INITIAL STUDY
For The
VENTURA COUNTY
MEDICAL CENTER EXPANSION

Prepared For:

COUNTY OF VENTURA PUBLIC WORKS AGENCY

May 1993

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MEDICAL CENTER EXPANSION

* * * * *

Prepared For:

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
800 South Victoria Avenue
Ventura, California 93009

* * * * *

Prepared By:

FUGRO-McCLELLAND (WEST), INC.
2140 Eastman Avenue / Ventura, California 93003

May 1993

Job Number 9261-5007

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1.0 PROJECT DESCRIPTION

1.1 PROJECT PROPONENT

County of Ventura
Public Works Agency
800 South Victoria Avenue
Ventura, CA 93009

1.2 PROJECT LOCATION

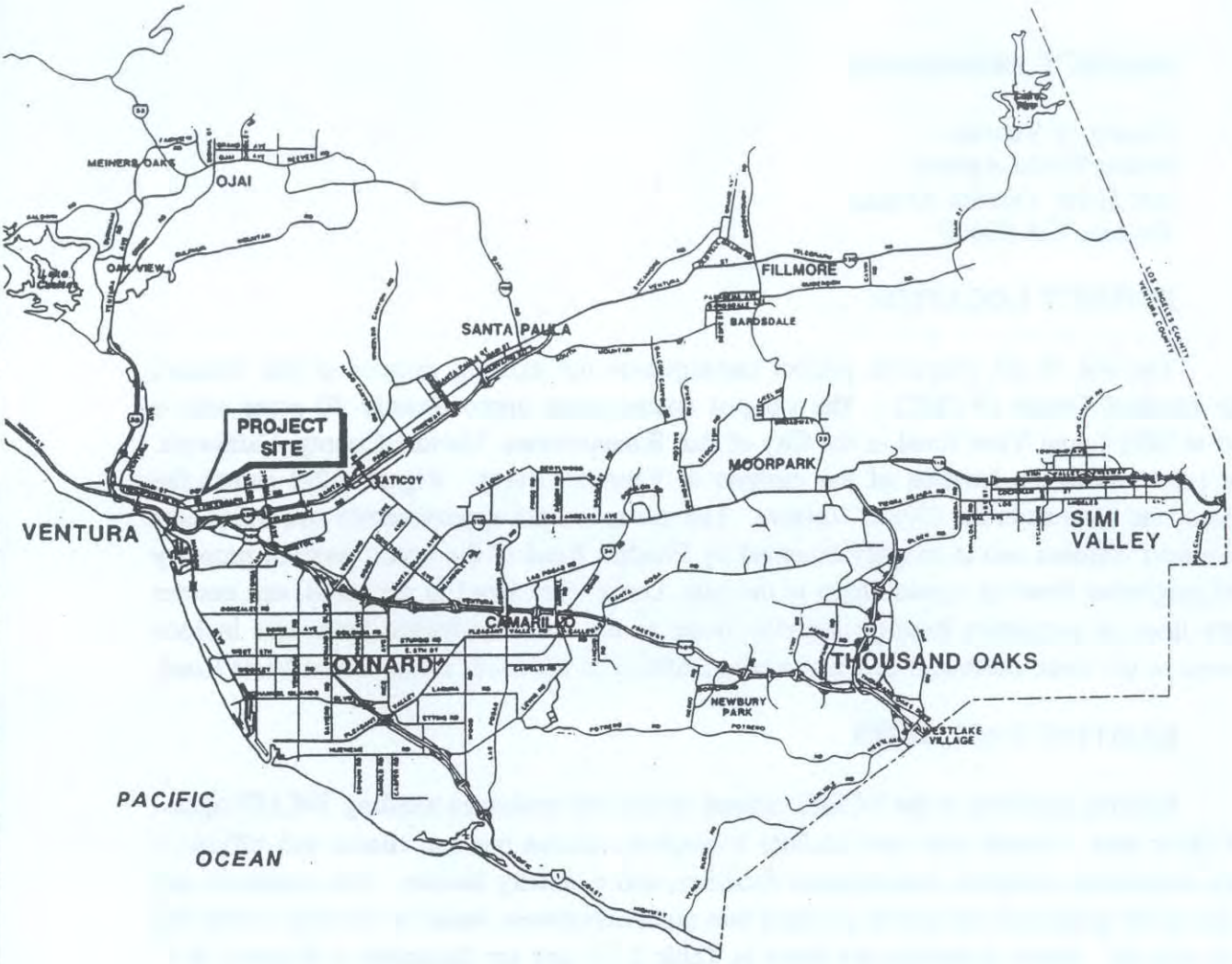
The site of the proposed project encompasses the existing campus of the Ventura County Medical Center (VCMC). The campus encompasses approximately 40 acres and is located at 3291 Loma Vista Road in the City of San Buenaventura, Ventura County, California. Figure 1.2-1 shows the location of the campus in Ventura County. Figure 1.2-2 shows the location of the campus in the City of Ventura. The site is located approximately two miles east of downtown Ventura and is roughly bounded by Foothill Road to the north, western property lines of properties fronting Agnus Drive to the east, Loma Vista Road to the south, and eastern property lines of properties fronting Estrella Street to the west. Adjacent land uses include residences to the west, north and east and medical offices to the south across Loma Vista Road.

1.3 EXISTING FACILITIES

Existing facilities at the VCMC campus include 60 structures totalling 398,157 square feet of floor area. Onsite land uses include a hospital, various medical clinics and offices, a juvenile corrections complex, maintenance facilities, and a laundry facility. The structures and facilities on the proposed site can be grouped into eight complexes, based on location within the site and activity. These groupings are listed in Table 1.3-1 and are illustrated in Figure 1.3-1.

Table 1.3-1. Existing VCMC Facilities By Land Use

Facility	Land Use	Floor Area (sq ft)
Hospital	Hospital	178,995
PSSA Building (formerly HCA Business Offices)	Offices	25,140
Public Health	Medical Offices	18,312
Mental Health Complex	In-Patient Medical Care	37,655
Family Care Complex	Medical Offices	32,555
Plant Operations	Offices/Maintenance	30,581
Bard Building	Office/Medical Office	24,754
Juvenile Complex	Corrections Facility	50,165
TOTAL		398,157

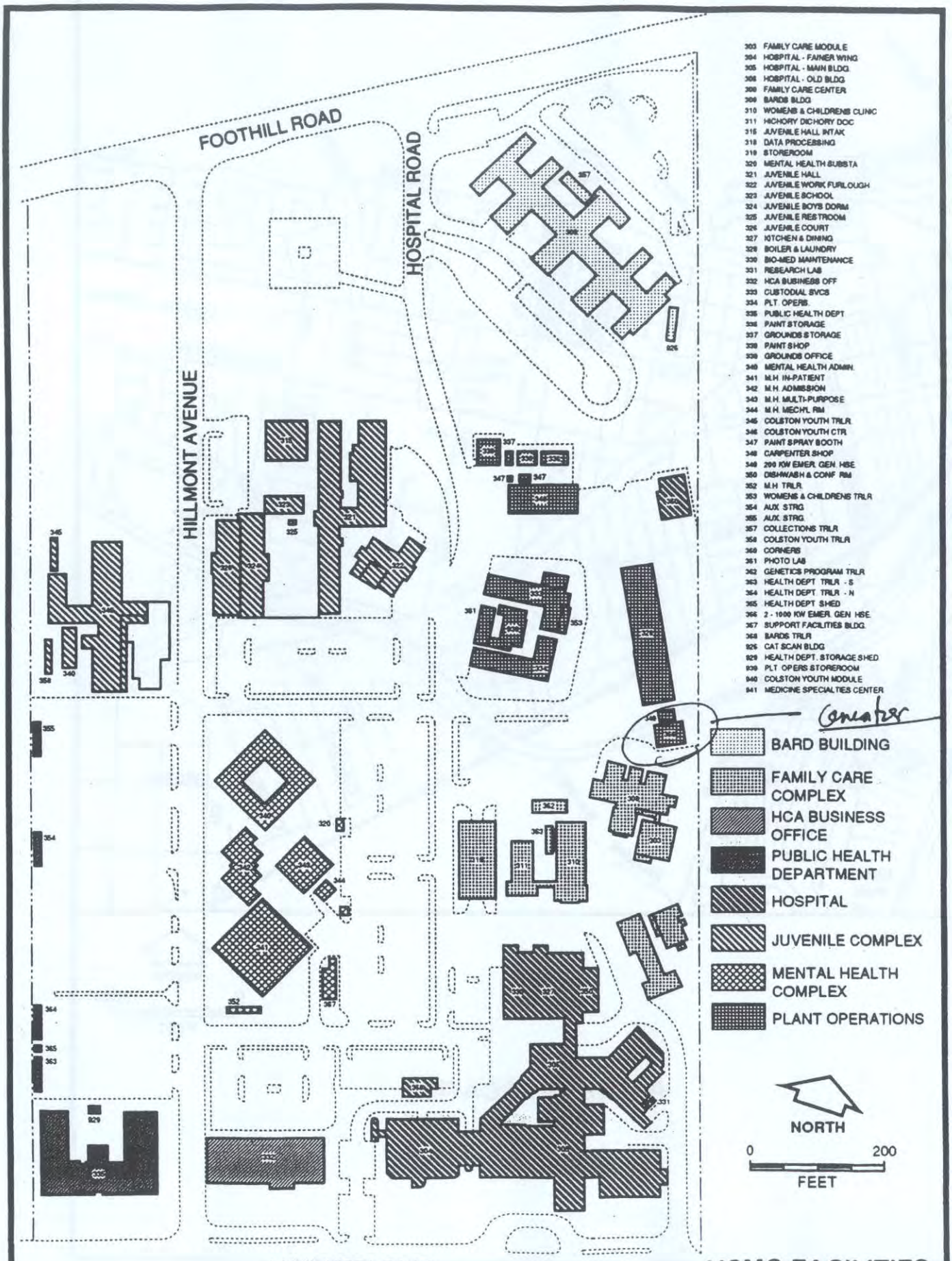


REGIONAL LOCATION

PROJECT LOCATION

000603

FIGURE 1.2-2


FOOTHILL ROAD
HOSPITAL ROAD
HILLMONT AVENUE
LOMA VISTA ROAD
303 FAMILY CARE MODULE
304 HOSPITAL - FARNER WING
305 HOSPITAL - MAIN BLDG.
306 HOSPITAL - OLD BLDG.
308 FAMILY CARE CENTER
309 BARDB BLDG
310 WOMENS & CHILDRENS CLINIC
311 HICHORY DICHORY DOC
315 JUVENILE HALL INTAK
318 DATA PROCESSING
319 STOREROOM
320 MENTAL HEALTH SUBSTA
321 JUVENILE HALL
322 JUVENILE WORK/ FURLOUGH
323 JUVENILE SCHOOL
324 JUVENILE BOYS DORM
325 JUVENILE RESTROOM
326 JUVENILE COURT
327 KITCHEN & DINING
329 BOILER & LAUNDRY
330 BIO-MED MAINTENANCE
331 RESEARCH LAB
332 HCA BUSINESS OFF
333 CUSTODIAL SVCS
334 PLT. OPERS.
335 PUBLIC HEALTH DEPT
336 PAINT STORAGE
337 GROUNDS STORAGE
338 PAINT SHOP
339 GROUNDS OFFICE
340 MENTAL HEALTH ADMIN.
341 M.H. IN-PATIENT
342 M.H. ADMISSION
343 M.H. MULTI-PURPOSE
344 M.H. MECH'L RM
345 COLSTON YOUTH TRLR.
346 COLSTON YOUTH CTR.
347 PAINT SPRAY BOOTH
348 CARPENTER SHOP
349 200 KW EMER. GEN. HSE.
350 DISHWASH & CONF RM
352 M.H. TRLR.
353 WOMENS & CHILDRENS TRLR
354 AUX. STRG.
355 AUX. STRG.
357 COLLECTIONS TRLR
358 COLSTON YOUTH TRLR
360 CORNERS
361 PHOTO LAB
362 GENETICS PROGRAM TRLR
363 HEALTH DEPT. TRLR. - S
364 HEALTH DEPT. TRLR. - N
365 HEALTH DEPT. SHED
366 2 - 1000 KW EMER. GEN. HSE.
367 SUPPORT FACILITIES BLDG.
368 BARDS TRLR
926 CAT SCAN BLDG
929 HEALTH DEPT. STORAGE SHED
939 PLT OPERS STOREROOM
940 COLSTON YOUTH MODULE
941 MEDICINE SPECIALTIES CENTER
BARD BUILDING
FAMILY CARE COMPLEX
HCA BUSINESS OFFICE
PUBLIC HEALTH DEPARTMENT
HOSPITAL
JUVENILE COMPLEX
MENTAL HEALTH COMPLEX
PLANT OPERATIONS
NORTH
0
200
FEET
VCMC FACILITIES

000604

1.4 PROPOSED ACTIONS

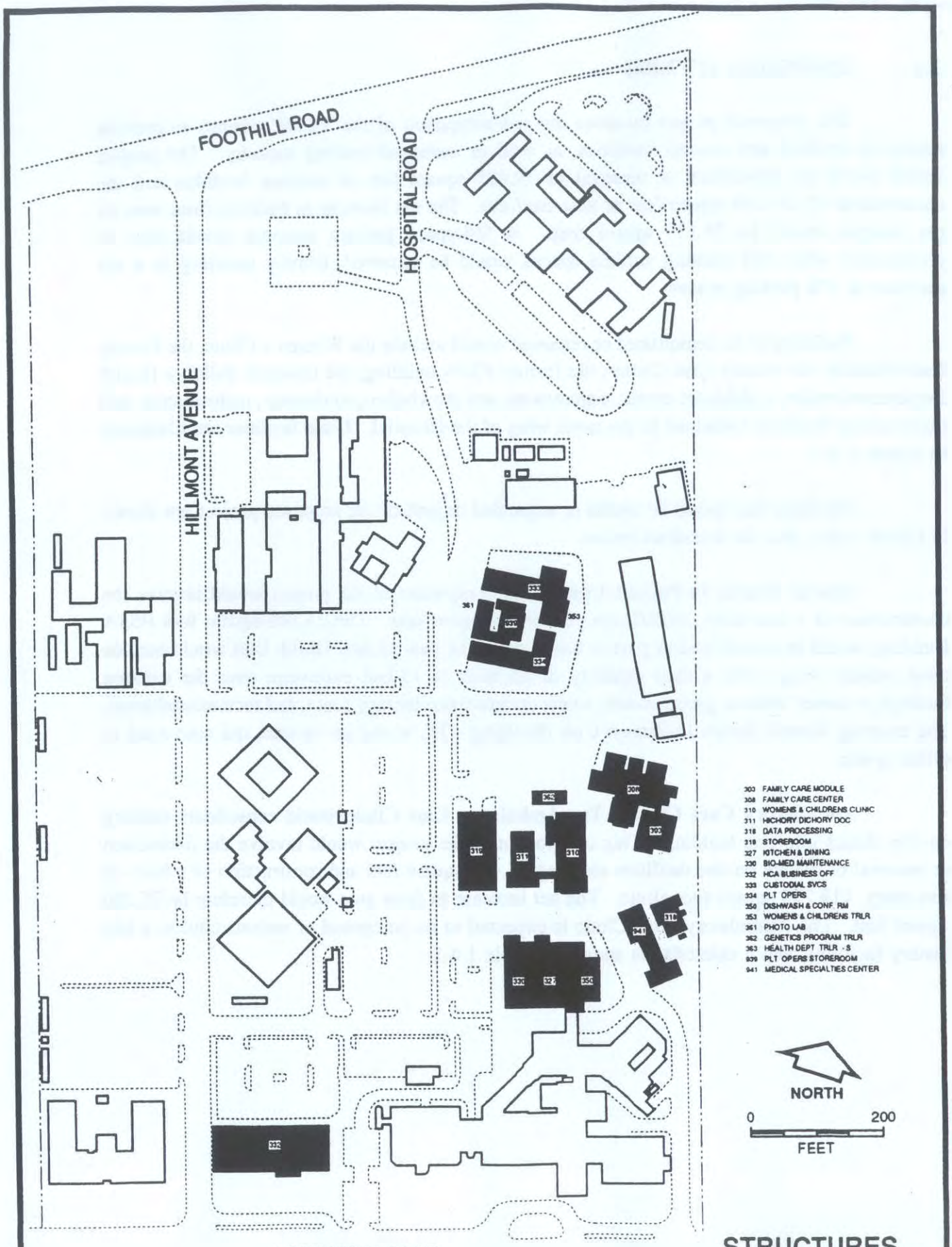
The proposed project involves the redevelopment of the VCMC campus to provide improved medical and coroner facilities, as well as increased parking capacity. The project would entail the demolition or removal of 79,425 square feet of existing facilities and the construction of 157,558 square feet of new facilities. The net increase in building floor area on the campus would be 78,133 square feet. A 564-space parking structure would also be constructed while 186 existing surface spaces would be removed, thereby resulting in a net increase of 378 parking spaces.

Facilities to be demolished or removed would include the Women's Clinic, the Family Care Module, the Family Care Center, the former PSSA building, the Genetics trailer, a Health Department trailer, a childcare center, a storeroom, and the kitchen, conference, maintenance, and dishwashing facilities contained in the north wing of the Hospital. These facilities are illustrated in Figure 1.4-1.

Facilities that would be added or expanded as part of the proposed project are shown in Figure 1.4-2, and are described below.

Mental Health In-Patient Unit. This component of the project would involve the construction of a one-story, 31,003 square-foot in-patient unit. The 25,140 square foot PSSA Building would be demolished as part of this phase. The new Mental Health Unit would include three patient wings with a total capacity of 43 beds (a 15-bed expansion over the existing facility), a nurses' station, group rooms, a new occupational therapy room, and recreational areas. The existing Mental Health In-Patient Unit (Building 431) would be vacated and converted to office space.

Ambulatory Care Clinic. The Ambulatory Care Clinic would consolidate existing on-site clinics into one building. This component of the project would involve the demolition or removal of twelve on-site facilities totalling 43,475 square feet and construction of a four- or five-story, 118,755 square foot clinic. The net increase in floor area would therefore be 75,280 square feet. The Ambulatory Care Clinic is expected to be composed of various clinics, a lab, dietary facilities, and a cafeteria, as shown in Table 1.4-1.



STRUCTURES TO BE DEMOLISHED

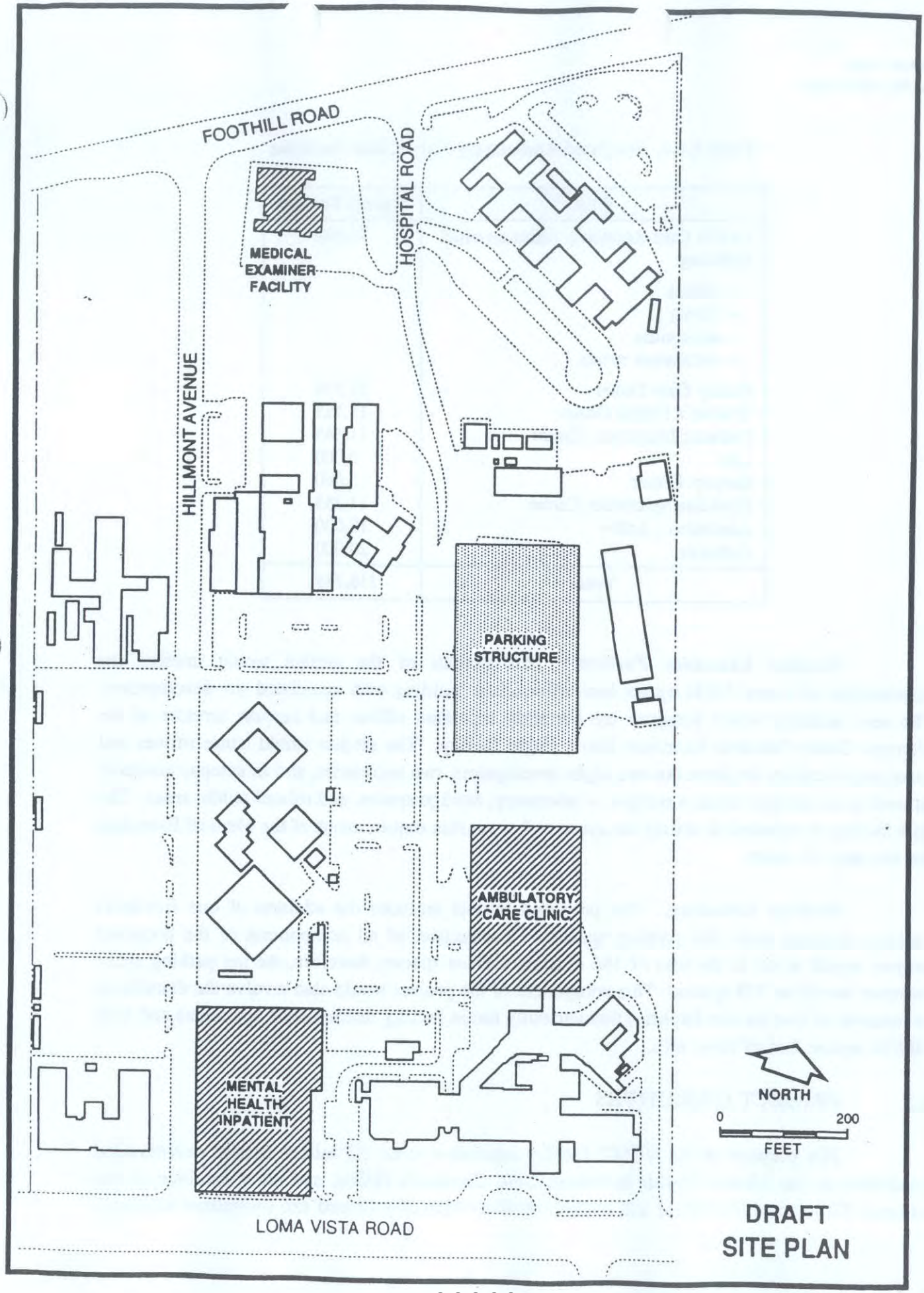


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FIGURE 1.4-2

Table 1.4-1. Proposed Ambulatory Care Clinic Facilities

Unit	Square Footage
Family Care Residency Administration including: • offices • library • auditorium • conference rooms	22,500
Family Care Center	22,500
Women's Health Center	11,585
Pediatric Diagnostic Center	11,585
Lab	6,000
Surgery Center	3,000
Medicine Specialties Center	11,585
Admission - Lobby	10,000
Cafeteria	20,000
Total	**118,755**

Medical Examiner Facility. This portion of the project would involve the construction of a new 7,800 square foot office/clinic building with associated site development. The new building would integrate the currently separated offices and support services of the Ventura County Medical Examiner into a single facility. The project would house offices and associated facilities for three doctors, eight investigators, two secretaries, and an autopsy assistant, as well as an autopsy room, a morgue, a laboratory, storage spaces, and related public areas. The new facility is expected to satisfy the space and expansion requirements of the Medical Examiner for the next 15 years.

Parking Structure. The proposed project includes the addition of one five-level parking structure with 564 parking spaces. Construction of all components of the proposed project would result in the loss of 186 existing surface spaces; therefore, the net parking space increase would be 378 spaces. This component of the project would also involve the demolition or removal of five on-site facilities that currently house facility maintenance operations and total 10,810 square feet of floor area.

1.5 PROJECT OBJECTIVES

The purpose of the VCMC facility expansion is to: (1) relieve current overcrowded conditions in the Mental Health In-Patient Unit, Coroner's Office, and other facilities on the campus; (2) to provide medical and coroner services from coordinated and centralized locations,

and (3) to provide additional parking to better accommodate the current demand for parking and to compensate for the loss of on-site parking that would result from new building construction.

1.6 PROJECT NEED

The Mental Health In-Patient Unit is currently operating at or above its design capacity of 28 beds. The facility averaged 29.5 patients daily in 1992, with a peak one day load of 40 patients.[1] Project implementation would add approximately 15 beds to the facility, increasing capacity and relieving overcrowded conditions. In addition, project implementation would consolidate the Mental Health Unit's Crisis Services team, which is currently located in a separate building.

Ambulatory Care Services at the VCMC are currently provided by a number of separate clinics located throughout the campus. Project implementation would consolidate these clinics into one facility that would provide a variety of care services to patients. This consolidation would provide upgraded facilities as well as improved service efficiency. A consolidated clinic administration would also be located within this facility, providing greater administrative efficiency.

The existing Medical Examiner facilities operated on the campus are also currently separated between two areas; the examination and storage facilities are currently operated in the VCMC hospital morgue, while the current Medical Examiner office is located in a temporary building on the eastern border of the campus (Building 360). Operational and aesthetic conflicts occur related to corpse storage, transfer, and autopsy examination due to the location of the examination and storage facilities within the hospital morgue.[2] In addition, the separation of these facilities from the Medical Examiner office creates administrative difficulties. Project implementation would consolidate the Medical Examiner facilities in a building completely separated from the hospital facility, thereby providing more efficient service and alleviating aesthetic conflicts.

A parking study prepared by Linscott, Law & Greenspan, Engineers in August 1992 determined an existing need for 205 additional onsite parking spaces based on: (1) current onsite parking usage, and; (2) movement of VCMC campus patrons from off-campus street spaces into on-campus parking areas. To relieve current overcrowded parking conditions and to accommodate future parking needs, project implementation would increase on-site parking by 378 spaces. This would provide sufficient parking areas for projected net on-campus parking demand.

1.7 PROJECT DESIGN FEATURES

Project design will incorporate the following features designed to reduce potential environmental impacts associated with the project. The features are organized according to the area of potential impact addressed.

Air Quality

- Regular ground wetting of graded areas will be conducted during construction to control fugitive dust emissions.
- Grading activities will cease during periods when winds exceed 30 miles per hour.
- Materials excavated, stockpiled, and transported during construction will be wetted regularly.
- Onsite construction vehicle speeds will be limited to 15 miles per hour.
- Construction vehicle traffic areas will be regularly wetted.

Water Resources

- Slope erosion control measures such as jute matting, silt fences along slope toes, and straw bales will be utilized to control runoff during project construction.

Visual Resources

- Landscaping materials around the Medical Examiner facility will not include trees or shrubs that will ultimately exceed the height of the building, so as not to obstruct distant views.
- The Medical Examiner building will be a single story, and building elevations will be stepped to ensure compatibility with surrounding topography and natural slope lines.
- All mechanical operational units for the Medical Examiner facility will be entirely screened from view of the Foothill Road view corridor.

Seismic Hazards

- The proposed Medical Examiner facility will be built in accordance with recommendations contained in the Staal, Gardner & Dunne geotechnical report (1992) regarding foundation construction

- A geotechnical report will be prepared for the proposed parking structure.

Geologic Hazards

- Project implementation will be in accordance with standard geotechnical practices and will comply with recommendations regarding excavation and compaction in the 1992 Staal, Gardner & Dunne geotechnical study.

Hydraulic Hazards

- Project implementation will include revegetation of all constructed slopes and graded areas. Such revegetation will minimize the potential for long-term sediment transport from the project site.

Noise and Vibration

- Construction activities will conform with standard noise reduction procedures, including limiting construction activity to between 8 a.m. and 5 p.m. and, when feasible, the use of temporary, movable construction noise barriers to shield sensitive receptors.

- To reduce noise levels at the Mental Health In-Patient Unit's sensitive uses (in-patient quarters), patient rooms and most exterior use areas will be sited to rear of the Mental Health Unit, away from Loma Vista Road. This will allow the structure to act as a noise attenuation device, shielding patient rooms and most outdoor use areas from excessive vehicle-generated noise.

- Specialty wall and glazing materials will be used for construction of the Mental Health In-Patient Unit.

- A 10-foot wall will be constructed at the front of the Mental Health In-Patient Unit along Loma Vista Road, thus attenuating noise levels at exterior use areas in the front of the facility.

- All paving within the proposed parking structure and on all external ramps will be Portland Cement Concrete with a non-squeal finish.

Light and Glare

- Lighting sources will be shielded and projected toward the ground to decrease the quantity of light radiated into the nighttime sky.

- The height of lighting for the rooftop level of the proposed parking structure will be limited to the parapet height.

- The proposed project will utilize non-reflective exterior materials in its construction.

Water Supply

- A sufficient number of toilets will be retrofitted to achieve the 3:1 water consumption offset requirements of City of Ventura Resolution No. 92-73.

- Low flow shower heads (2.5 gallons per minute or less at 40 psi) will be installed on all new construction.

- Sink and lavatory faucets which limit the flow of water to a maximum of 2.5 gallons per minute at 40 psi, will be installed on all new construction.

- New landscaping developed on the subject site in conjunction with the proposed project will be drought tolerant.

- Drip, mini-emitter or low volume sprinkler irrigation systems will be used for all new landscaping developed in conjunction with the proposed project.

Waste Treatment/Disposal

- The VCMC will mulch grass clippings rather than disposing of them. If existing VCMC equipment will not mulch the clippings, one or more mulching lawn mowers will be purchased by the VCMC. In addition, a "green bin" recycling program will be initiated to handle yard wastes other than grass clippings.

- The VCMC will develop an on-site or off-site composting program for organic compostable wastes generated on the VCMC campus.

- Adequate space for waste and recycling bins, as determined by the Ventura County Solid Waste Management Department, will be provided for all new facilities developed as part of the proposed project.

- The VCMC will purchase a baler or develop an alternative method to break down cardboard boxes and reduce the space requirements for recyclable materials bins.

- The contractor that conducts project-related construction and demolition activities will be required to develop County-approved plans for the diversion of construction/demolition wastes through source reduction or recycling.

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[1] Essex, Duane, Ventura County Mental Health Center, 1992.

[2] O'Halloran, Ronald L., Assistant Chief Medical Examiner, 1992.

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2.0 INITIAL STUDY CHECKLIST

ISSUE (Responsible Department)		PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	S	U	N	LS	S	U
GENERAL:	1. General Plan Environmental Goals and Policies (Plng.)	X				X			
LAND USE:	2. Land Use (Plng.)								
	a. community character				X				X
	b. housing		X				X		
	c. growth inducement	X				X			
RESOURCES:	3. Air Quality (APCD)								
	a. regional		X				X		
	b. local				X				X
	4. Water Resources (PWA)								
	a. groundwater quantity	X				X			
	b. groundwater quality	X				X			
	c. surface water quantity		X			X			
	d. surface water quality		X			X			
	5. Mineral Resources (Plng)								
	a. aggregate		X				X		
	b. petroleum		X				X		
	6. Biological Resources								
	a. endangered, threatened, or rare species	X				X			
	b. wetland habitat	X				X			
	c. coastal habitat	X				X			
	d. migration corridors	X				X			
	e. locally important species/communities	X				X			
	7. Agricultural Resources (Ag. Dept.)								
	a. soils	X				X			
	b. water	X				X			
	c. air quality/micro-climate	X				X			
	d. pests/diseases	X				X			
	e. land use incompatibility	X				X			
	8. Visual Resources								
	a. scenic highway (Plng.)				X	X			
	b. scenic area/feature				X	X			
	9. Palentological Resources	X				X			
	10. Cultural Resources								
	a. archaeological		X			X			
	b. historical (GSA)		X			X			
	c. ethic, social or religious		X			X			
	11. Energy Resources	X				X			
	12. Coastal Beaches & Sand Dunes	X				X			

Project No. 9261-5007

ISSUE (Responsible Department)		PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	S	U	N	LS	S	U
HAZARDS:	13. Seismic Hazards (PWA)								
	a. fault rupture	—	X	—	—	X	—	—	—
	b. ground shaking	—	X	—	—	X	—	—	—
	c. tsunami	X	—	—	—	X	—	—	—
	d. seiche	X	—	—	—	X	—	—	—
	e. liquefaction	X	—	—	—	X	—	—	—
	14. Geologic Hazards (PWA)								
	a. subsidence	X	—	—	—	X	—	—	—
	b. expansive soils	X	—	—	—	X	—	—	—
	c. landslides/mudslides	X	—	—	—	X	—	—	—
	15. Hydraulic Hazards (PWA/FCD)								
	a. erosion/siltation	X	—	—	—	X	—	—	—
	b. flooding	X	—	—	—	X	—	—	—
	16. Aviation Hazards (Airports)	X	—	—	—	X	—	—	—
	17. Fire Hazards (Fire)	X	—	—	—	X	—	—	—
	18. Hazardous Materials/Waste								
	a. above-ground hazardous mtl's. (Fire)	X	—	—	—	X	—	—	—
	b. below-ground hazardous mtl's. (EH)	X	—	—	—	X	—	—	—
	c. hazardous waste (EH)	—	X	—	—	X	—	—	—
	19. Noise and Vibration	—	—	—	X	—	X	—	—
	20. Glare	—	—	—	X	—	X	—	—
PUBLIC FACILITIES/ SERVICES	21. Transportation/Circulation								
	a. public roads and highways								
	(1) level of service (PWA)	—	—	—	X	—	—	—	X
	(2) safety/design (PWA)	X	—	—	—	X	—	—	—
	(3) tactical access (Fire)	X	—	—	—	X	—	—	—
	b. private roads and driveways (Fire)								
	(1) safety/design	X	—	—	—	X	—	—	—
	(2) tactical access	X	—	—	—	X	—	—	—
	c. pedestrian/bicycle								
	(1) public facilities (PWA)	X	—	—	—	X	—	—	—
	(2) private facilities	X	—	—	—	X	—	—	—
	d. parking (Plng.)	—	—	—	X	—	—	—	X
	e. bus transit	X	—	—	—	X	—	—	—
	f. railroads	X	—	—	—	X	—	—	—
	g. airports (Airports)	X	—	—	—	X	—	—	—
	h. harbors (GSA)	X	—	—	—	X	—	—	—
	i. pipelines	X	—	—	—	X	—	—	—

Project No. 9261-5007

ISSUE (Responsible Department)	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
	N	LS	S	U	N	LS	S	U
22. Water Supply								
a. quality (EH)	X				X			
b. quantity (PWA/EH)		X				X		
c. fire flow (Fire)	X				X			
23. Waste Treatment/Disposal								
a. Individual Sewage Disposal System (EH)	X				X			
b. sewage collection/ treatment facilities		X				X		
c. solid waste facilities (SWMD)	X				X			
24. Utilities								
a. electric		X				X		
b. gas		X				X		
c. communication	X				X			
25. Flood Control/Drainage								
a. FCD facility (FCD)	X				X			
b. other facilities (PWA)	X				X			
26. Law Enforcement/Emergency Svs. (Sheriff)								
a. personnel/equipment	X				X			
b. facilities	X				X			
27. Fire Protection (Fire)								
a. distance/response time	X				X			
b. personnel/equipment/facilities	X				X			
28. Education								
a. schools	X				X			
b. libraries (Lib. Agency)	X				X			
29. Recreation (GSA)								
a. local parks/facilities	X				X			
b. regional parks/facilities	X				X			
c. regional trails/corridors	X				X			

*Explanation: Degree of Effect

N = No Effect
LS = Less Than Significant Effect
S = Significant Effect; MND or EIR Required.
U = Unknown; EIR Required

Allie T. Pringle
12 May 1993

Agencies

APCD - Air Pollution Control District
PWA - Public Works Agency
Plng. - Planning Division
GSA - General Services Agency
Ag. Dpt. - Agricultural Department
FCD - Flood Control District
Airports - Department of Airports
Fire - Fire Protection District
Sheriff - Sheriff's Department
EH - Environment Health Division
SWMD - Solid Waste Management Department
Lib. Agency - Library Services Agency

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3.0 DISCUSSION OF RESPONSES TO CHECKLIST

3.1 GENERAL PLAN ENVIRONMENTAL GOALS AND POLICIES

3.1.1 Potential Impacts

The proposed project is located within the City of San Buenaventura. As such, although the County-owned VCMC site is exempt from City planning regulations, the City of San Buenaventura's Comprehensive Plan Update to the Year 2010 will be used as the primary document for determining consistency with general plan environmental goals and policies.

The most applicable goals and policies relative to the proposed project are contained in the Intent and Rationale for Land Use Designations section. The future land use map indicates that the subject site should remain in its current use as "existing urban". The designation implies that the medical and social service facilities that exist should remain. The proposed project represents a continuation and upgrading of an established use with no direct encroachment into the surrounding residential areas. As such, the proposed project is consistent with the City's Comprehensive Plan.

3.1.2 Mitigation Measures

No mitigation measures are required.

3.2 LAND USE

3.2.1 Potential Impacts

a. Community Character. Land uses in the vicinity of the site consist primarily of single-family residences. Construction activity associated with implementation of the proposed project would have potential temporary impacts to the community character of the surrounding residential land uses. These impacts would include a reduction in the aesthetics of the project site during construction, as well as increases in noise, dust generation, and traffic. However, due to their temporary nature, these construction-related impacts are considered less than significant.

As proposed, the facilities constructed would be contained on the existing VCMC campus and would be consistent with the current land uses onsite. The project would consolidate dispersed offices and support services, as well as satisfy future space and expansion requirements. New structures constructed as part of the proposed project would be integrated into the existing facilities onsite. The proposed Ambulatory Care Clinic and the parking structure are significantly larger buildings than the ones they would replace. The Ambulatory Care Clinic is proposed to measure approximately 118,755 square feet and rise four or five floors. The existing hospital building measures 178,995 square feet and rises four floors. The proposed parking structure will rise five levels. The scale of these two structures would intensify the urban nature of the campus. The intensified scale may result in compatibility problems with the single-family

neighborhood to the east. Therefore, project implementation may have a significant effect on the community character.

b. Housing. As the proposed project does not involve housing construction or demolition, housing stock within Ventura County would not be affected. Although the proposed project would increase building square footage on the VCMC campus, the primary purpose of this expansion is to relieve current overcrowded conditions at campus facilities. Consequently, implementation of the proposed project would not substantially increase the number of employees currently working at the VCMC campus. Construction-related jobs generated by the project would be temporary and are expected to be filled by workers already living in the area, as there have historically been more construction workers than construction jobs within the Ventura County area. In addition, the proposed project would not result in any cumulative impact to housing within Ventura County. Therefore, project implementation would have a less than significant impact on housing in Ventura County.[1]

c. Growth Inducement. Project implementation would increase on-site building square footage and at least one facility (the Mental Health In-Patient Unit) would experience a direct increase in employment as a result of the project. However, the primary purpose of the project is to relieve existing overcrowded conditions at various VCMC campus facilities and to consolidate dispersed campus clinics and support services. Consequently, the proposed project would not be inherently growth-inducing. Impacts are therefore considered less than significant.

3.2.2 Mitigation Measures

Feasible mitigation measures that address issues of land use compatibility should be explored as part of an environmental impact report preparation process.

3.3 AIR QUALITY

3.3.1 Potential Impacts

a. Regional. Air pollution control is administered at three government levels in California: federal, state and local. The federal government has established ambient air quality standards to protect the public health and welfare. The State of California has established separate standards which are generally more stringent than federal standards. Air quality within Ventura County is monitored by the Ventura County Air Pollution Control District (VCAPCD) and the California Air Resources Board (CARB). The VCAPCD is responsible for administering air pollution control programs within the County.

The site of the proposed project is located within the Oxnard Plain Airshed, which has been designated as a non-attainment area by the VCAPCD for the federal and state ozone standards of 0.12 and 0.09 parts per million (ppm), respectively. Maximum particulate (PM_{10}) levels in the County also exceed the state 24-hour concentration standard of 50 $\mu g/m^3$, although the County is in compliance with the federal PM_{10} standard.[2]

Project implementation would result in increased long-term traffic within the project area. However, this increase is not expected to be significant (for further discussion of traffic related impacts, see Section 3.21, Traffic and Circulation). Based upon projected increases from project related traffic, potential air quality impacts were analyzed using the California Air Resources Board URBEMIS3 Model (Appendix A). VCAPCD Air Quality Guidelines state that a significant impact would occur if an individual project exceeded County thresholds of 25 lbs/day of oxides of nitrogen (NO_x) and/or 25 lbs/day of reactive organic gases (ROG). Results of the URBEMIS3 Model indicate that the proposed project would result in long-term emissions of 12.4 lbs/day of NO_x and 9.5 lbs/day of total organic gases (approximately 90 percent of which are ROG). These amounts are both less than the VCAPCD Significance Thresholds. Therefore, the long-term impacts to regional air quality would be less than significant.

b. Local. During the construction phase of the project, demolition and construction activities would generate temporary emissions from fugitive dust and construction equipment exhaust. Construction emissions would be generated by excavation activities on the site and by transportation and disposal of excavation materials offsite.

Fugitive dust emissions generated during grading, excavation and soil removal activities are difficult to estimate accurately because of the number and variability of the factors involved. These include soil moisture, wind speed, amount of equipment operating, and silt content of soil.

Grading and demolition activities at the project site could potentially create dust nuisance, thereby producing a temporary local air quality impact. This temporary impact would be reduced by approximately 50 percent by regular watering of the site during grading activities (EPA, 1985). Standard dust control during construction is mandated by Ventura County Grading Ordinance and VCAPCD Rule 51. Both are applicable to this project and would include:

- Regular ground wetting of graded areas;
- Cessation of grading activities during periods when winds exceed 30 miles per hour (mph);
- Wetting of excavated, stockpiled and transported materials;
- On-site construction vehicle speed limits of 15 mph; and
- Wetting of construction vehicle traffic areas.

VCAPCD significance thresholds for emissions are 25 lbs/day of NO_x and ROG. However, the 1989 VCAPCD Guidelines state that construction related emissions are not counted towards these thresholds due to their short-term nature. Therefore, due to the size of the proposed project and the short-term nature of the emissions, on-site fugitive construction

equipment emissions are not expected to significantly impact air quality in the Oxnard Air Shed.[3]

Members of the public have expressed concerns over CO and other localized proposed emissions from the proposed parking structure adversely affecting residences downwind of the proposed project.

In summary, the proposed project may generate significant long-term impacts to adjacent residential areas from the proposed parking structure. Compliance with all VCAPCD control measures would reduce impacts to regional air sheds to less than significant levels.

3.3.2 Mitigation Measures

Mitigation measures should be developed to address concerns related to localized emissions as part of an EIR preparation process.

3.4 WATER RESOURCES

3.4.1 Potential Impacts

a. Groundwater Quantity. The proposed project is located within the Mound Groundwater Basin. As the proposed project is located within an urban area on a site that is largely developed, it does not involve significant new overcovering of permeable surface area. Project implementation may result in some incremental change in groundwater infiltration rates on the project site; however, because important water-bearing aquifers are overlain by one or more low permeability "clay caps", no effect on groundwater storage in the Mound Ground Water Basin would occur as a result of the proposed project. Therefore, project-specific and cumulative impacts to groundwater quantity associated with project implementation would be less than significant.

b. Groundwater Quality. The majority of urban-generated water pollutants are those associated with petroleum by-products which collect on streets and parking areas that are subsequently washed into groundwater supplies with the first rainstorm of the winter season. Pollutants carried in surface water could potentially infiltrate below the surface and contaminate shallow groundwater. However, because important water-bearing aquifers are separated from shallow groundwater of probable poor quality by one or more low permeability "clay caps", the impact of the proposed project is considered less than significant.

c. Surface Water Quantity. The nearest surface water bodies to the proposed project site are Hall Canyon Creek and Prince Barranca, located north and west of the subject site, respectively. Surface water quantity of the creek would not be altered by project implementation. Surface runoff from the proposed project site generally is collected at storm drains on Loma Vista Road and does not result in any change to surface flow conditions.

Due to the developed nature of the site, existing flow paths, storm runoff volumes, peak flows and velocities would not be significantly altered by project implementation. Any potential changes in drainage would be incorporated into the site development plan, and accomplished in accordance with the County of Ventura's Building Code and Chapter 70 of the Uniform Building Code. Therefore, project-specific and cumulative impacts to surface water quantity due to project implementation would be less than significant.

d. Surface Water Quality. During construction, surface water quality may be degraded due to increased turbidity resulting from soil runoff. Soil loss would occur because of sheet erosion, with the most serious erosion occurring on freshly graded slopes. The southern portion of the site, where the construction of the Mental Health In-Patient Unit, Ambulatory Care Clinic, and parking structure is proposed, is relatively flat; therefore little soil loss would be expected to occur. The VCMC campus as a whole, however, has a north to south slope differential of approximately 88 feet, with moderate slopes occurring on the northern portion of the site. As proposed, the Medical Examiner Facility would be constructed on the northerly portion of the site, where the gradient is approximately 50 percent. Due to the existing slopes in this area of the VCMC campus, the potential for soil erosion during the construction of the Medical Examiner Facility would exist. However, slope erosion control measures such as jute matting, silt fences along slope toes, and straw bales in drainage courses would be utilized during project construction. In addition, the revegetation of constructed slopes would provide long-term erosion control. Surface water quality impacts would therefore be less than significant.

As the project site is currently developed with uses similar to what is proposed, project implementation is not expected to significantly increase the amount of surface water pollutants generated on the site. Therefore, project-specific and cumulative impacts to surface water quality associated with project implementation would be less than significant.

3.4.2 Mitigation Measures

No mitigation measures are required.

3.5 MINERAL RESOURCES

3.5.1 Potential Impacts

a. Aggregate. The proposed project would use a finite amount of aggregate material (mainly construction grade sand and gravel), during construction. Due to the size of the project, this amount is not expected to be significant. Adequate aggregate resources are available in the county to meet local demand for the next 50 years.[4] Therefore, no significant project-specific or cumulative impacts on aggregate mineral resources would occur due to project implementation.

b. Petroleum. During the construction phase of the project petroleum resources (oil and gas) would be used for the operation of construction equipment. However, this project and cumulative projects would have a less than significant impact on the demand for petroleum

resources because these resources are considered a world-wide, national, and statewide resource. Such a resource is beyond the scope of local governments to effectively manage or control.

3.5.2 Mitigation Measures

No mitigation measures are required.

3.6 BIOLOGICAL RESOURCES

3.6.1 Potential Impacts

The subject site is located in an urbanized area and is currently developed with extensive medical and social service facilities. Open areas of the site are covered with non-native, disturbed grassland communities. These undeveloped portions of the site are routinely disked for weed control. As a result of these conditions, the subject site does not represent significant biological resource habitat.

a. Endangered, Threatened, or Rare Species. No rare or otherwise sensitive animal and/or plant species are known to occur in the immediate vicinity of the project site.[5] Due to the urban nature of the project area and the lack of biological resources onsite, project implementation would not impact endangered, threatened or rare species on the project site or in the project area.

b. Wetland Habitat. No wetland areas exist on or in the immediate vicinity of the project site. In addition, surface runoff is largely captured in urban storm drain systems and is conveyed to outfalls as part of the City of Ventura's storm drain runoff system. Therefore, no project-specific impacts to wetland habitat would occur as a result of project implementation.

c. Coastal Habitat. The project site is not located within a coastal habitat. Therefore, no impacts to coastal habitat would occur as a result of project implementation.

d. Migration Corridor. Potential migration corridors in the vicinity of the project site include the Hall Canyon Creek/Prince Barranca drainage system, located north and west of the subject site. This potential migration corridor would not be affected by development at the subject site, due to distance of the proposed project from the drainage. Therefore, no impacts to migration corridors would occur due to project implementation.

e. Locally Important Species/Communities. The majority of the proposed project site is developed, with some areas of non-native, disturbed grassland located in the northwestern corner of the site. Therefore, it is not expected that any significant wildlife activity currently occurs on the project site. The disturbed grassland area in the northwest corner may provide foraging habitat for raptors; however, loss of this foraging area would not significantly impact raptors in the vicinity because of large foraging areas in the hills north of the subject site. Therefore, the proposed project would not impact locally important species or community.

3.6.2 Mitigation Measures

No mitigation measures are required.

3.7 AGRICULTURAL RESOURCES

3.7.1 Potential Impacts

a. Soils. The U.S. Soil Conservation Service Important Farmlands Inventory (IFI) system is used in Ventura County to evaluate which lands have agricultural value. The proposed project site is currently developed, and is located in an urban area. The project area does not include land of any significant agricultural value. Therefore, project implementation would have no impact on agricultural resources.

b. Water. Based upon the water demand rates contained in City of Ventura Ordinance 92-73, project implementation would increase water consumption at the VCMC campus by approximately 4,604 gpd. This increase would be offset by fixture retrofit in accordance with Ordinance 92-73. Therefore, the proposed project would not deplete water available for agricultural uses. The proposed project would not significantly affect groundwater or surface water quality in the project area. Therefore, no project-specific or cumulative impacts to agricultural water would be associated with project implementation.

c. Air Quality/Micro-Climate. Project implementation would result in dust dispersal during the construction phase. However, as the project site is located in an urban area, dust generation would not have any significant affect on agricultural resources. As discussed in Section 3.3, standard dust control measures would be implemented during project construction. The proposed project would not generate dust during long-term operations. Therefore, no project-related or cumulative impacts would be associated with project implementation.

d. Pests/Diseases. Due to the location of the project site within an urban area, project implementation would not introduce any pests or diseases to agricultural lands. Therefore the proposed project would have no pest or disease related impacts to agricultural lands.

e. Land Use Incompatibility. As agricultural lands are not located on or near the proposed project site, the proposed project would not promote uses that are incompatible with agricultural lands. Therefore, project implementation would have no land use incompatibility impacts with regards to agriculture.

3.7.2 Mitigation Measures

No mitigation measures are required.

3.8 VISUAL RESOURCES

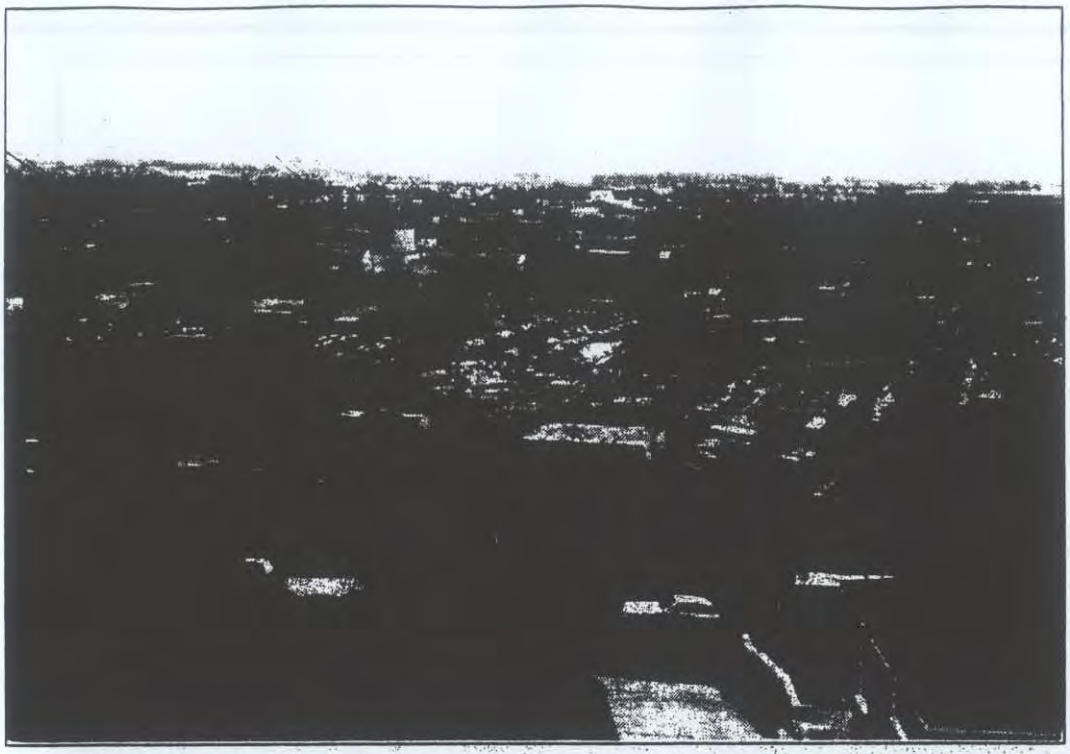
3.8.1 Potential Impacts

a and b. Scenic Highway and Scenic Area/Feature. The VCMC Campus is bordered by Foothill Road to the north, Loma Vista Road to the south, properties fronting Estrella Street to the west, and properties fronting Agnus Drive to the east. Land uses to the north, west, and east consist primarily of single family residences. Land uses to the south across Loma Vista Road are primarily commercial office. Views from areas north and northeast of the project site that are at higher elevations would stand to be affected by development of the site. Existing views from several sites along Agnus Drive and north of Foothill Road are shown in Figures 3.8-1 and 3.8-2. Existing views from north of Foothill Boulevard would not be expected to be significantly altered by project implementation. As the photographs in Figure 3.8-2 show, views from northeast of the site along Agnus Drive are already partially obscured by existing structures and trees. Views from properties along the west side of Agnus Drive closest to the proposed Ambulatory Care Clinic and parking structures would be affected by the new structures. However, viewsheds from most public viewing areas (streets and sidewalks) would not be significantly changed. Consequently, project implementation would not significantly affect views from this area.

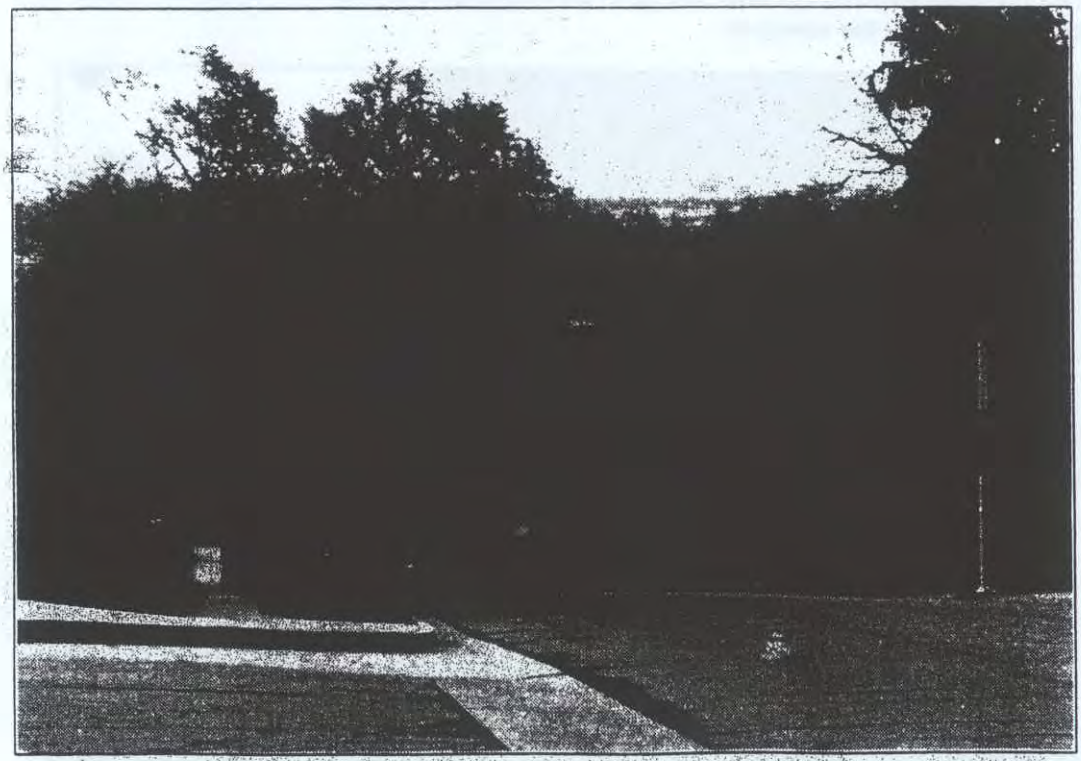
Foothill Road has been designated as a "scenic drive" in the City of San Buenaventura Comprehensive Plan. As the VCMC campus fronts Foothill Road, the subject site lies within the viewshed of this scenic drive. Visual resources along Foothill Road in the vicinity of the project include southwesterly views of the Pacific Ocean and Channel Islands in the background, and the city in the foreground. Land uses in this vicinity include residential housing and the existing VCMC campus facilities. Present views from Foothill Road are partially disrupted by the existing four-story hospital facility located on the southeast corner of the project site.

Project implementation would entail the construction of four new structures on the VCMC Campus. Due to the north to south slope of the project site, only the Medical Examiner Facility, located near the top of the slope in the northwest portion of the project site, would affect views from Foothill Road. The other three buildings, located downslope from the Medical Examiner Facility, would be constructed at heights and finished-grades that would not significantly obstruct views from Foothill Road. The effect of the Ambulatory Care Clinic and parking structure on the viewshed would be to interrupt the views of the existing hospital itself and other nearby facilities, and not to adversely affect distant ocean, island, and city views. Therefore, these proposed facilities would not impact any scenic highways or other viewshed features in the project area. Nevertheless the proposed project would likely affect views from several residences along Agnus Drive, immediately east of the campus.

The location of the proposed Medical Examiner Facility could potentially affect aesthetics of Foothill Road by blocking southerly views of the ocean and city. However, the finished grade of the facility would be lower than that of the Foothill Road grade, diminishing the effective height of the structure and its impact on the Foothill Road viewshed. Figure 3.8-3



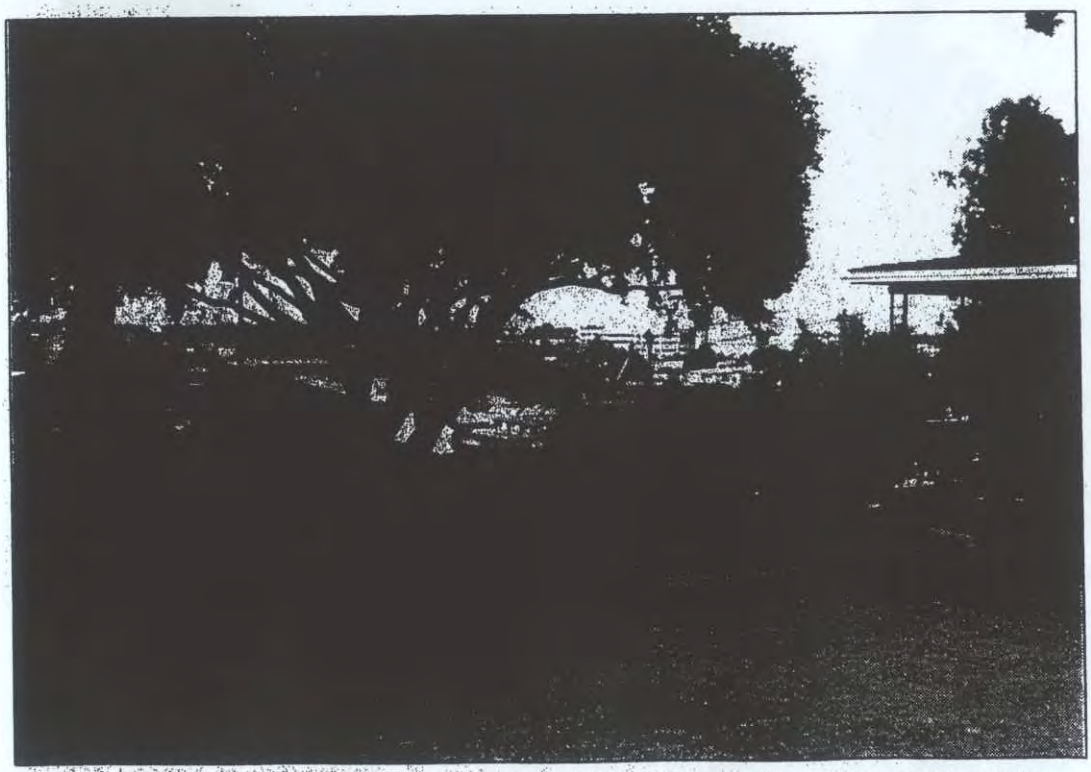
A. Existing view of the VCMC campus and uses south of the campus from 628 Whitecap Drive.



B. Existing view looking south along Agnus Drive from the intersection of Agnus Drive and Fairmont Drive. This view would not be altered by project implementation.

EXISTING VIEWS OF THE VCMC CAMPUS

A. Public view of the VCMC campus and uses southwest of the campus from 404 Agnus Drive. The only campus structure that can be seen from this location is the VCMC Hospital. The proposed Ambulatory Care Clinic and parking structure would be visible but would not significantly affect the viewshed.



B. View of the VCMC campus from a side yard at 365 Agnus Drive. Although it would be partially obscured by the tree in the center-left of the photograph, the proposed parking structure would be visible from this location in the left portion of the photo.

EXISTING VIEWS
OF THE VCMC CAMPUS

illustrates the potential impact of the structure by comparing the existing view from Foothill Road to that which would exist following project implementation.

The following design features, which would be incorporated into the proposed Medical Examiner facility, would serve to minimize visual impacts associated with the proposed structure:

- Landscaping materials should not include trees or shrubs that would ultimately exceed the height of the building, so as not to obstruct distant views.
- The building would be a single story, and building elevations would be stepped to effectively be compatible with surrounding topography and natural slope lines.
- All mechanical operational units would be entirely screened from view of the Foothill Road view corridor.

The proposed one-story facility would also utilize setbacks and landscaping in its design, and would represent continuity of land uses on the project site. Implementation of these design features would render potential visual impacts associated with the Medical Examiner facility to a level that is less than significant.

c. **Loma Vista Road frontage.** The primary and most visually prominent frontage of the VCMC campus is along the north side of Loma Vista Road. There are three campus structures that front the street from east to west: the four-story Hospital complex, the two-story the former PSSA building, and across Hillmont Avenue, the one-story Public Health Department building. The middle structure, the two-story former PSSA building, is scheduled to be demolished and replaced with a one-story Mental-Health In-Patient Unit.

There are no explicit City or County design guidelines that govern the Loma Vista Road frontage.

As a result of this proposed change, the visual character would be altered in two ways. The height at the overall frontage profile would be lower, allowing a broader backdrop views of the hills behind the VCMC campus. Additionally, the consistent front yard setback would be interrupted, owing to the fact that the Mental-Health In-Patient Unit structure would extend closer to the street. At the same time, designs for the new structure include a curvilinear wall, which would be incorporated into the architecture and landscaping plan. The setback would remain larger than the adjacent private medical buildings immediately west of the campus, which are developed in a "zero-lot line" manner.

Because of the reduced building massing and the setback conditions in the larger context of the Loma Vista Road district, the visual impacts related to the proposed Mental-Health In-Patient Unit would not be significant. However, the potential obstruction of views from Agnus Drive that would occur as a result of implementation of the proposed Ambulatory Care Clinic and parking structure could represent a significant effect.

Existing southern view from 3133 Foothill Road.

Proposed southern view from 3133 Foothill Road following implementation of the Coroner/ Medical Examiner Facility Phase of the proposed project.

POTENTIAL VIEW IMPACTS FROM THE PROPOSED MEDICAL EXAMINER FACILITY

3.8.2 Mitigation Measures

Measures should be developed that could mitigate view obstruction from residences on Agnus Drive.

3.9 PALEONTOLOGICAL RESOURCES

3.9.1 Potential Impacts

The project site is located in a zone of undetermined paleontological potential.[6] As the project site is currently developed and has been extensively disturbed by previous construction and excavation, the probability of encountering significant resources is considered remote. Therefore, potential impacts to paleontological resources are considered to be less than significant.

3.9.2 Mitigation Measures

No mitigation measures are required; however, in the event that paleontological resources are uncovered during excavation and construction, the County of Ventura requires that work in the vicinity of the find be temporarily suspended and a qualified paleontologist be contacted to evaluate the find. Once the find has been examined and evaluated, and an appropriate mitigation plan has been agreed upon, construction or excavation work on the project site may continue.

3.10 CULTURAL RESOURCES

3.10.1 Potential Impacts

a, b, and c. Archaeological, Historical and Ethnic, Social or Religious. Due to the developed nature of the site, the probability of encountering significant archaeological, cultural or historic resources is considered remote. Therefore, potential impacts to cultural resources are considered less than significant.

3.10.2 Mitigation Measures

No mitigation measures are required; however, in the event that archaeological resources are uncovered during excavation and construction, the County of Ventura would require that work in the vicinity of the find be temporarily suspended and a qualified archaeologist be contacted to evaluate the find. Once a find has been examined and evaluated, and an appropriate mitigation plan has been agreed upon, construction or excavation work in the area may be continued.

3.11 ENERGY RESOURCES

3.11.1 Potential Impacts

During the construction phase of the proposed project, oil and gas reserves would be used for the operation of construction equipment. Due to the size of the proposed project, the quantity of these resources required would not significantly impact energy resources available in the project area.

Electricity for the new facilities would be produced and sold to the VCMC by Southern California Edison. Natural gas would be provided by the Southern California Gas Company.

The proposed project would increase daily consumption of electricity on the subject site by an estimated 3,832 kilowatt hours (kWh) and increase daily natural gas consumption by an estimated 12,501 cubic feet. Energy purveyors indicate that they can meet this level of demand without service interruption. In addition, the project would incorporate energy efficiency into design, in accordance with Title 24 of the California Code of Regulations. Impacts would therefore be less than significant.

3.11.2 Mitigation Measures

No mitigation measures are required.

3.12 COASTAL BEACHES AND SAND DUNES

3.12.1 Potential Impacts

The proposed project site is not located within the vicinity of any coastal area. Therefore, no impacts to coastal beaches and/or sand dunes would occur as a result of project implementation.

3.12.2 Mitigation Measures

No mitigation measures are required.

3.13 SEISMIC HAZARDS

3.13.1 Potential Impacts

The subject site is located on the northern flank of the Ventura basin, a major structural trough within the larger Transverse Ranges Geomorphic Province of California. The Ventura Basin is a structurally controlled basin bordered on the north by the Red Mountain and the San Cayetano faults, and on the south by the Oak Ridge fault. This region is characterized by east-

west trending structural features such as the Ventura Avenue Anticline, the Ventura syncline, and the Red Mountain, Oak Ridge, San Cayetano, and Ventura faults.

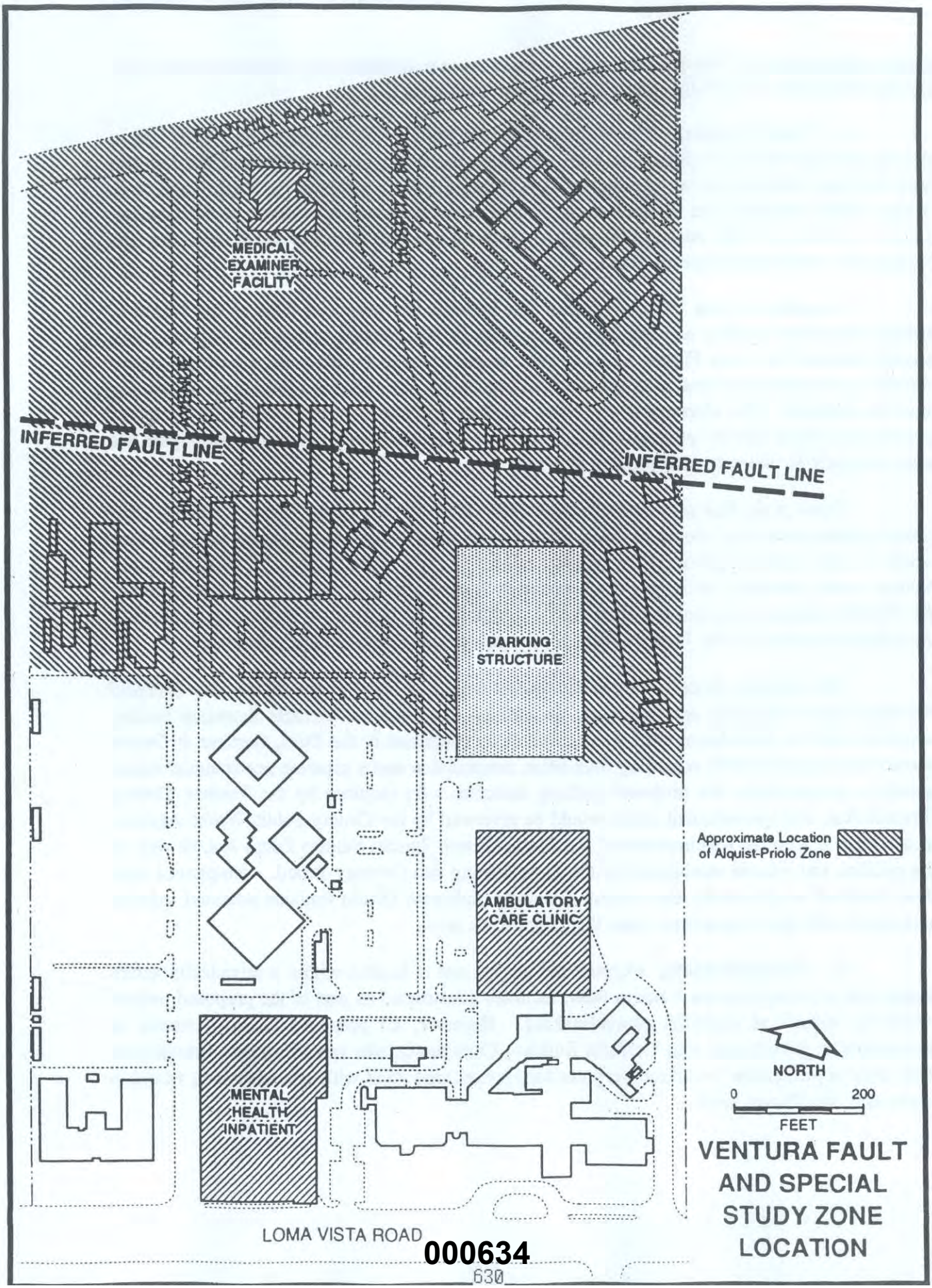
a. Fault Rupture. The Ventura fault runs through the middle of the project site in an east-west direction (see Figure 3.13-1). Although the seismogenic potential of the Ventura fault has been debated among geologists, a geotechnical report prepared by Staal, Gardner & Dunne (1992) indicates that the fault is considered active based upon evidence of deformation within the Holocene (the past 11,000 years). Because the fault traverses the subject site, the potential for onsite fault rupture exists.

A portion of the VCMC campus that includes the proposed sites of the Coroner/ Medical Examiner facility and the parking structure is also located within the Alquist-Priolo Special Studies Zone (see Figure 3.13-1). Prior to construction in this zone, a geologic report identifying hazards associated with surface fault rupture for any structures for human occupancy must be prepared. The aforementioned Staal, Gardner & Dunne report identifies fault rupture hazards associated with the proposed Medical Examiner facility; however, no geologic report has been prepared for the proposed parking structure.

Three of the four proposed structures (Mental Health In-patient Unit, Ambulatory Care Clinic, parking structure) would be constructed on the sites of existing structures, and therefore would not increase the potential for impacts related to fault rupture. The Medical Examiner facility would, however, be located on a currently undeveloped site in the northwest corner of the VCMC campus, as shown in Figure 3.13-1. Although the location of the facility is north of the inferred location of the Ventura fault, the exact location of the fault is unknown.

All structures built as part of the project would be built in accordance with Uniform Building Code earthquake specifications. In addition, the proposed Medical Examiner facility would be built in accordance with recommendations contained in the Staal, Gardner & Dunne geotechnical report (1992) regarding foundation construction and a separate geotechnical report would be prepared for the proposed parking structure. As required by the Ventura County General Plan, this geotechnical report would be reviewed by the County Public Works Agency, in accordance with the requirements of the Alquist-Priolo Special Studies Zones Act, as well as the policies and criteria established by the State Mining and Geology Board. Compliance with these standard requirements and additional recommendations should mitigate potential impacts associated with fault rupture to a less than significant level.

b. Groundshaking. Because the project site is located within a seismically active region and is crossed by the Ventura fault, facilities constructed as part of the proposed project would be subject to potential groundshaking. However, all proposed facilities would be constructed in accordance with Uniform Building Code earthquake specifications. Compliance with these requirements would reduce potential impacts associated with groundshaking would to a less than significant level.


POOTHILL ROAD
POOTHILL ROAD
MEDICAL EXAMINER FACILITY
INFERRED FAULT LINE
INFERRED FAULT LINE
PARKING STRUCTURE
AMBULATORY CARE CLINIC
MENTAL HEALTH INPATIENT
LOMA VISTA ROAD
Approximate Location of Alquist-Priolo Zone
NORTH
0
200
FEET
VENTURA FAULT AND SPECIAL STUDY ZONE LOCATION

c. Tsunami. The elevation of the project site place it outside the tsunami hazard zone established by the Ventura County General Plan Hazards Appendix (1989). Therefore, no tsunami related impacts would be associated with project implementation.

d. Seiche. The project site is not located near any large inland body of water that could potentially be affected by seiche conditions during a seismic event. Therefore, no seiche-related impacts would result from project implementation.

e. Liquefaction. The project site is located outside the liquefaction hazard zone established by the Ventura County General Plan Hazards Appendix. Groundwater levels onsite are estimated to be approximately 40 feet below the surface. Groundwater was not encountered onsite during the Staal, Gardner & Dunne geotechnical study (1992). Therefore, no liquefaction related impacts would be associated with project implementation.

3.13.1.1 Mitigation Measures

No mitigation measures are required.

3.14 GEOLOGIC HAZARDS

3.14.1 Potential Impacts

The topography of the site is characterized by a slight north to south slope on the southern portion and a medium north to south slope in the north-northwest portion. Elevations of the site range from approximately 147 feet above sea level on the southern portion of the site to 235 feet above sea level. Soils located on the majority of the site are mapped as Sorrento loam, with some areas of Soper gravelly loam.

a. Subsidence. The project site is located outside subsidence zones established in the Ventura County General Plan Hazards Appendix (1989). However, both Sorrento loam and Soper gravelly loam have moderate shrink-swell characteristics. Therefore, although soils onsite are not characterized as hazardous, the potential for soil subsidence does exist onsite. Project implementation would be in accordance with standard geotechnical practices and would comply with recommendations regarding excavation and compaction in the Staal, Gardner & Dunne geotechnical study. This would reduce potential impacts associated with subsidence to less than significant levels.

b. Expansive Soils. The project site is located within a moderate expansive soil zone, as established by the Ventura County General Plan Hazards Appendix. Both Sorrento loam and Soper gravelly loam soils have moderate shrink-swell characteristics. Therefore, the potential exists for expansive soils to be located onsite. All construction associated with the proposed project would be accordance with standard geotechnical practices and would comply with recommendations regarding excavation and compaction in the Staal, Gardner & Dunne geotechnical study. As soils onsite are not expected to have high expansive characteristics, potential impacts from soils onsite are considered to be less than significant.

c. Landslides/Mudslides. The project site is not located within any landslide/ mudslide zones established by the Ventura County General Plan Hazards Appendix. Therefore, project implementation would not be expected to result in any significant landslide or mudslide impacts.

3.14.2 Mitigation Measures

All construction associated with the proposed project would be in accordance with standard geotechnical requirements and the recommendations of the Staal, Gardner, and Dunne Fault Hazard Study for the Medical Examiner's Facility. No mitigation measures are required.

3.15 HYDRAULIC HAZARDS

3.15.1 Potential Impacts

a. Erosion/Siltation. As discussed in Section 3.14, soils on the project site consist of loamy soils of the Sorrento and Soper series. The majority of the site is covered by Sorrento loam. Surface runoff for this soil is characterized as medium, and erosion hazards are considered to be slight.

During the construction phase of the project, soils exposed by onsite grading and foundation construction could be affected by wind and water erosion. As discussed in Sections 3.3 and 3.4, standard construction techniques would be undertaken in order to reduce short-term wind and water erosion. These standard techniques would reduce construction related erosion/siltation impacts to a less than significant level.

Project implementation would include revegetation of all constructed slopes and graded areas. Such revegetation would minimize the potential for long-term sediment transport from the project site. Therefore, potential long-term impacts from soil erosion and/or siltation would be reduced to a less than significant level.

b. Flooding. The proposed project site is not located within any 100-year floodplain as established by the FEMA Flood Insurance Rate Map for the City of San Buenaventura (1985). Therefore, no significant flood-related impacts would occur as a result of project implementation.

3.15.2 Mitigation Measures

As discussed above, project implementation would include revegetation of all constructed slopes and graded areas. No mitigation measures are required.

3.16 AVIATION HAZARDS

3.16.1 Potential Impacts

The subject site is not located within any of the airport hazard zones established by the Ventura County General Plan Hazards Appendix (1989). However, the hospital currently receives helicopter flights on an emergency basis. These flights currently arrive at and depart from a helicopter pad located atop the VCMC hospital in the southwest corner of the site.

None of the facilities proposed as part of the project would be for emergency medical service. Therefore, project implementation would not increase the need for emergency helicopter service on the subject site and no additional impacts related to helicopter hazards would occur. On-site helicopter operations would continue to comply with Federal Aviation Administration safety requirements.

3.16.2 Mitigation Measures

No mitigation measures are required.

3.17 FIRE HAZARDS

3.17.1 Potential Impacts

The subject site is located within a low fire hazard zone. Although project implementation would result in additional structures, these structures would be built in accordance with the Uniform Fire Code regulations, including the use of flame retardant building materials where feasible. In addition, the project involves demolition of older structures which were not originally designed with fire preventative features required today. As a result, the proposed project likely represents an improvement in fire safety features over the current VCMC development.

Project implementation would not introduce new fire hazards into the project area. Therefore, no project-specific or cumulative impacts to fire hazard would be associated with project implementation.

3.17.2 Mitigation Measures

No additional mitigation measures are required.

3.18 HAZARDOUS MATERIALS/WASTE

3.18.1 Potential Impacts

a. Above-Ground Hazardous Materials. Above-ground hazardous materials currently stored on the project site include paint and paint thinner waste oil. Project implementation would not significantly increase the use or storage of hazardous materials onsite. Therefore, no project-specific or cumulative impacts would be associated with project implementation.

b. Below-Ground Hazardous Materials. A 12,000-gallon underground tank containing diesel and a 15,000-gallon tank containing #5 fuel oil currently exist on the project site. The proposed project would not affect either of these tanks or include the installation or use of any additional underground tanks for the storage of hazardous materials. Therefore, no project-specific or cumulative impacts would be associated with project implementation.

c. Hazardous Waste. The proposed project would not generate significant quantities of hazardous waste during construction or operational phases. However, bio-medical wastes are currently generated on-site and would continue to be generated following project implementation. Although no significant increase in the generation of infectious wastes is anticipated, the improper storage, handling, and disposal of bio-medical wastes could contaminate groundwater and surface water resources. Direct contact with these wastes could also result in adverse health effects to humans. However, compliance with applicable California Department of Health and Safety regulations enforced by the Environmental Health Division would reduce any potential adverse impacts related to bio-medical wastes to a level considered less than significant.

3.18.2 Mitigation Measures

No mitigation measures are required.

3.19 NOISE AND VIBRATION

3.19.1 Potential Impacts

Both the City and County of Ventura have established standards for noise-sensitive uses, measured in Community Noise Equivalent Levels (CNEL). County noise level criteria dictate that indoor noise levels in habitable rooms not exceed 45 dBA CNEL. Outdoor noise levels should not exceed 60 dBA CNEL. A significant impact would occur if: (1) a proposed project would subject a noise-sensitive use to noise levels in excess of these standards; or (2) a proposed project would result in an increase in ambient noise levels of 3 dB(A) to Leq 50 dB(A), whichever is greater, during any hour from 6 a.m. to 7 p.m.

Project construction would generate temporary noise impacts at potentially significant levels. Short-term noise is associated with heavy equipment involved in demolition, grading, and construction of facilities proposed as part of the project. Noise levels associated with

construction activity typically range from 73 to 96 dBA at 50 feet from individual pieces of equipment. Such noise level may adversely impact sensitive receptors at medical and educational facilities on the VCMC campus as well as adjacent single family residences. Construction activities would conform with standard operating procedures, including limiting construction activity to between 8 a.m. and 5 p.m. and the use of temporary, movable construction noise barriers, when feasible, to shield sensitive receptors such as adjacent residences and the campus hospital and clinics. Nevertheless, impacts would be adverse and unavoidable. However, because noise level increases associated with construction activity would be temporary in nature, impacts would be considered less than significant.

Long-term impacts would result primarily from traffic on adjacent roadways. Sensitive receptors for long-term noise located on the VCMC campus include the Hospital, Mental Health In-patient Facility, and Juvenile Complex. The proposed project would site the Mental Health In-patient Facility fronting Loma Vista Road east of Hillmont Drive. Other proposed facilities would be set back from roadways and would not be expected to experience significant noise impacts.

Noise levels associated with traffic along Loma Vista Road at Hillmont Drive were estimated using a modification of the updated version of the Federal Highway Noise Model (Stamina 2.0) published by the Federal Highway Administration in 1982. This model provides the user with CNEL noise levels by using average daily traffic volumes (ADTs), vehicle speeds, and distances to receptors. The 1991 Traffic volumes used in this model were provided by the City of Ventura. The maximum posted speed in the vicinity of the project site is 35 mph on both Loma Vista Road and Hillmont Avenue. The average distance to receptors is assumed to be approximately 50 feet from roadway centerline.

The model indicates that the current exterior noise level at the front of the proposed Mental Health In-patient Facility property line is approximately 68.4 dBA CNEL. This exceeds the 60 dBA CNEL County threshold by over 8 dBA. Based upon the proposed increase in net square footage at the VCMC campus, implementation of the proposed project could potentially result in increases to existing traffic levels on Loma Vista Road east of Hillmont by up to 351 trips per day. Noise levels generated by traffic increases along these roadways would also be increased. Noise modeling for project-related traffic increases indicates that ambient levels plus project-related increases would yield a receptor exterior noise level of 68.5 dBA CNEL at the front of the Mental Health In-patient Facility, a 0.1 dBA increase over existing levels. Exterior noise levels would remain above the 60 dBA CNEL threshold for habitable rooms but the noise level increase would not be perceptible to the human ear.

Based upon the results of the Stamina 2.0 model, project implementation would not significantly increase noise levels along Loma Vista Road. However, as proposed, the Mental Health In-Patient facility would abut Loma Vista Road, thereby placing a noise sensitive land use in an area with projected ambient noise levels well in excess of the County's 60 dBA CNEL standard.

To reduce noise levels at the facility's sensitive uses (patient rooms), patient rooms and most exterior use areas would be sited to rear of the Mental Health Unit, away from Loma Vista. This would allow the structure to act as a noise attenuation device, shielding patient rooms and most outdoor use areas from excessive vehicle-generated noise. Specialty wall and glazing materials would also be used for building construction. In addition, a 10-foot wall would be constructed at the front of the facility along Loma Vista Road, thus attenuating noise levels at exterior use areas in the front of the facility. As shown in Appendix B, this wall would reduce exterior sound levels at the front of the facility by approximately 12 dBA, bringing exterior noise levels at the front of the Mental Health In-patient facility to about 56.5 dBA CNEL. These design features would therefore reduce long-term traffic noise impacts to less than significant levels.

Tire squeal noise in the proposed parking facility could also create long-term noise impacts, particularly during nighttime hours when ambient noise levels are lower. While all paving within the structure and on all external ramps would be Portland Cement Concrete with a nonsqueal finish, impacts from this nuisance noise may be significant. In addition, engine start-ups, and door slams could create noise that could annoy residents immediately east of the proposed project.

3.19.2 Mitigation Measures

Measures should be developed which will address potentially significant nuisance noise generated by activity within the parking structure as part of an EIR process.

3.20 LIGHT AND GLARE

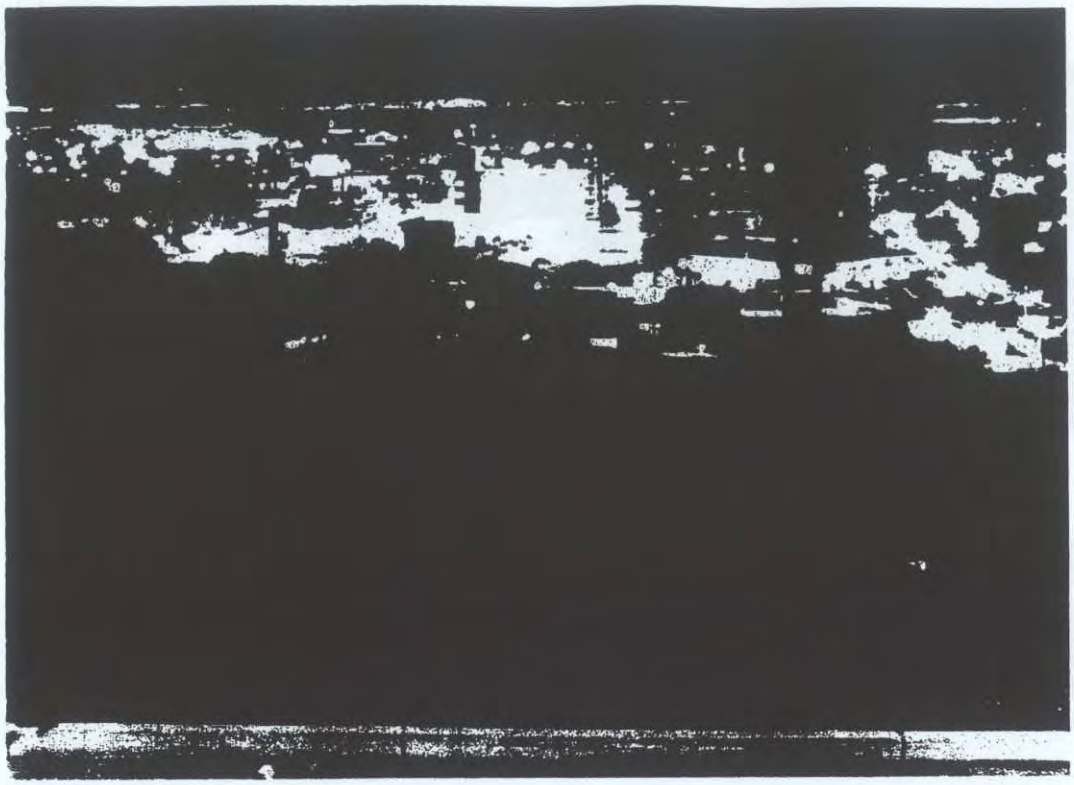
3.20.1 Potential Impacts

Receptors in the project site area that may be sensitive to increased light and glare include the residential units east and west of the VCMC campus, as well as residences north of Foothill Road. The VCMC campus is currently equipped with night lighting for safety and security reasons. Figure 3.20-1 compares daytime views of the VCMC campus to nighttime views. The new facilities constructed as part of the proposed project would also be illuminated at night, and could potentially increase the quantity of night lighting in the project area. The potential effect of the new lighting sources on the campus to residences north of Foothill Road is shown in Figure 3.20-2. As the figure illustrates, the addition of proposed structures would alter nighttime lighting conditions by adding two new large structures which would also be internally and externally illuminated. However, because the project site is already lighted with both structural and parking lot illumination, project implementation would not substantially increase lighting sources on the campus. In addition, new lighting sources would be shielded and projected toward the ground to decrease the quantity of light radiated into the nighttime sky. Also, lighting for the rooftop level of the parking structure would be limited to the parapet height, so as not to cast lighting on surrounding areas. Nevertheless, potential light impacts

Daytime view of the VCMC campus from north of the site along Grove Street.

Nighttime view of the VCMC campus from north of the site along Grove Steet.

DAY vs. NIGHT VISUAL CHARACTER



Pre-project view of the VCMC campus.

Post-project view of the VCMC campus.

associated with project implementation have caused concern for residents immediately east of the site and may be significant.

Glare is produced by light reflected off atmospheric particles and dispersed into the surrounding area. Reflective surfaces such as metal cars and glass buildings, and unshielded light bulbs may create glare. The proposed project would utilize non-reflective materials in its construction, and is not expected to add significant amounts of reflective surfaces to the site. Additional sources of light would be added, but would be expected to cause only minimal, if any, glare. Automobiles on the top level of the proposed parking structure may cause glare impacts. However, impacts would not be expected to be greater than currently exist on site and would not be significant. Overall glare impacts associated with project implementation would therefore be less than significant.

Potential shadowing effects may adversely affect residences along Agnus Drive.

3.20.2 Mitigation Measures

Mitigation Measures should be developed to address potentially adverse light and shadow effects as part of the EIR preparation process.

3.21 TRAFFIC AND CIRCULATION

3.21.1 Potential Impacts

Potential traffic impacts associated with the proposed project were examined for five critical intersections in the City of San Buenaventura. These five study intersections include the following:

- Main Street at Loma Vista Road
- Main Street at Telegraph Road
- Main Street at Mills Road
- Main Street at Seaward Avenue
- Mills Road at Telegraph Road

In conformance with the City of San Buenaventura requirements and the County of Ventura's Congestion Management Plan (CMP) guidelines, the PM peak hour operating conditions at the five study intersections were investigated according to the Intersection Capacity Utilization (ICU) Method. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship based on the individual V/C ratios of key conflicting movements.

The intersection capacity analysis was performed for: (1) existing traffic conditions; and (2) existing plus project traffic conditions. Traffic volume data used in the analysis was based upon modeled data obtained from the City's MINUTP model. This data was provided by

City of San Buenaventura staff. The trip generation rates used to forecast the proposed project's trip generation were based upon the existing square footage and the number of employees currently arriving/departing the hospital during peak traffic hours. This data was also provided by City of San Buenaventura staff.

The trip generation forecast for the proposed expansion is based on trip generation rates developed by City of San Buenaventura staff. The trip generation rates developed were based on the existing VCMC square footage (398,157 square feet) and the number of employees (1,016) currently arriving/departing the hospital during peak hours.

Based on calculations by City staff, the daily traffic rate for the VCMC is 10.2 trips per thousand square feet (10.2/KSF), with a PM peak hour trip generation rate of 1.02 trips per thousand square feet (1.02/KSF). The directional split for VCMC traffic during the PM peak hour is 38 percent inbound and 62 percent outbound. Using these rates, the proposed VCMC expansion would generate approximately 797 vehicle trips per day with approximately 80 of these trips occurring during the PM peak hour (30 inbound, 50 outbound).

Table 3.21-1 summarizes the PM peak hour levels of service at the five study locations. This table indicates that four of the five study area intersections currently operate at acceptable levels of service during the PM peak hour. (LOS C is the minimum acceptable level according to City of San Buenaventura standards.) Only the intersection of Main Street at Mills Road currently operates at a poor level of service during this period with a V/C ratio of 0.84 (Los D).

Table 3.21-1. PM Peak Hour LOS Summary Table
Ventura County Medical Center Expansion

Intersection	Existing Conditions		Existing Plus Project Conditions		Change in V/C Ratio	Project Peak Hour Trips added to Critical Movements
	LOS	V/C Ratio	LOS	V/C Ratio		
Main Street @ Loma Vista Road	A	0.44	A	0.44	0.00	4 trips
Telegraph Road	A	0.50	A	0.50	0.00	4 trips
Mills Road	D	0.84	D	0.85	+0.01	15 trips
Seaward Avenue	B	0.69	B	0.69	0.00	7 trips
Mills Road @ Telegraph Road	A	0.52	A	0.52	0.00	8 trips

According to City standards, a project would have a significant traffic impact when the addition of project traffic to an intersection exceeds the threshold criteria allowed for added peak hour trips to the critical movements of an intersection. For an intersection that operates at LOS D, the threshold criterion is 15 peak hour trips. The threshold criteria for intersections operating at LOS C, B, and A are 45 trips, 75 trips, and 150 trips, respectively.

As shown in Table 3.21-1, the addition of project traffic to the existing volume network would not result in any significant impact at the five study intersections. The addition of VCMC traffic to the intersection at Main Street and Mills Road would total 15 trips, which would result in a V/C ratio increase of 0.01 (from 0.84 to 0.85). The increase in trips at this key intersection approaches the threshold but is not greater than the threshold value. Therefore, the impact associated with project-generated traffic is considered insignificant. At the four remaining intersections, from four to eight trips would be added to the critical movements, resulting in V/C ratio increases of 0.00.

However, capacity analysis was conducted only at five intersections deemed by City of San Buenaventura staff to be critical. Certain signalized intersections near the hospital that have not been analyzed may be adversely affected. In addition, the County of Ventura has indicated that an analysis should include roadways in the County General Plan that could be adversely affected.

3.21.2 Mitigation Measures

Further analysis should be conducted to determine appropriate traffic mitigation if roadway segments or intersections not analyzed to date will be adversely affected. In addition, the parking demand should be analyzed in greater detail.

3.22 WATER SUPPLY

3.22.1 Potential Impacts

a. Water Quality. The project site is not located near any surface or groundwater sources of municipal water supply. Therefore, no impacts to the quality of water supply would occur as a result of project implementation.

b. Water Quantity. Water supply is currently provided to the project site by the Casitas Municipal Water District via a network of feeder lines extending from 12-inch City lines located along Loma Vista, Foothill Road and Hillmont Avenue.

The proposed project would be subject to City of Ventura Resolution No. 92-73, which states that any increase in water consumption resulting from non-residential development must be offset by a decrease in water consumption at a 3:1 ratio. Based on the water demand rates contained in Resolution No. 92-73, implementation of the proposed project would result in a water demand increase of approximately 4,604 gallons per day (gpd) (see the VCMC Water Audit). This demand rate is based upon gallons per square foot demand for the various uses on the site. Because project implementation would primarily increase building square footage without directly increasing employee or patient populations, this estimate may overstate the demand increase that would actually occur.

The additional project demand would be offset by fixture retrofitting, in accordance with Resolution No. 92-73. Based upon a demand increase of approximately 4,604 gpd, the proposed project would require a water savings of 13,812 gpd. According to Resolution No. 92-73, this required savings would correspond to the retrofit of between 96 and 207 toilets with ultra low flow fixtures to meet the 3:1 offset goal (see the VCMC Water Audit, 1993). Part or all of the required water savings could also be met by the retrofit of existing on-site landscaping and irrigation systems with drought-tolerant landscaping and drip irrigation systems.

The range in the required number of retrofit toilets is based upon the frequency of fixture use with regards to land use. These retrofits would be in addition to the use of ultra low flow toilets in the new structures. The number of fixtures required for this retrofit is currently available at various existing facilities on the VCMC campus; therefore, fixture retrofit could take place entirely onsite. However, the required retrofits could also be achieved off-site. Compliance with Resolution No. 92-73 would more than offset the increase in water consumption associated with proposed project and would reduce impacts to local water supply to a less than significant level.

In addition, the following water conservation techniques would be integrated into project design:

- Low flow shower heads (2.5 gallons per minute or less at 40 psi) would be installed on all new construction.
- Sink and lavatory faucets which limit the flow of water to a maximum of 2.5 gallons per minute at 40 psi, would be installed on all new construction.
- New landscaping developed on the subject site in conjunction with the proposed project would be drought-tolerant.
- Drip, mini-emitter or low volume sprinkler irrigation systems would be used for all new landscaping developed in conjunction with the proposed project.

c. **Fire Flow.** Project design would include adequate hydrant coverage for the new facilities, as per the Uniform Fire Code. Ventura County Fire Department staff indicate that standard sprinkler systems within the proposed facilities would reduce the fire flow required by approximately 50 percent. Fire flows in the area are adequate to accommodate the proposed facilities and would not be affected by project implementation.[7] Therefore, no project-specific or cumulative impacts to fire flow would occur due to project implementation.

3.22.2 Mitigation Measures

No mitigation measures are required.

3.23 WASTE TREATMENT/DISPOSAL

3.23.1 Potential Impacts

a. Individual Sewage Disposal System. The proposed project would be connected to the City's sewer treatment system and would not utilize individual sewage disposal systems onsite. Therefore, no project-specific or cumulative impacts to individual sewage disposal systems would be associated with project implementation.

b. Sewage Collection/Treatment Facilities. Sewage collection treatment of the proposed facility is provided by the City of Ventura's Wastewater Reclamation Plant. The plant provides tertiary treatment and has an existing design capacity of 14.0 MGD (average daily flow). The plant is currently operating at 8.1 MGD. Project-generated sewage can be estimated based on water usage of the proposed project. As discussed in Section 3.22, project implementation would result in a water demand increase of 4,604 gpd. However, this water consumption increase would be more than offset by the reduction in consumption related to toilets retrofitted in association with the requirements of City of Ventura Resolution No. 9273. Therefore, no project-specific or cumulative impacts to sewage collection or treatment facilities would occur due to project implementation.

c. Solid Waste Facilities. Solid waste generated within the City of Ventura, including the VCMC campus, is deposited in the Bailard Landfill. The permit to operate the landfill is scheduled to expire in December 1993.[8]

Based on the Ventura County Solid Waste Management Department's (VCSWMD) solid waste generation rates, current solid waste generation on the VCMC campus is estimated at 1,401 tons per year (tpy), as shown in Table 3.23-1. The majority of the waste (70 percent) is generated at the VCMC Hospital while the remaining 30 percent is divided among the various other campus facilities.

Such materials as office paper, newspaper, cardboard, HDPE and PET plastic, glass, and aluminum are currently recycled through the County's RAP (Recycle All Paper) program in most buildings on the VCMC campus, and limited recycling is taking place in the Hospital. Paper recycling containers are currently located in facility offices and beverage container recycling receptacles are located in kitchen and dining areas. There are two paper only recycling bins and eight mixed recyclable material bins on the campus.

According to the VCSWMD, the lack of adequate space for refuse and recyclables bins is one of the primary constraints to management of recycling and refuse disposal on the VCMC campus. This lack of space is due to both a shortage of space for receptacles as well as the lack of a baler or other system to break down bulky cardboard boxes, which constitute a large portion of the VCMC wastestream.[9]

Table 3.23-1 Current Solid Waste Generation

Facility	Square Feet	Generation Rate (tons/sf/yr)	Total Generation (tons/yr)
Hospital	178,995	.0055	984.5
PSSA Building	25,140	.0014	35.2
Public Health	18,312	.0027	49.4
Mental Health Complex	37,655	.0027	101.7
Family Care Complex	32,555	.0027	87.8
Plant Operations	30,581	.0014	42.8
Bard Building	24,754	.0014	34.6
Juvenile Complex	50,165	.0013	65.2
Total	**398,157**		**1,401.2**

The VCSWMD has developed guidelines for solid waste analysis, including solid waste generation and reduction rates. These guidelines state that a project shall be considered individually significant if the solid waste disposal rate exceeds 65 net tons per year (tpy) and the solid waste diversion rate is less than 25 percent.

Based upon the County's per employee waste generation rates for health services, the proposed project would increase long-term solid waste generation at the VCMC campus by an estimated 127.96 tpy (see Appendix C). In addition, short-term increases in solid waste generation would occur during project-related demolition and construction.

The long-term generation associated with project implementation would exceed the County' significance threshold. However, VCMC staff are currently in the process of developing a more extensive recycling program which will extend current programs to the Hospital and any new facilities constructed on the campus.

Combined, the materials that are currently recycled on the VCMC campus through the RAP program account for approximately 19.5 percent of the total 127.96 tpy increase in solid waste generation that would occur as a result of project implementation. If all such materials generated by new campus facilities are recycled, as much as a 24.98 tpy reduction in solid waste disposal could be achieved. Assuming that the materials recycled through the RAP program also account for 19.5 percent of the waste generated at the VCMC Hospital, extension of the RAP program to that facility would reduce on-site waste disposal by up to 192 tpy. Implementation of campus-wide recycling efforts would supplement project programs and mitigate the project's effects.

In addition to the extension of the currently planned recycling program to the VCMC Hospital and all new facilities that are part of the proposed project, the following features will be implemented campus-wide to further reduce solid waste generation on the VCMC campus:

- The VCMC will mulch the grass clippings from campus lawns rather than disposing of the clippings. If existing equipment will not mulch the clippings, one or more mulching lawn mowers will be purchased by the VCMC. Grass clippings on campus lawns will be used as mulch for campus landscaping rather than the current method of disposing clippings in trash receptacles. In addition, a "green bin" recycling program will be initiated for other yard wastes. Yard waste accounts for an estimated 13.8 percent of the increase in waste generation associated with the proposed project. Diversion of all yard wastes generated in association with the proposed project could therefore reduce the increase in solid waste generation associated with project implementation by up to 17.77 tpy. Implementation of campus-wide mulching could reduce the generation of such waste by an even greater amount.

- The VCMC will develop an on-site or off-site composting program for organic compostable wastes generated on the campus. One possible approach would be to compost kitchen scraps from their own facility using worm boxes or closed air compost containers. This approach would require at least one day of labor every six months to harvest finished vermipost or compost as well as regular maintenance of the worm boxes or compost bins. Organic compostables constitute an estimated 11.8 percent of the increase in solid waste generation associated with the proposed project. If all such materials are composted, a disposal reduction of up to 15.1 tpy could be achieved. A campus-wide program would result in an even greater reduction.

- Adequate space for waste and recycling bins, as determined by the Ventura County Solid Waste Management Department, will be provided for all new facilities developed as part of the proposed project.

- The VCMC will purchase a baler for the VCMC facility or develop an alternative method to break down cardboard boxes and reduce the space requirements for recyclable materials bins. An example of an alternative method might be assigning custodians to manually break down cardboard boxes.

- The contractor that conducts project-related construction and demolition activities will be required to develop County-approved plans for the diversion of construction/demolition wastes through source reduction or recycling.

Full implementation of currently planned programs and the additional programs recommended as part of the proposed project could reduce solid waste disposal associated with project implementation by as much as 57.85 tpy (45 percent). In addition, implementation of these programs campus-wide would further reduce waste generation associated with existing on-site facilities while extension of the RAP program to the VCMC Hospital would reduce on-site

disposal by up to 192 tpy. These programs would accomplish as great a reduction as is feasible on the campus and the diversion rate would exceed the County's 25 percent diversion target. Both project and cumulative impacts to County solid waste facilities are therefore considered less than significant.

3.23.2 Mitigation Measures

No mitigation measures are required.

3.24 UTILITIES

3.24.1 Potential Impacts

a. Electric. Electrical service to the project site is provided by Southern California Edison. Current average daily consumption of electricity on the VCMC campus is estimated at 30,273 kilowatt-hours (kWh).[10] Project implementation would increase on-site electrical power consumption and would require the extension of distribution lines to the new facilities. Based upon electricity consumption factors contained in the South Coast Air Quality Management District's (SCAQMD) Air Quality Handbook, the proposed 88,378 square foot increase would increase electrical demand by 3,832 kWh per day.[11] This would represent a 13 percent increase over estimated current on-site consumption. Because the primary purpose of the project is to relieve current overcrowded conditions rather than accommodate an expansion of services, this estimate may overstate the actual increase that would occur.

Southern California Edison staff indicate that this increase in electrical demand would not impact its service in the area and that onsite distribution improvements are expected to be routine.[12] In addition, energy efficiency would be incorporated into project design, in accordance with Title 24 of the California Code of Regulations. Therefore, no project-specific or cumulative impacts to electrical service would be associated with project implementation.

b. Natural Gas. Natural gas service to the subject site is provided by the Southern California Gas Company. Current average daily natural gas use on the VCMC campus is estimated at 47,931 cubic feet. Project implementation would increase natural gas use onsite and would require the extension of distribution lines to the new facilities. Based upon natural gas demand factors in the SCAQMD's Air Quality Handbook, the increase in square footage would result in an increase in demand for natural gas of approximately 12,501 cubic feet per day.[13] This would represent a 26 percent increase over current estimated consumption on the VCMC campus. Again, it should be noted that this estimate may overstate the actual consumption increase because project implementation would primarily relieve current overcrowded conditions on the campus rather than provide for expansion of services.

This increase would not be expected to impact natural gas service in the area and onsite distribution improvements would be routine. Therefore, no project-specific or cumulative impacts to natural gas service would be associated with project implementation.

c. Communications. Communications to the project site is provided by PacBell. Project implementation would require the extension and/or expansion of communications service to the Coroners/Medical Examiner's facility, the Ambulatory Care Clinic, and the Mental Health In-Patient facility. PacBell personnel indicate that this expansion is expected to be routine and would not impact its service in the area. Therefore, no project-specific or cumulative impacts to communication are anticipated.

3.24.2 Mitigation Measures

No mitigation measures are required.

3.25 FLOOD CONTROL/DRAINAGE

3.25.1 Potential Impacts

a. Flood Control District Facility. The project site is not located within the 100-year floodplain. No flood control district facilities are present on or near the project site. The project site itself does not contain any areas which are subject to flooding. Therefore, no project-specific or cumulative impacts to flood control facilities would occur due to project implementation.

b. Other Facilities. As previously discussed, the project site is not located within any floodplain and does not have any areas that are subject to flooding. Onsite drainage is currently routed to Loma Vista Road via Hillmont Avenue. Although project implementation may incrementally increase the amount of impervious surface area onsite, drainage patterns would not be expected to be significantly altered. Any alteration of drainage patterns would be incorporated in the site development plans in accordance with the County of Ventura's Building Code, and Chapter 70 of the Uniform Building Code. Therefore, no project-specific or cumulative impacts to private drainage facilities would occur due to project implementation.

3.25.2 Mitigation Measures

No mitigation measures are required.

3.26 LAW ENFORCEMENT

3.26.1 Potential Impacts

a and b. Personnel/Equipment and Facilities. Police protection for the project site is provided by the City of San Buenaventura Police Department and the Ventura County Sheriff's Department. The nearest City Police Department station to the project site is the department headquarters, located at 1425 Dowell Drive. Response time for the city police department is based upon patrol unit location and the nature of the call, but is under three minutes for emergencies. The closest sheriff's station to the proposed site is the "David" station, located in

the Ventura County Government Center at 800 South Victoria Avenue. Response time to the project site is based upon patrol unit location and nature of the call.

During the first 8 months of 1992, the City Police Department received a total of 264 calls for service from the VCMC campus. In addition, 137 calls for service were received from the 800 block of Hillmont Avenue and the 300 block of Hospital Road. The majority of these calls dealt with missing walkaways from the campus Mental Health Unit. The total number of calls related to the VCMC facilities for the 8-month period are therefore estimated by the City Police Department at 401.

Although project implementation would result in an increase in on-site building square footage, this increase is not expected to affect police service to the site. Nevertheless, project implementation would be expected to incrementally increase the number of calls for service on the VCMC campus. Project related enforcement concerns at the site would include equipment theft and trespassing during construction. During construction and operation of the new facilities, equipment and tools used at the project site would be secured to prevent theft. Long-term enforcement concerns include burglary, auto theft and vandalism during operation of the facilities and crime associated with potentially dangerous patients. The proposed Mental Health In-patient Facility incorporates more stringent security design features than does the existing facility it is replacing. In addition, mental health staff are trained for emergency situations involving patients. Therefore, project implementation is not expected to significantly increase enforcement calls to the project site.

The introduction of structured parking as an element of the proposed project represents a concern for the safety of employees, particularly those walking to their cars in late night hours. These safety issues would be addressed through programming and design features, which would be reviewed by the City Police Department.

3.26.2 Mitigation Measures

No mitigation measures are required.

3.27 FIRE PROTECTION

3.27.1 Potential Impacts

a and b. Distance/Response Time and Personnel, Equipment and Facilities. Fire protection for the site is provided by Ventura City Fire Station No. 2, located approximately 2 miles from the site. Response time to the site is less than 5 minutes and is considered adequate. Additional equipment and personnel are available from Ventura City Stations 3 and 5, located within a 5-mile radius of the project site. City of Ventura fire personnel indicate that staffing and equipment at these stations are adequate to accommodate the proposed project. Therefore, no project-specific or cumulative impacts to fire protection would be associated with project implementation.

3.27.2 Mitigation Measures

No mitigation measures are required.

3.28 EDUCATION

3.28.1 Potential Impacts

a and b. Schools and Libraries. The proposed project would not affect enrollment at area schools or demand for library service. Schools on the VCMC campus may experience air quality and noise impacts during project construction. However, such impacts would be of short-term duration and would be considered less than significant.

3.28.2 Mitigation Measures

No mitigation measures are required.

3.29 RECREATION

3.29.1 Potential Impacts

a, b, and c. Local and Regional Parks, Facilities and Trails. The project would take place entirely on the VCMC campus. Aside from small-scale recreational facilities within both the Youth Detention Complex and the Mental Health In-patient Unit, no recreational uses exist onsite. Project implementation would not affect local or regional parks, facilities, or trails. The Mental Health In-patient facility would include newly programmed recreational space to improve provision of onsite needs. Therefore, no project-specific or cumulative impacts to recreational opportunities would occur due to project implementation.

3.29.2 Mitigation Measures

No mitigation measures are required.

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1 Wood, Steve, Ventura County Planning Department, personal communication, November 1992.

2 Thomas, Chuck, Ventura County Air Pollution Control District, personal communication, November 1992.

3 Ibid

4 Resources Appendix, Ventura County General Plan, 1988.

5 California Natural Diversity Database, 1992.

6 Lander, Bruce, Paleoenvironmental Associates, 1992.

7 Morgan, Diane, Ventura County Fire Protection District, personal communication, November 1992.

8 County of Ventura, Draft Environmental Impact Report: Weldon Canyon Landfill, 1992.

9 David Goldstein, Ventura County Solid Waste Management Department, January 1993.

10 This figure includes the 23,336 kWh/day consumed by the VCMC hospital as identified in the 1992 VCMC Water/Energy Conservation Study prepared by Black & Veatch and assumes consumption rates provided by the South Coast Air Quality Management District for the remainder of the campus.

11 In order to provide a worst case estimate, the Hospital consumption rate of 17.9 kWh/square foot/year is used for the entire increase in square footage associated with the project.

12 Rembolt, Donald, Southern California Edison, personal communication, 1992.

13 The SCAQMD handbook does not include a natural gas consumption rate for medical facilities. Consequently, the Hotel/Motel rate of 4.8 cubic feet/square foot/month, which is the highest rate identified in the handbook, is used to provide a worst-case analysis.

4.0 MANDATORY FINDINGS OF SIGNIFICANCE

		Yes/Maybe	No
1.	Does the project have the potential to significantly 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	___
2.	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).	X	___
3.	Does the project have impacts which are individually limited, but cumulatively considerable? (Several projects may have relatively small individual impacts on two or more resources, but the total of those impacts on the environment is significant).	X	___
4.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X	___

5.0 DETERMINATION OF ENVIRONMENTAL DOCUMENT

On the basis of this initial evaluation:

☐ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION should 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 the mitigation measure(s) described in Section C of the Initial Study will be applied to the project. A MITIGATED NEGATIVE DECLARATION should be prepared.

☒ I find the proposed project, individually and/or cumulatively MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.*

Alec T. Pringle — Signature of Preparer

12 May 1993 — Date

Alec T. Pringle, Project Manager

*EIR Issues of Focus: Land Use (community character); Air Quality (localized emissions); visual resources; noise and vibration; light, glare, and shadow; and transportation/circulation (level of service, parking)

6.0 LIST OF PREPARERS/PERSONS CONTACTED

6.1 LIST OF PREPARERS

This environmental document was prepared by Fugro-McClelland (West), Inc. and Linscott, Law & Greenspan, Engineers, while under contract to the County of Ventura, Public Works Agency. Persons directly involved in the preparation of this report were:

Fugro-McClelland

Stephen Svete, AICP, Senior Program Manager, Planning Services
Joe Power, Environmental Planner
Jim O'Toole, Environmental Analyst
Dottie Colleran, Word Processing Coordinator
Tony Vigil, Graphics Coordinator

Linscott, Law & Greenspan

Paul Wilkinson, P.E.
Richard E. Barretto, Transportation Engineer II

6.2 PERSONS CONTACTED

Blair, Ray, Maintenance Manager, Ventura County Medical Center
Colbertson, Kathy, County of Ventura, Solid Waste Management Department
Fisher, Jim, County of Ventura, Public Works Agency
Goldstein, David, County of Ventura, Solid Waste Management Department
Kaiser, Peter, County of Ventura, Solid Waste Management Department
Lander, Bruce, Paleoenvironmental Associates
Lowry, Kathy, City of Ventura, Transportation Division
Morgan, Diane, Ventura County Fire Protection District
Prodoehl, Robert, P.E., City of Ventura, Building and Safety Division
Rembolt, Donald, Southern California Edison
Thomas, Chuck, Ventura County Air Pollution Control District
Turner, John, County of Ventura, Water Resources Division
Wood, Steve, County of Ventura, Planning Department

7.0 REFERENCES

Bates, Karen, Senior Planner, City of Ventura, Letter dated December 1, 1992.

California Department of Fish and Game (1992), Natural Diversity Database.

Hayes, Russ, City of Ventura Police Department, Letter dated December 1, 1992.

Santa Barbara, City of (1989), Water Demand Factor and Conservation Study.

South Coast Air Quality Management District (1992), CEQA Air Quality Handbook Final Draft.

Ventura, City of (1989), Comprehensive Plan Update to the Year 2010.

Ventura, City of (1992), Resolution No. 92-73.

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County of Ventura (1988), General Plan Resources Appendix.

County of Ventura (1992), Draft Environmental Impact Report: Weldon Canyon Landfill.

U.S. Department of Housing and Urban Development (1984), Noise Assessment Guidelines.

Ventura County Air Pollution Control District (1989), Guidelines for the Preparation of Air Quality Impact Analyses.

Ventura County Public Works Agency (1992), Fault Hazard Study: Medical Examiner's Facility, prepared by Staal, Gardner & Dunne, Inc..

Ventura County Solid Waste Management Department (1992), Guidelines for the Preparation of Environmental Assessments for Solid Waste Impacts.

APPENDIX A
AIR QUALITY

Project Name : VCMC Date : 02-20-1993

Analysis Year = 1995 Temperature = 60
EMFAC7 VERSION : EMFAC7D ...11/88

Unit Type	Trip Rate	Size	Tot Trips	Days Op.
Medical Office Building	10.2/1000 Sqf	78	797	1

	Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Work	Non-Work
Trip Length	8.4	3.7	3.9	7.4	3.6
Started Cold	88.2	40.1	58.0	77.2	27.0
Trip Speed	35	35	35	35	35
Percent Trip	27.0	17.0	56.0		

Vehicle Fleetmix

Vehicle Type	Percent Type	Leaded	Unleaded	Diesel
Light Duty Autos	72.8	1.7	95.6	2.7
Light Duty Trucks	14.3	2.2	95.0	2.8
Medium Duty Trucks	4.3	5.3	94.7	0.0
Heavy Duty Trucks	3.9	29.8	70.3	N/A
Nonheavy Duty Trucks	3.9	N/A	N/A	100.0
Motorcycles	0.9	100.0	N/A	N/A

Project Emissions Report in Lb/Day

Unit Type	TOG	CO	NOx
Medical Office Building	9.5	99.9	12.4

Project Emissions Report in Lb/Day

Unit Type	FUEL USE	PM10	SOx
Medical Office Building	138.4	15.1	1.3

APPENDIX B
NOISE

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EXISTING

NOISE PREDICTION MODEL - MODIFIED FHWA STAMINA 2.0

Loma Vista Road e/o Hillmont

DATA	Date:	03/01/93
Enter ADT:	21800	
Enter vehicle speed:	35	
Enter % of Medium trucks:	1.8	
Enter % of Heavy trucks:	0.7	
Enter % of Evening Traffic -		
(default=17%) Autos:	12.9	
Medium Trucks:	4.9	
Heavy Trucks:	2.7	
Enter % of Nighttime Traffic -		
(default=15%) Autos:	9.6	
Medium Trucks:	10.3	
Heavy Trucks:	10.8	
Enter % road gradient:	0	
Enter distance from site to centerline of road, feet:	50	

RESULTS

Noise Level at site -		Hard Sites
Ldn, dBA:	68.0	68.0
CNEL, dBA:	68.4	68.4

Distance To Contour From Centerline, feet (4.5 dB/2x) -	Ldn	CNEL
75 dBA:	NA	NA
70 dBA:	37	39
65 dBA:	80	84
60 dBA:	172	182
55 dBA:	371	392
50 dBA:	798	845

EXISTING + PROJECT

NOISE PREDICTION MODEL - MODIFIED FHWA STAMINA 2.0

Loma Vista Road e/o Hillmont

DATA	Date:	03/01/93
Enter ADT:	22154	
Enter vehicle speed:	35	
Enter % of Medium trucks:	1.8	
Enter % of Heavy trucks:	0.7	
Enter % of Evening Traffic -		
(default=17%) Autos:	12.9	
Medium Trucks:	4.9	
Heavy Trucks:	2.7	
Enter % of Nighttime Traffic -		
(default=15%) Autos:	9.6	
Medium Trucks:	10.3	
Heavy Trucks:	10.8	
Enter % road gradient:	0	
Enter distance from site to centerline of road, feet:	50	

RESULTS

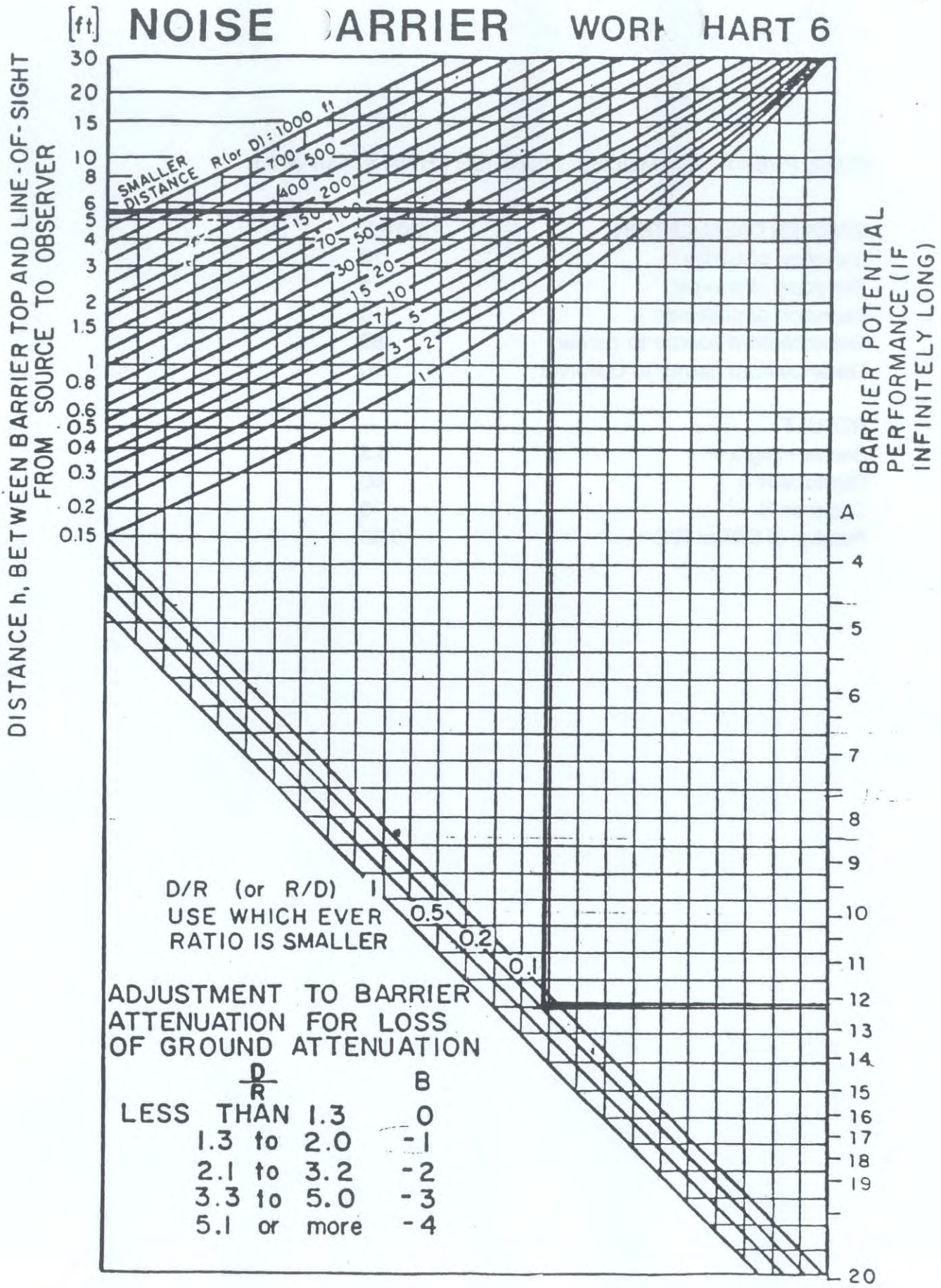
		Hard Sites
Noise Level at site -		
Ldn, dBA:	68.1	68.1
CNEL, dBA:	68.5	68.5

Distance To Contour From Centerline, feet (4.5 dB/2x) -	Ldn	CNEL
75 dBA:	NA	NA
70 dBA:	37	40
65 dBA:	81	85
60 dBA:	174	184
55 dBA:	375	396
50 dBA:	807	854

NOISE PREDICTION MODEL - MODIFIED FHWA STAMINA 2.0

BARRIER CALCULATION	INPUT
Elevation of barrier:	10
Elevation of source:	3
Elevation of observer:	5
Distance from source to barrier:	50
Distance from barrier to observer:	10

RESULT	
Barrier Height =	5.3
Distance R =	50
Distance S =	10
Smaller of D/R or R/D =	0.20


[ft] NOISE BARRIER WORK SHEET 6
DISTANCE h, BETWEEN BARRIER TOP AND LINE-OF-SIGHT FROM SOURCE TO OBSERVER
30
20
15
10
8
6
5
4
3
2
1.5
1
0.8
0.6
0.5
0.4
0.3
0.2
0.15
SMALLER DISTANCE R(or D): 1000 ft
700
500
400
200
150
100
70
50
30
20
15
10
7
5
3
2
1
BARRIER POTENTIAL PERFORMANCE (IF INFINITELY LONG)
A
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
D/R (or R/D)
USE WHICH EVER RATIO IS SMALLER
1
0.5
0.2
0.1
ADJUSTMENT TO BARRIER ATTENUATION FOR LOSS OF GROUND ATTENUATION
D/R
B
LESS THAN 1.3 0
1.3 to 2.0 -1
2.1 to 3.2 -2
3.3 to 5.0 -3
5.1 or more -4

APPENDIX C
SOLID WASTE GENERATION

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VENTURA COUNTY SOLID WASTE MANAGEMENT DEPARTMENT
SOLID WASTE PROJECT IMPACT CALCULATION

PROJECT: County Hospital VCMC

01/27/93

(values in tons/year)

MATERIAL TYPE	RESIDENTIAL	COMMERICAL	INDUSTRIAL	TOTAL
CARDBOARD	0.000	16.057	0.000	16.057
MIXED PAPER	0.000	6.927	0.000	6.927
NEWSPAPER	0.000	2.886	0.000	2.886
LEDGER	0.000	4.297	0.000	4.297
NONRECYCLABLE PAPER	0.000	18.385	0.000	18.385
PAPER TOTAL	0.000	48.546	0.000	48.546
HDPE	0.000	0.127	0.000	0.127
PET	0.000	0.125	0.000	0.125
FILM PLASTIC	0.000	3.975	0.000	3.975
OTHER PLASTIC	0.000	13.140	0.000	13.140
PLASTICS TOTAL	0.000	17.367	0.000	17.367
RECYCLABLE GLASS	0.000	1.035	0.000	1.035
NONRECYCLABLE GLASS	0.000	2.373	0.000	2.373
GLASS TOTAL	0.000	3.408	0.000	3.408
ALUMINUM	0.000	0.452	0.000	0.452
FERROUS METALS	0.000	2.853	0.000	2.853
NONFERROUS METALS	0.000	0.652	0.000	0.652
WHITE GOODS	0.000	0.000	0.000	0.000
METAL TOTAL	0.000	3.964	0.000	3.964
YARD WASTE	0.000	17.767	0.000	17.767
ORGANIC COMPOSTABLES	0.000	15.096	0.000	15.096
ORG. NONCOMPOSTABLES	0.000	1.773	0.000	1.773
TIRES AND RUBBER	0.000	6.877	0.000	6.877
WOOD WASTES	0.000	1.562	0.000	1.562
ORGANIC TOTAL	0.000	25.305	0.000	25.305
INERT SOLIDS	0.000	0.391	0.000	0.391
HHW	0.000	0.123	0.000	0.123
OTHER SPEC. WASTE TOTL	0.000	0.514	0.000	0.514
SLUDGE	0.000	0.000	0.000	0.000
OTHER SPECIAL WASTE	0.000	11.084	0.000	11.084
SPECIAL WASTE TOTAL	0.000	11.084	0.000	11.084
TOTAL WASTE	0.000	127.962	0.000	127.962

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NOP RESPONSES

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REC'D MAY 27 1993

5/27

VENTURA UNIFIED SCHOOL DISTRICT

359 S. Victoria Avenue
Ventura, California 93003
Phone (AREA CODE 805) 642-415
THE POINSETTIA CITY BY THE SEA

FACILITIES,
MAINTENANCE and OPERATIONS DEPARTMENT

May 24, 1993

Mr. Alec T. Pringle, Project Manager
County of Ventura
Public Works Agency
800 S. Victoria Avenue
Ventura, CA. 93009

Subject: Ventura County Medical Center Expansion

Dear Mr. Pringle:

Thank you for the opportunity to comment on the "Notice of Preparation of a Draft Environmental Impact Report" for the Ventura County Medical Center Expansion Project.

Loma Vista Elementary School located at 300 Lynn Drive, is less than two blocks east of the project site. The draft report fails to provide a complete assessment on the relationship between the project and its potential impact to the Elementary School.

Loma Vista Elementary School consists of 288 students on a nine-acres site. Its grade level is kindergarten through 5th grades.

In the final report, please provide mitigation measures for the following potential impact items:

A) Noise and Vibration
B) Traffic and Circulation

Also, determine the number of students generated from the employment created by the project and its potential impact to existing school facilities. Provide proposed mitigation measures to address the adverse impact from the additional students generated.

Should you have any questions, please contact me at 641-5266.

Cordially,

Jorge B. Gutierrez
Director, Facilities

JBG:cs

cc: Joseph Richards, Jr.

County of Ventura
SOLID WASTE MANAGEMENT DEPARTMENT

MEMORANDUM

May 28, 1993

TO: Alec Pringle, PWA - Engineering Services Department

FROM: Peter Kaiser (PK)

SUBJECT: Initial Study - Ventura County Medical Center (VCMC) Expansion

The Solid Waste Management Department (SWMD) has completed reviewing the above project's Initial Study. The SWMD commends the PWA for providing a comprehensive analysis of the VCMC campus, new project effects, and proposed remedial efforts related to solid waste impacts. The SWMD is satisfied with the diversion programs described, which if properly implemented, should reduce solid waste impacts to less than significant levels.

The SWMD appreciates the opportunity to review this project and looks forward to assist the PWA and VCMC staff as needed in the implementation of proposed programs.

If you should have any questions, please call me at extension 3849.

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
ENGINEERING SERVICES DEPARTMENT

May 20, 1993

To: Health Care Agency
Dr. O'Halloran

From: Alec Pringle, Project Manager

Subject: NOTICE OF PREPARATION (NOP) OF ENVIRONMENTAL IMPACT REPORT (EIR) FOR VENTURA COUNTY MEDICAL CENTER EXPANSION PROJECT

1. The attached NOP and Initial Study (IS) for subject project is forwarded for your review and comments.

   The IS has been slightly modified from the IS submitted as a part of the project's original Negative Declaration. The modifications show in some areas the potential for a significant environmental impact which will be addressed in the EIR.

2. Please provide any comments you have within 30 days of receipt of this package and acknowledge receipt of this package by signing and returning the attached copy of this memo. Direct any questions to me at 654-2083.

Received by: for O'Halloran Date: 6-2-93

See attached two sheets for comments.

Table 1.4-1. Proposed Ambulatory Care Clinic Facilities

Unit	Square Footage
Family Care Residency Administration including: • offices • library • auditorium • conference rooms	22,500
Family Care Center	22,500
Women's Health Center	11,585
Pediatric Diagnostic Center	11,585
Lab	6,000
Surgery Center	3,000
Medicine Specialties Center	11,585
Admission - Lobby	10,000
Cafeteria	20,000
Total	118,755

Medical Examiner Facility. This portion of the project would involve the construction of a new 7,800 square foot office/clinic building with associated site development. The new building would integrate the currently separated offices and support services of the Ventura County Medical Examiner into a single facility. The project would house offices and associated facilities for three doctors, eight investigators, two secretaries, and an autopsy assistant, as well as an autopsy room, a morgue, a laboratory, storage spaces, and related public areas. The new facility is expected to satisfy the space and expansion requirements of the Medical Examiner for the next (15) years. should be 30 years.

Parking Structure. The proposed project includes the addition of one four-level parking structure with 564 parking spaces. Construction of all components of the proposed project would result in the loss of 186 existing surface spaces; therefore, the net parking space increase would be 378 spaces. This component of the project would also involve the demolition or removal of five on-site facilities that currently house facility maintenance operations and total 10,810 square feet of floor area.

1.5 PROJECT OBJECTIVES

The purpose of the VCMC facility expansion is to: (1) relieve current overcrowded conditions in the Mental Health In-Patient Unit, Coroner's Office, and other facilities on the campus; (2) to provide medical and coroner services from coordinated and centralized locations,

and (3) to provide additional parking to better accommodate the current demand for parking and to compensate for the loss of on-site parking that would result from new building construction.

1.6 PROJECT NEED

The Mental Health In-Patient Unit is currently operating at or above its design capacity of 28 beds. The facility averaged 29.5 patients daily in 1992, with a peak one day load of 40 patients.[1] Project implementation would add approximately 14 beds to the facility, increasing capacity and relieving overcrowded conditions. In addition, project implementation would consolidate the Mental Health Unit's Crisis Services team, which is currently located in a separate building.

Ambulatory Care Services at the VCMC are currently provided by a number of separate clinics located throughout the campus. Project implementation would consolidate these clinics into one facility that would provide a variety of care services to patients. This consolidation would provide upgraded facilities as well as improved service efficiency. A consolidated clinic administration would also be located within this facility, providing greater administrative efficiency.

should be colon.

The existing Medical Examiner facilities operated on the campus are also currently separated between two areas; the examination and storage facilities are currently operated in the VCMC hospital morgue, while the current Medical Examiner office is located in a temporary building on the eastern border of the campus (Building 360). Operational and aesthetic conflicts occur related to corpse storage, transfer, and autopsy examination due to the location of the examination and storage facilities within the hospital morgue.[2] In addition, the separation of these facilities from the Medical Examiner office creates administrative difficulties. Project implementation would consolidate the Medical Examiner facilities in a building completely separated from the hospital facility, thereby providing more efficient service and alleviating aesthetic conflicts.

A parking study prepared by Linscott, Law & Greenspan, Engineers in August 1992 determined an existing need for 205 additional onsite parking spaces based on: (1) current onsite parking usage, and; (2) movement of VCMC campus patrons from off-campus street spaces into on-campus parking areas. To relieve current overcrowded parking conditions and to accommodate future parking needs, project implementation would increase on-site parking by 378 spaces. This would provide sufficient parking areas for projected net on-campus parking demand.

County of Ventura

MEMORANDUM

To: ALEC PRINGLE, PUBLIC WORKS Date: 6-21-93

From: ROD MEGLI, FIRE DISTRICT Reference No.: _____

Subject: NOP FOR MEDICAL CENTER EIR

THIS PROJECT IS LOCATED WITHIN THE JURISDICTION OF THE CITY OF SAN BUENAVENTURA FIRE DEPARTMENT. THEY ARE RESPONSIBLE FOR PROVIDING FIRE SERVICES TO THE PROJECT.

IF YOU HAVEN'T ALREADY DONE SO, PLEASE INCLUDE VENTURA CITY FIRE ON YOUR DISTRIBUTION LIST.

IF YOU HAVE ANY QUESTIONS, PLEASE CALL ME AT EXTENSION 9731.

SINCERELY,

Rod Megl

State of California

Business, Transportation and Housing Agency

Memorandum

REC'D JUN 17 1993

To : Mr. Tom Loftus
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

Date : June 11, 1993

File No.: IGR/CEQA 6023
Initial Study
Ventura County
Medical Center
Expansion

Vic. Ven-101-28.2

From : Wilford Melton - District 7
DEPARTMENT OF TRANSPORTATION

Subject: Project Review Comments

SCH# 93041042

We have reviewed the above referenced document in regards to expansion of the Ventura County Medical Center at the corner of Loma Vista Avenue and Hillmont Street in the County of Ventura.

Based on the information received, we find no apparent impact on the State transportation system at this time.

Original Signed By

WILFORD MELTON
Senior Transportation Planner
IGR/CEQA Coordinator
Advance Planning Branch

CC: Mr. Alec Pringle
County of Ventura Public Works
800 South Victoria Avenue
Ventura, CA 93009

JP

STATE OF CALIFORNIA—ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
101 CENTRE PLAZA DRIVE
MONTEREY PARK, CA 91754-2156
(213) 266-7500
FAX: (213) 266-7600

June 21, 1993

Alec Pringle
Project Manager
City of Ventura
800 S. Victoria Avenue
Ventura, CA 93009

INITIAL STUDY FOR THE VENTURA COUNTY MEDICAL CENTER EXPANSION PROJECT FOR COUNTY OF VENTURA PUBLIC WORKS AGENCY JOB NUMBER 9261-5007 SCH #93041042 (File No. 700.504)

We have reviewed the subject document regarding the proposed project, and have the following comments:

☐ We have no further comments at this time.

☒ The proposed project should address the attached comments.

Thank you for this opportunity to review your document. If you have any questions, please contact Hari Brown at (213) 266-7598.

Mark R. Pumford, Chief
Stormwater Unit

cc: Tom Loftus, State Clearinghouse

Attachments: SE

1. Soil Erosion Concerns:

☐ a. Every precaution should be taken to prevent water quality impacts resulting from soil erosion and increased surface runoff, especially during grading and construction activities.

☐ b. Adequate storm drainage facilities should be made available to minimize soil erosion.

☐ c. Based on the information provided, the project site is an area potentially subject to high erosion and high mud flow conditions. In addition, the site is located in an area having moderately high slope instability. Development of the site may result in additional impermeable surfaces, which could increase the volume and intensity of storm water runoff and accelerate soil erosion. Therefore, the project should include mitigation measures that will minimize the water quality impacts surrounding the site.

☒ d. Discharges of storm water associated with construction activity resulting in soil disturbances of five acres or more are required to submit a Notice of Intent(NOI) to be covered under the General Construction Activity Storm Water Permit to the State Water Resources Control Board. Storm water discharges from construction activity that results in a land disturbance of less than five acres, but which is part of a larger common plan of development or sale, are also required to apply.

RESOURCE MANAGEMENT AGENCY

county of ventura

REC'D 011993

THOMAS BER
Agency Direct

MEMORANDUM

TO: Alec Pringle
Public Works Agency
Engineering Services Division

DATE: June 28, 1993

FROM: Thomas Berg, Director
THB

SUBJECT: **VCMC NOP**

The subject document was received on May 21st for review. It was reviewed and the response is attached. Please forward a copy of the Draft EIR document when completed.

If you have any questions, please contact Kim Hocking at extension 2414 and he will direct you to the appropriate staff member.

Reference No. 93-33

TB/KH/sw:mem-brg.93

Attachments

c: Darryl Siegrist, EHD

Government Center, Hall of Administration Building, L #1700
800 South Victoria Avenue, Ventura, CA 930[illegible] (805) 654-2661 FAX (805) 648-9212

COUNTY OF VENTURA

ENVIRONMENTAL HEALTH DIVISION

M E M O R A N D U M

TO: Kim Hocking **DATE:** June 17, 1993

FROM: Darrell Siegrist

SUBJECT: NOTICE OF PREPARATION OF DRAFT EIR, VCMC EXPANSION

The Environmental Health Division has reviewed the subject document, and comments that the issues germane to this Divsion's area of expertise are adequately addressed.

The Environmental Health Division comments, however,that a compost/vermipost operation (Section 3.23.1) may require a solid waste facilities permit issued by the LEA.

If you have any questions, please contact me at ex. 2811.

93-33

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APPENDIX 5.2
AESTHETIC IMPACT CRITERIA/
INDEX TO VIEWING LOCATIONS

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Table 4.7-1. Scenic Variety Classes

	Distinctive	Common	Minimal
Landform	>60% slope exposed ridges; steep, highly dissected canyons	20-60% slope, small ridges, knolls, canyons	<20% slope level to rolling terrain
Vegetation/ Drainages	High variation in vegetative types; such as mixture of trees, shrubs, and grassland forming edges	Some variation in vegetative types, height, and density	Graded areas, bare soils
Shorelines/Rivers (where applicable)	Perennial streams, pools, falls, vegetated shoreline	Intermittent streams, diversified shoreline	Gullies
General Landscape Character	Variety in detail, with many unique boundaries between different units.	Some variation, with indistinct boundaries	No variety boundaries
Urban Design Character	Powerful sense of unity and proportion with design variation. Strong design linkages provided by: • Building silhouette; • Spacing between buildings; • Setbacks from street property line; • Proportion of windows, bays, doorways, and other features; • Massing of building form; • Location and treatment of entryway; • Surface material, finish and texture; • Shadow patterns; • Building scale; • Style of architecture; and • Landscaping if any.	Some sense of unity and proportion. Moderate design linkages.	No sense of unity and proportion. Design linkage absent, or strong unity with no design variation (monotonous).

SOURCE: Adapted from U.S. Department of Agriculture (1974), *National Forest Landscape Management*, Forest Service, Washington, D.C., Vol. 2, Ch. 1 and Hedman and Jaszewski (1984), *Fundamentals of Urban Design*, American Planning Association, Chicago, Illinois.

Table 4.7-2. Criteria for Rating Sensitivity Levels

Travel Route or Use Area	Sensitivity Level		
	1	2	3
Primary Travel Route and Use Area	At least 1/4 of users have major concern for visual quality	Fewer than 1/4 users have major concern for visual quality	N/A
Secondary Travel Routes and Use Areas	At least 3/4 of users have major concern for visual quality	Between 1/4 and 3/4 of users have major concern for visual quality	Fewer than 1/4 of users have major concern for visual quality.

NOTES: The proportions of users indicated (1/4, 3/4) are approximate. These user ratios indicate a relationship between the number of travelers and their appreciation for aesthetics while enroute to a destination. In accordance with the U.S. Forest Service methodology, a greater sensitivity is assumed to be felt by those driving, walking, and bicycling for pleasure and those engaged in recreation activities than those commuting for work-related purposes.

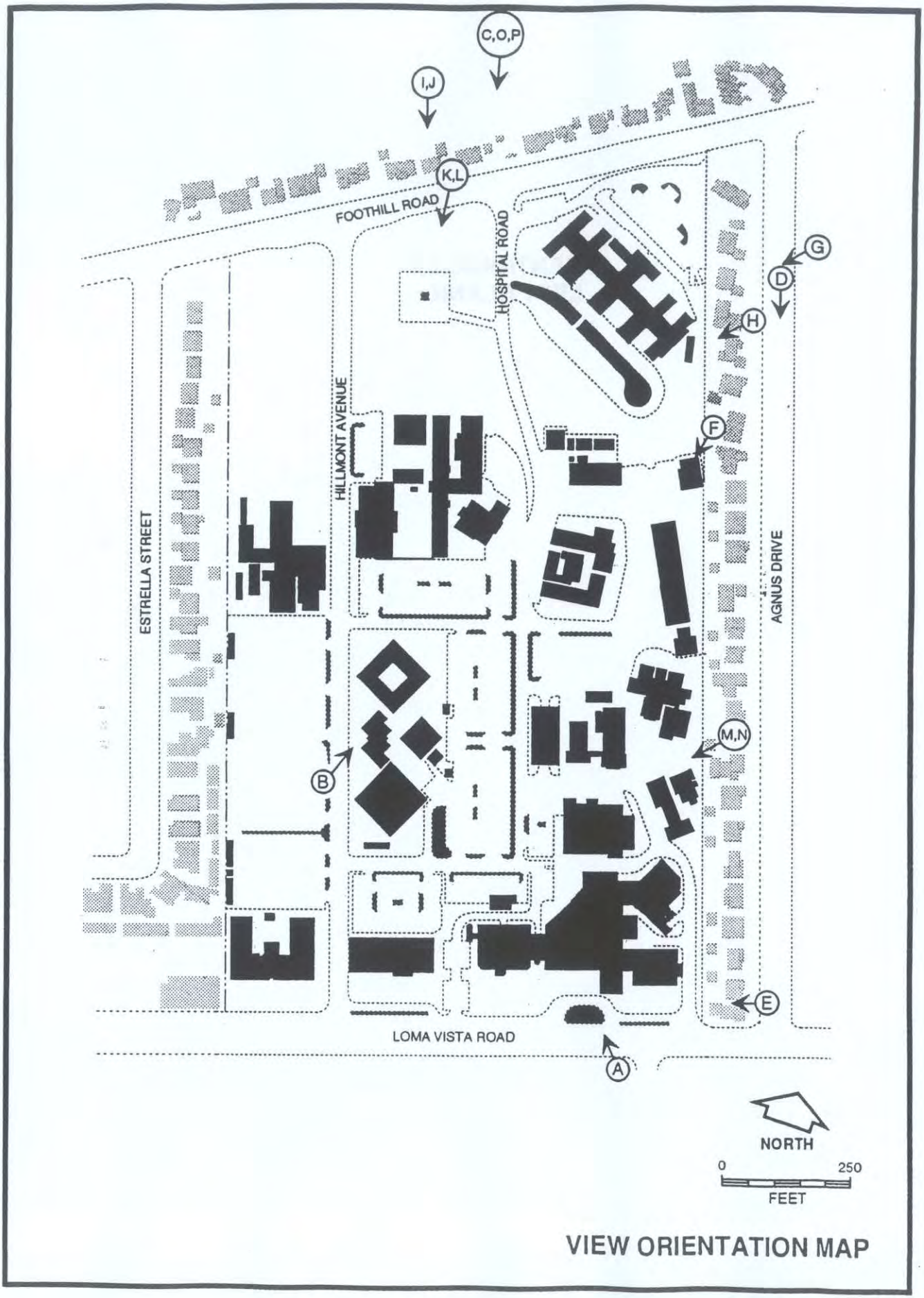
Sensitivity: Level 1 - highly sensitive
Level 2 - moderately sensitive
Level 3 - low sensitivity

SOURCE: U.S. Department of Agriculture (1974), *National Forest Landscape Management*, Forest Service, Washington, D.C., Vol. 2, Ch. 1. Table 4.7-2 modified by Lawrence Headley, Arthur Little, Inc., Santa Barbara, California, 1985.

Table 4.7-3. Visual Condition Rating Guidelines

Visual Condition Class	Guidelines
VC-1	a) All features within the field of view appear to be characteristic of the region; b) Or, features appearing incongruous (out of place, incompatible) are evident, but would usually be overlooked by the casual viewer (inconspicuous due to such factors as size, distance, distribution, context, screening, or the predominant orientation of the views).
VC-2	a) Uncharacteristic features, appear incongruous, are not easily overlooked, and may attract attention, but are visually subordinate to inherent features. b) Or, uncharacteristic features are subordinate to the predominant characteristics of the area, but are similar enough to the inherent features of the area to be regarded as at least moderately compatible with them.
VC-3	a) Uncharacteristic features appear incongruous and compete for attention (are distracting and co-dominant) with those that are inherent to the area; b) Or, uncharacteristic features demand attention (are visually dominant), but are moderately compatible with features inherent to the area.
VC-4	Uncharacteristic features appear incongruous and dominate the field of view. The primary character of the area may be subdued by comparison and difficult to recognize.
VC-5	Uncharacteristic features appear incongruous and so dominate the field of view, due to their size and/or distribution, that the character of the area is unrecognizable or does not appear to be the same as that for the rest of the region.

SOURCE: Modified from USFS, 1974 and Lawrence Headley, 1985.



VIEW ORIENTATION MAP

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APPENDIX 5.3
TRANSPORTATION AND CIRCULATION/ PARKING STUDY

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LEVEL OF SERVICE (LOS) AND INTERSECTION CAPACITY UTILIZATION (ICU)

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Level of Service concept denotes any one of a number of various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the Highway Capacity Manual of 1985. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing. The capacity per hour of green time for each approach is calculated based on the methods of the Highway Capacity Manual. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the Highway Capacity Manual) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e., when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

LEVEL OF SERVICE	LOAD FACTOR	EQUIVALENT
A (free flow)	0.0	0.0 - 0.60
B (rural design)	0.0 - 0.1	0.61 - 0.70
C (urban design)	0.1 - 0.3	0.71 - 0.80
D (maximum urban design)	0.3 - 0.7	0.81 - 0.90
E (capacity)	0.7 - 1.0	0.91 - 1.00
F (forced flow)	Not Applicable	Not Applicable

SERVICE LEVEL A - Page 2

There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B

This 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.

SERVICE LEVEL C

At this level stable operation continues. Loading is still intermittent but more frequent that at Level B. 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.

SERVICE LEVEL 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 hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E

This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F

Jammed conditions. Traffic backed up from a downstream location on one of the streets restricts or prevents movement of traffic through the intersection under consideration.

PROJECT NAME: VENTURA COUNTY MEDICAL CENTER EXPANSION

OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING

AM PEAK HOUR

	EXISTING TRAFFIC				AMBIENT GROWTH .000				VCMC PROJECT TRAFFIC				CUMULATIVE TRAFFIC				BACKGROUND TRAFFIC							
MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NBT	0	3200	0.000	*	0	0	3200	0.000	* 0	0	3200	0.000	*	0	0	3200	0.000	*	0	0	3200	0.000	*	0	0	3200	0.000	*
NBR	0	1600	0.000		0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
SBL	0	1600	0.000	*	0	0	1600	0.000	* 0	0	1600	0.000	*	0	0	1600	0.000	*	0	0	1600	0.000	*	0	0	1600	0.000	*
SBT	0	1600	0.000		0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
SBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EBL	0	1600	0.000		0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
EBT	0	3200	0.000	*	0	0	3200	0.000	* 0	0	3200	0.000	*	0	0	3200	0.000	*	0	0	3200	0.000	*	0	0	3200	0.000	*
EBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WBL	0	1600	0.000	*	0	0	1600	0.000	* 0	0	1600	0.000	*	0	0	1600	0.000	*	0	0	1600	0.000	*	0	0	1600	0.000	*
WBT	0	3200	0.000		0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000
WBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
	CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00			
	ICU VALUE 0.00				ICU VALUE 0.00				ICU VALUE 0.00				ICU VALUE 0.00				ICU VALUE 0.00				ICU VALUE 0.00			
LEVEL OF SERVICE A					LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A			

PM PEAK HOUR

MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	193	0	0.000		0	193	0	0.000	7	200	0	0.000	18	218	0	0.000	15	233	0	0.000	0	233	0	0.000
NBT	7	3200	0.063	*	0	7	3200	0.063	* 0	7	3200	0.065	*	0	7	3200	0.070	*	1	8	3200	0.075	*	0	8	3200	0.075	*
NBR	106	1600	0.066		0	106	1600	0.066	0	106	1600	0.066	15	121	1600	0.076	8	129	1600	0.081	0	129	1600	0.081
SBL	21	1600	0.013	*	0	21	1600	0.013	* 0	21	1600	0.013	*	0	21	1600	0.013	*	2	23	1600	0.014	*	0	23	1600	0.014	*
SBT	15	1600	0.019		0	15	1600	0.019	0	15	1600	0.019	0	15	1600	0.019	1	16	1600	0.020	0	16	1600	0.020
SBR	15	0	0.000		0	15	0	0.000	0	15	0	0.000	0	15	0	0.000	1	16	0	0.000	0	16	0	0.000
EBL	7	1600	0.004		0	7	1600	0.004	0	7	1600	0.004	0	7	1600	0.004	1	8	1600	0.005	0	8	1600	0.005
EBT	515	3200	0.284	*	0	515	3200	0.284	* 3	518	3200	0.289	*	7	525	3200	0.299	*	40	565	3200	0.321	*	0	565	3200	0.321	*
EBR	394	0	0.000		0	394	0	0.000	12	406	0	0.000	27	433	0	0.000	30	463	0	0.000	0	463	0	0.000
WBL	108	1600	0.068	*	0	108	1600	0.068	* 0	108	1600	0.068	*	15	123	1600	0.077	*	8	131	1600	0.082	*	0	131	1600	0.082	*
WBT	224	3200	0.071		0	224	3200	0.071	3	227	3200	0.072	3	230	3200	0.073	17	247	3200	0.078	0	247	3200	0.078
WBR	4	0	0.000		0	4	0	0.000	0	4	0	0.000	0	4	0	0.000	0	4	0	0.000	0	4	0	0.000
	CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00			
	ICU VALUE 0.42				ICU VALUE 0.42				ICU VALUE 0.44				ICU VALUE 0.46				ICU VALUE 0.49				ICU VALUE 0.49			
LEVEL OF SERVICE A					LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A			

N/S: MILLS ROAD
E/W: LOMA VISTA ROAD
1633-4

MILLS ROAD/ LOMA VISTA ROAD
VOLUME-CAPACITY ANALYSIS
INTERSECTION #: 4

PROJECT NAME: **VENTURA COUNTY MEDICAL CENTER EXPANSION**

AM PEAK HOUR

	EXISTING TRAFFIC (OPT. APPR. PHASING)			AMBIENT GROWTH .000 (OPT. APPR. PHASING)				VCMC PROJECT TRAFFIC (OPT. APPR. PHASING)			
MVT	VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
NBT	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *
NBR	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
SBL	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *
SBT	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000
SBR	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
EBL	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
EBT	0	3200	0.000 *	0	0	3200	0.000 *	0	0	3200	0.000 *
EBR	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
WBL	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *
WBT	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000
WBR	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
	CLEARANCE		0.00		CLEARANCE		0.00		CLEARANCE		0.00
	ICU VALUE		0.00		ICU VALUE		0.00		ICU VALUE		0.00
	LEVEL OF SERVICE		A		LEVEL OF SERVICE		A		LEVEL OF SERVICE		A

	CUMULATIVE TRAFFIC (OPT. APPR. PHASING)				BACKGROUND GROWTH (OPT. APPR. PHASING)				WITH MITIGATION (OPT. APPR. PHASING)			
MVT	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
NBT	0	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *
NBR	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
SBL	0	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *
SBT	0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000
SBR	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
EBL	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
EBT	0	0	3200	0.000 *	0	0	3200	0.000 *	0	0	3200	0.000 *
EBR	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
WBL	0	0	1600	0.000 *	0	0	1600	0.000 *	0	0	3200	0.000 *
WBT	0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000
WBR	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
	CLEARANCE			0.00	CLEARANCE			0.00	CLEARANCE			0.00
	ICU VALUE			0.00	ICU VALUE			0.00	ICU VALUE			0.00
	LEVEL OF SERVICE			A	LEVEL OF SERVICE			A	LEVEL OF SERVICE			A

PM PEAK HOUR

	EXISTING TRAFFIC			AMBIENT GROWTH				VCMC PROJECT TRAFFIC			
MVT	VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	117	1600	0.073	0	117	1600	0.073	0	117	1600	0.073
NBT	266	1600	0.166 *	0	266	1600	0.166 *	4	270	1600	0.169 *
⊕ NBR	233	1600	0.146	0	233	1600	0.146	0	233	1600	0.146
SBL	68	1600	0.043 *	0	68	1600	0.043 *	2	70	1600	0.044 *
SBT	406	3200	0.127	0	406	3200	0.127	8	414	3200	0.129
⊕ SBR	0	1600	0.000	0	0	1600	0.000	2	2	1600	0.001
EBL	64	1600	0.040	0	64	1600	0.040	1	65	1600	0.041
EBT	590	3200	0.184 *	0	590	3200	0.184 *	0	590	3200	0.184 *
⊕ EBR	45	1600	0.028	0	45	1600	0.028	0	45	1600	0.028
WBL	210	1600	0.131 *	0	210	1600	0.131 *	0	210	1600	0.131 *
WBT	440	3200	0.138	0	440	3200	0.138	0	440	3200	0.138
⊕ WBR	13	1600	0.008	0	13	1600	0.008	2	15	1600	0.009
	CLEARANCE		0.00		CLEARANCE		0.00		CLEARANCE		0.00
	ICU VALUE		0.52		ICU VALUE		0.52		ICU VALUE		0.52
	LEVEL OF SERVICE		A		LEVEL OF SERVICE		A		LEVEL OF SERVICE		A

	CUMULATIVE TRAFFIC				BACKGROUND GROWTH				WITH MITIGATION			
MVT	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	35	152	1600	0.095 *	11	163	1600	0.102 *	0	163	1600	0.102 *
NBT	23	293	1600	0.183	25	318	1600	0.199	0	318	1600	0.199
⊕ NBR	20	253	1600	0.158	29	282	1600	0.176	0	282	1600	0.176
SBL	5	75	1600	0.047	6	81	1600	0.051	0	81	1600	0.051
SBT	29	443	3200	0.138 *	38	481	3200	0.150 *	0	481	3200	0.150 *
⊕ SBR	14	16	1600	0.010	2	18	1600	0.011	0	18	1600	0.011
EBL	10	75	1600	0.047	6	81	1600	0.051	0	81	1600	0.051
EBT	26	616	3200	0.193 *	55	671	3200	0.210 *	0	671	3200	0.210 *
⊕ EBR	30	75	1600	0.047	9	84	1600	0.053	0	84	1600	0.053
WBL	19	229	1600	0.143 *	20	249	1600	0.156 *	0	249	3200	0.078 *
WBT	29	469	3200	0.147	41	510	3200	0.159	0	510	3200	0.159
⊕ WBR	0	15	1600	0.009	4	19	1600	0.012	0	19	1600	0.012
	CLEARANCE			0.00	CLEARANCE			0.00	CLEARANCE			0.00
	ICU VALUE			0.57	ICU VALUE			0.62	ICU VALUE			0.54
	LEVEL OF SERVICE			A	LEVEL OF SERVICE			B	LEVEL OF SERVICE			A

N/S: MILLS ROAD
E/W: TELEGRAPH ROAD
1633-1

MILLS ROAD/ TELEGRAPH ROAD
VOLUME-CAPACITY ANALYSIS
INTERSECTION #: 1

⊕ Adjust for RTOR

PROJECT NAME: VENTURA COUNTY MEDICAL CENTER EXPANSION

N/S IS SPLIT PHASE | N/S IS SPLIT PHASE | N/S IS SPLIT PHASE | N/S IS SPLIT PHASE | N/S IS SPLIT PHASE | N/S IS SPLIT PHAS

AM PEAK HOUR

	EXISTING TRAFFIC			.000 AMBIENT GROWTH				VCMC PROJECT TRAFFIC				CUMULATIVE TRAFFIC				BACKGROUND GROWTH				WITH MITIGATION			
MVT	VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
NBT	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
NBR	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
SBL	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBT	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000
SBR	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EBL	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
EBT	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000
EBR	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
WBL	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	3200	0.000
WBT	0	6400	0.000	0	0	6400	0.000	0	0	6400	0.000	0	0	6400	0.000	0	0	6400	0.000	0	0	4800	0.000
WBR	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	3200	0.000
CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00		
ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00		
LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A		

PM PEAK HOUR

MVT	VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	20	1600	0.013	0	20	1600	0.013	0	20	1600	0.013	0	20	1600	0.013	2	22	1600	0.014	0	22	1600	0.014
NBT	68	1600	0.043	0	68	1600	0.043	0	68	1600	0.043	3	71	1600	0.044	6	77	1600	0.048	0	77	1600	0.048
NBR ⊛	109	1600	0.068 *	0	109	1600	0.068 *	0	109	1600	0.068 *	0	109	1600	0.068 *	10	119	1600	0.074 *	0	119	1600	0.074 *
SBL	1271	0	0.000	0	1271	0	0.000	8	1279	0	0.000	159	1438	0	0.000	118	1556	0	0.000	0	1556	0	0.000
SBT	7	4800	0.272 *	0	7	4800	0.272 *	0	7	4800	0.274 *	3	10	4800	0.314 *	1	11	4800	0.339 *	0	11	4800	0.339 *
SBR	28	0	0.000	0	28	0	0.000	0	28	0	0.000	29	57	0	0.000	3	60	0	0.000	0	60	0	0.000
EBL	92	1600	0.058 *	0	92	1600	0.058 *	0	92	1600	0.058 *	29	121	1600	0.076 *	9	130	1600	0.081 *	0	130	1600	0.081 *
EBT	968	4800	0.202	0	968	4800	0.202	0	968	4800	0.202	228	1196	4800	0.249	90	1286	4800	0.268	0	1286	4800	0.268
EBR ⊛	9	1600	0.006	0	9	1600	0.006	0	9	1600	0.006	0	9	1600	0.006	1	10	1600	0.006	0	10	1600	0.006
WBL	171	1600	0.107	0	171	1600	0.107	0	171	1600	0.107	0	171	1600	0.107	16	187	1600	0.117	0	187	3200	0.058
WBT	1171	6400	0.350 *	0	1171	6400	0.350 *	0	1171	6400	0.350 *	204	1375	6400	0.413 *	109	1484	6400	0.448 *	0	1484	4800	0.309 *
WBR ⊛	1066	0	0.000	0	1066	0	0.000	4	1070	0	0.000	197	1267	0	0.000	115	1382	0	0.000	0	1382	3200	~~0.431~~ 0.263 *
CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00		
ICU VALUE	0.75			ICU VALUE	0.75			ICU VALUE	0.75			ICU VALUE	0.87			ICU VALUE	0.94			ICU VALUE	~~0.97~~ 0.80		
LEVEL OF SERVICE	C			LEVEL OF SERVICE	C			LEVEL OF SERVICE	C			LEVEL OF SERVICE	D			LEVEL OF SERVICE	E			LEVEL OF SERVICE	~~E~~ C		

N/S: MILLS ROAD (S-P)
E/W: MAIN STREET
1633-2

MILLS ROAD (S-P) / MAIN STREET
VOLUME-CAPACITY ANALYSIS
INTERSECTION #: 2

⊛ Adjusted for RTOR

* Adjusted to account for Right-turn over lap phase.

PROJECT NAME: **VENTURA COUNTY MEDICAL CENTER EXPANSION**

OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING

AM PEAK HOUR

	EXISTING TRAFFIC				AMBIENT GROWTH .000				VCMC PROJECT TRAFFIC				CUMULATIVE TRAFFIC				BACKGROUND GROWTH				WITH MITIGATION			
MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NBT	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000 *
NBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBL	0	1600	0.000	*	0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	3200	0.000 *
SBT	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBR	0	3200	0.000		0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000	0	0	4800	0.000
EBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EBT	0	4800	0.000	*	0	0	4800	0.000	* 0	0	4800	0.000	* 0	0	4800	0.000	* 0	0	4800	0.000	* 0	0	4800	0.000 *
EBR	0	1600	0.000		0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
WBL	0	1600	0.000	*	0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	3200	0.000 *
WBT	0	4800	0.000		0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000
WBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
	CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00		
	ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00		
	LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A		

PM PEAK HOUR

MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NBT	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000 *
NBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBL	205	1600	0.128	*	0	205	1600	0.128	* 0	205	1600	0.128	* 9	214	1600	0.134	* 19	233	1600	0.146	* 0	233	3200	0.073 *
SBT	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBR	1213	3200	0.379		0	1213	3200	0.379	2	1215	3200	0.380	172	1387	3200	0.433	113	1500	3200	0.469	0	1500	4800	0.313
EBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EBT	2176	4800	0.453	*	0	2176	4800	0.453	* 8	2184	4800	0.455	* 332	2516	4800	0.524	* 202	2718	4800	0.566	* 0	2718	4800	0.566 *
EBR	264	1600	0.165		0	264	1600	0.165	0	264	1600	0.165	52	316	1600	0.198	25	341	1600	0.213	0	341	1600	0.213
WBL	458	1600	0.286	*	0	458	1600	0.286	* 0	458	1600	0.286	* 31	489	1600	0.306	* 43	532	1600	0.333	* 0	532	3200	0.166 *
WBT	1400	4800	0.292		0	1400	4800	0.292	2	1402	4800	0.292	221	1623	4800	0.338	130	1753	4800	0.365	0	1753	4800	0.365
WBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
	CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00		
	ICU VALUE	0.87			ICU VALUE	0.87			ICU VALUE	0.88			ICU VALUE	0.96			ICU VALUE	1.05			ICU VALUE	0.81		
	LEVEL OF SERVICE	D			LEVEL OF SERVICE	D			LEVEL OF SERVICE	D			LEVEL OF SERVICE	E			LEVEL OF SERVICE	F			LEVEL OF SERVICE	D		

N/S: U.S. 101 NB RAMPS
E/W: MAIN STREET
1633-3

U.S. 101 NB RAMPS / MAIN STREET
VOLUME-CAPACITY ANALYSIS
INTERSECTION #: 3

PROJECT NAME: VENTURA COUNTY MEDICAL CENTER EXPANSION

669000

OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING

AM PEAK HOUR

	EXISTING TRAFFIC				000 AMBIENT GROWTH				VCMC PROJECT TRAFFIC				CUMULATIVE TRAFFIC				BACKGROUND GROWTH				WITH MITIGATION			
MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NBT	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000 *
NBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBL	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	3200	0.000 *
SBT	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	4800	0.000
EBL	0	3200	0.000		0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000
EBT	0	4800	0.000	*	0	0	4800	0.000	* 0	0	4800	0.000	* 0	0	4800	0.000	* 0	0	4800	0.000	* 0	0	4800	0.000 *
EBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WBL	0	1600	0.000	*	0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	3200	0.000 *
WBT	0	4800	0.000		0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000	0	0	4800	0.000
WBR	0	1600	0.000		0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
CLEARANCE			0.00				CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00
ICU VALUE			0.00				ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00
LEVEL OF SERVICE			A				LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A

PM PEAK HOUR

MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NBT	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000 *
NBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBL	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	3200	0.000 *
SBT	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	4800	0.000
EBL	407	3200	0.127	*	0	407	3200	0.127	* 3	410	3200	0.128	* 69	479	3200	0.150	* 38	517	3200	0.162	* 0	517	3200	0.162 *
EBT	2191	4800	0.456		0	2191	4800	0.456	5	2196	4800	0.458	269	2465	4800	0.514	204	2669	4800	0.556	0	2669	4800	0.556
EBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WBL	10	1600	0.006		0	10	1600	0.006	0	10	1600	0.006	0	10	1600	0.006	1	11	1600	0.007	0	11	3200	0.003
WBT	2124	4800	0.443	*	0	2124	4800	0.443	* 2	2126	4800	0.443	* 255	2381	4800	0.496	* 198	2579	4800	0.537	* 0	2579	4800	0.537 *
WBR	411	1600	0.257		0	411	1600	0.257	0	411	1600	0.257	3	414	1600	0.259	38	452	1600	0.283	0	452	1600	0.283
CLEARANCE			0.00				CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00
ICU VALUE			0.57				ICU VALUE	0.57			ICU VALUE	0.57			ICU VALUE	0.65			ICU VALUE	0.70			ICU VALUE	0.70
LEVEL OF SERVICE			A				LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	B			LEVEL OF SERVICE	B			LEVEL OF SERVICE	B

N/S: S.R. 126 EB ON-RAMP
E/W: MAIN STREET
1633-7

S.R. 126 EB ON-RAMP / MAIN STREET
VOLUME-CAPACITY ANALYSIS
INTERSECTION #: 7

PROJECT NAME: **VENTURA COUNTY MEDICAL CENTER EXPANSION**

OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING

AM PEAK HOUR

	EXISTING TRAFFIC				AMBIENT GROWTH 000				VCMC PROJECT TRAFFIC				CUMULATIVE TRAFFIC				BACKGROUND GROWTH							
MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NBT	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	*	0	0	0	0.000	*	0	0	0	0.000	*	0	0	0	0.000	*
NBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBL	0	1600	0.000	*	0	0	1600	0.000	* 0	0	1600	0.000	*	0	0	1600	0.000	*	0	0	1600	0.000	*	0	0	1600	0.000	*
SBT	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBR	0	1600	0.000		0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
EBL	0	1600	0.000		0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
EBT	0	3200	0.000	*	0	0	3200	0.000	* 0	0	3200	0.000	*	0	0	3200	0.000	*	0	0	3200	0.000	*	0	0	3200	0.000	*
EBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WBL	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	*	0	0	0	0.000	*	0	0	0	0.000	*	0	0	0	0.000	*
WBT	0	3200	0.000		0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000	0	0	3200	0.000
WBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
	CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00			
	ICU VALUE 0.00				ICU VALUE 0.00				ICU VALUE 0.00				ICU VALUE 0.00				ICU VALUE 0.00				ICU VALUE 0.00			
	LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A			

PM PEAK HOUR

MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NBT	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	*	0	0	0	0.000	*	0	0	0	0.000	*	0	0	0	0.000	*
NBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBL	179	1600	0.112	*	0	179	1600	0.112	* 17	196	1600	0.123	*	0	196	1600	0.123	*	11	207	1600	0.129	*	0	207	1600	0.129	*
SBT	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBR	96	1600	0.060		0	96	1600	0.060	3	99	1600	0.062	0	99	1600	0.062	6	105	1600	0.066	0	105	1600	0.066
EBL	50	1600	0.031	*	0	50	1600	0.031	* 2	52	1600	0.033	*	0	52	1600	0.033	*	3	55	1600	0.034	*	0	55	1600	0.034	*
EBT	477	3200	0.149		0	477	3200	0.149	0	477	3200	0.149	34	511	3200	0.160	29	540	3200	0.169	0	540	3200	0.169
EBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WBT	314	3200	0.125	*	0	314	3200	0.125	* 0	314	3200	0.128	*	21	335	3200	0.135	*	19	354	3200	0.143	*	0	354	3200	0.143	*
WBR	86	0	0.000		0	86	0	0.000	11	97	0	0.000	0	97	0	0.000	5	102	0	0.000	0	102	0	0.000
	CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00				CLEARANCE 0.00			
	ICU VALUE 0.27				ICU VALUE 0.27				ICU VALUE 0.28				ICU VALUE 0.29				ICU VALUE 0.30				ICU VALUE 0.30			
	LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A				LEVEL OF SERVICE A			

N/S: HILLMONT AVENUE
E/W: LOMA VISTA ROAD
1633-5

HILLMONT AVENUE LOMA VISTA ROAD
VOLUME-CAPACITY ANALYSIS
INTERSECTION #: 5

PROJECT NAME: VENTURA COUNTY MEDICAL CENTER EXPANSION

OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING | OPT. APPR. PHASING

AM PEAK HOUR

	EXISTING TRAFFIC				AMBIENT GROWTH 000				VCMC PROJECT TRAFFIC				CUMULATIVE TRAFFIC				BACKGROUND GROWTH							
MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL		0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
NBT		1600	0.000	*	0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000 *
NBR		0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBL		0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000 *
SBT		0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBR		0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EBL		0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EBT		1600	0.000	*	0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000 *
EBR		0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
WBL		1600	0.000	*	0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000	* 0	0	1600	0.000 *
WBT		1600	0.000		0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000	0	0	1600	0.000
WBR		0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
CLEARANCE		0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00		
ICU VALUE		0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00			ICU VALUE	0.00		
LEVEL OF SERVICE		A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A		

PM PEAK HOUR

MVT	VOL	CAP	V/C		ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C	ADD VOL	TOT VOL	CAP	V/C
NBL	37	0	0.000		0	37	0	0.000	12	49	0	0.000	0	49	0	0.000	2	51	0	0.000	0	51	0	0.000
NBT	0	1600	0.055	*	0	0	1600	0.055	* 0	0	1600	0.068	* 0	0	1600	0.068	* 0	0	1600	0.071	* 0	0	1600	0.071 *
NBR	51	0	0.000		0	51	0	0.000	8	59	0	0.000	0	59	0	0.000	3	62	0	0.000	0	62	0	0.000
SBL	0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000 *
SBT	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
SBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EBL	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
EBT	432	1600	0.293	*	0	432	1600	0.293	* 0	432	1600	0.297	* 0	432	1600	0.297	* 26	458	1600	0.314	* 0	458	1600	0.314 *
EBR	36	0	0.000		0	36	0	0.000	7	43	0	0.000	0	43	0	0.000	2	45	0	0.000	0	45	0	0.000
WBL	10	1600	0.006	*	0	10	1600	0.006	* 4	14	1600	0.009	* 0	14	1600	0.009	* 1	15	1600	0.009	* 0	15	1600	0.009 *
WBT	261	1600	0.163		0	261	1600	0.163	0	261	1600	0.163	0	261	1600	0.163	16	277	1600	0.173	0	277	1600	0.173
WBR	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
CLEARANCE		0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00			CLEARANCE	0.00		
ICU VALUE		0.36			ICU VALUE	0.36			ICU VALUE	0.38			ICU VALUE	0.38			ICU VALUE	0.39			ICU VALUE	0.39		
LEVEL OF SERVICE		A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A			LEVEL OF SERVICE	A		

N/S: HILLMONT AVENUE
E/W: POLI ST.-FOOTHILL ROAD
1633-6

HILLMONT AVENUE POLI ST.-FOOTHILL ROAD
VOLUME-CAPACITY ANALYSIS
INTERSECTION #: 6

000207

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

The computations described in the 1985 HCM result in a solution for the capacity of each lane on the minor approaches to a STOP or YIELD-controlled intersection. Level of Service for this methodology are stated in very general terms, and are related to general delay ranges. The criterias are given in the following table, and are based on the reserve, or unused, capacity of the lane in question.

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

RESERVE CAPACITY (PCPH)	LEVEL OF SERVICE	EXPECTED DELAY TO MINOR STREET TRAFFIC
≤ 400	A	Little or no delay
300-399	B	Short traffic delays
200-299	C	Average traffic delays
100-199	D	Long traffic delays
0- 99	E	Very long traffic delays
< 0	F	Severe congestion

Caution should be used in the interpretation of these criterias. They are stated in general terms, without specific numeric values. It is, therefore, not possible to directly compare an unsignalized LOS with a signalized intersection analysis LOS in terms of specific delay values without collecting delay data directly at the subject site. The levels of service in this type of analysis <u>are not</u> associated with the delay values cited for signalized intersections.

Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This is generally evident from extremely long delays experienced by side street traffic, and by queuing on the minor approaches. Level of Service F may also appear in the form of side street vehicles selecting smaller than usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues, but may result in adjustments to a normal gap acceptance behavior.

Source: Highway Capacity Manual, Transportation Research Board
Special Report 209, 1985. Edited for clarity

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... 1

AREA POPULATION..... 150000

NAME OF THE EAST/WEST STREET..... Foothill Road

NAME OF THE NORTH/SOUTH STREET..... Hillmont Avenue

NAME OF THE ANALYST..... REB

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-14-1993

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... FUTURE TRAFFIC CONDITIONS

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: EAST/WEST

CONTROL TYPE NORTHBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	0	15	51	--
THRU	458	277	0	--
RIGHT	45	0	62	--

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	2	2	--

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ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	N
WESTBOUND	0.00	90	20	N
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	-----	---	---	-

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	---	---	---

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	NB	5.50	5.50	0.00	5.50
MAJOR LEFTS	WB	5.00	5.00	0.00	5.00
MINOR LEFTS	NB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Foothill Road
NAME OF THE NORTH/SOUTH STREET.... Hillmont Avenue
DATE AND TIME OF THE ANALYSIS..... 07-14-1993 ; PM PEAK HOUR
OTHER INFORMATION.... FUTURE TRAFFIC CONDITIONS

MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)	SHARED CAPACITY c_{SH} (pcph)	RESERVE CAPACITY $c_R = c_{SH} - v$	LOS
MINOR STREET						
NB LEFT	56	326	321	321	265	C
RIGHT	68	642	642	642	573	A
MAJOR STREET						
WB LEFT	17	710	710	710	694	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Foothill Road
NAME OF THE NORTH/SOUTH STREET.... Hillmont Avenue
DATE AND TIME OF THE ANALYSIS..... 07-14-1993 ; PM PEAK HOUR
OTHER INFORMATION.... FUTURE TRAFFIC CONDITIONS

****

IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... 1

AREA POPULATION..... 150000

NAME OF THE EAST/WEST STREET..... Foothill Road

NAME OF THE NORTH/SOUTH STREET..... Hillmont Avenue

NAME OF THE ANALYST..... REB

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-14-1993

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... EXISTING PLUS VCMC PROJECT TRAFFIC

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: EAST/WEST

CONTROL TYPE NORTHBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	0	14	49	--
THRU	432	261	0	--
RIGHT	43	0	59	--

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	2	2	--

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	N
WESTBOUND	0.00	90	20	N
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	-----	---	---	-

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	---	---	---

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	NB	5.50	5.50	0.00	5.50
MAJOR LEFTS	WB	5.00	5.00	0.00	5.00
MINOR LEFTS	NB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Foothill Road
NAME OF THE NORTH/SOUTH STREET.... Hillmont Avenue
DATE AND TIME OF THE ANALYSIS..... 07-14-1993 ; PM PEAK HOUR
OTHER INFORMATION.... EXISTING PLUS VCMC PROJECT TRAFFIC

CAPACITY AND LEVEL-OF-SERVICE

MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)	SHARED CAPACITY c_{SH} (pcph)	RESERVE CAPACITY $c_R = c_{SH} - v$	LOS
MINOR STREET						
NB LEFT	54	351	347	347	293	C
RIGHT	65	661	661	661	596	A
MAJOR STREET						
WB LEFT	15	733	733	733	718	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Foothill Road
NAME OF THE NORTH/SOUTH STREET.... Hillmont Avenue
DATE AND TIME OF THE ANALYSIS..... 07-14-1993 ; PM PEAK HOUR
OTHER INFORMATION.... EXISTING PLUS VCMC PROJECT TRAFFIC

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CITY OF SAN BUENAVENTURA
TRIP GENERATION CALCULATIONS FOR THE
VENTURA COUNTY MEDICAL CENTER

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CITY OF SAN BUENAVENTURA
MEMORANDUM

DATE: December 7, 1992
TO: John Correa, County of Ventura
FROM: Toan Nguyen, City of San Buenaventura

SUBJECT: VENTURA COUNTY MEDICAL CENTER EXPANSION - PROJECT NO. 9261-5005 - TRAFFIC COMMENTS FOR DRAFT REPORT DATED NOVEMBER 1992.

1. Level-of-Service:

The ADD VOL column of EXISTING PLUS PROJECT from Appendix A for Seaward Avenue/Main Street Volume-Capacity Analysis should be corrected as "2 for NBT, 8 for SBT, 1 for WBT" as shown in Figure 2 PROJECT TRAFFIC VOLUMES of the Linscott, Law & Greenspan report.

2. Proposed trip rate:

As discussed during our telephone conversation on 12/4/92, the proposed trip rate needs to be re-calculated due to several discrepancies in the square footage and number of employees.

The trip generation rates for the net increase in hospital use (70,562 sqft) is calculated based on the existing square footage (398,157 sqft) and the number of employees currently arriving at the hospital during normal working hours (1,016 employees).

For each employee an average rate of 4 trips per day is assigned. This was based on the type of work performed by the employees including client and/or patient trips.

The trip rate per 1,000 sqft is calculated as follows:

1,016 employees * 4 trips/employee = 4,064 ADT trips
4,064 ADT trips / 398,157 sqft = 10.2 ADT trips per 1,000 sqft

Total of trips generated by the additional square footage of hospital use is:

ADT: 720 trips (10.2 * 70,562 / 1000)
PM: 72 trips (10% of ADT)

3. Mitigation Measures:

We concur with the proposal to mitigate the intersection of Main Street and Mills Road by re-striping of the westbound Main Street pproach to include two through lanes, two right turn only lanes, nd one left turn only lane. This mitigation should be implemented by the hospital upon completion of the expansion.

CITY OF SAN BUENAVENTURA
MEMORANDUM

DATE: November 18, 1992

TO: Richard Barretto, Linscott, Law & Greenspan

FROM: Kathleen Lowry, Transportation Planner

SUBJECT: VENTURA COUNTY MEDICAL CENTER
JUSTIFICATION OF TRIP GENERATION RATE

The trip generation rates for the net increase in hospital use was calculated based on the existing square footage by use type and the number of employees currently arriving at the hospital during peak hours.

A. Employee population:
The existing employee population that arrives and departs between 6:00 a.m. and 6:00 p.m. totals 99 employees. (Per John Correa, County staff, fax dated June 92, see attached)

B. Trip rate/employee
For each employee an average rate of 4 trips per day assigned. This was based on the type of work performed by the employees including client and/or patient trips.

C. P.M. Trip rate assumption
Ten percent of the ADT rate was assigned to the P.M. rate.

D. Existing Square Footage
The existing square footage of the site is 39,614 square feet. (Based on data provided by John Correa, see attached)

E. Trip rate per square footage
The trip rate per square footage is calculated as followed:
99 employees = 396.0 ADT (99 emp * 4 trips/employee)
39.6 p.m. trips (10% of ADT rate)
Trip rate = 396.0 ADT trips/39,614 sq. feet =
10.0 trips/1,000 sq. feet

F. Proposed trip rate:
Proposed net increase in square footage = 117,537 sq. feet

ADT = 1,175 trips/1,000 sq. feet
PM Trips = 117 trips/1,000 sq. feet

Existing

Ped Clinic	3780 SF	7 employees
Family Clinic	7700 SF	17
Women's Clinic	5612 SF	13
Genetics Clinic	1000 SF	1
Amb Care Admin	1000 SF	8
Ortho Clinic	2620 SF	5
Med Spec Clinic	690 SF	3
Eye clinic	150 SF	3
Rapid Care	1570 SF	8
Internal Med Clinic	4817 SF	9
Surg. Spec Clinic	150 SF	3
	(77)	--subtotal 29,089 SF
Food Service	10,525 SF	22
	(99)	--total 39,614 SF

376 trips

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To Kathy Lowery	From Lonn Correa
Co. City of Vta	Co. County of Vta
Dept.	Phone # 654-2083
Fax # 648-1809	Fax # 654 3952

Model Trip Rate
The model generated 104 p.m. trips which is within 10% of the projected trip rate.

you have any questions please call me at 805-654-7743.

VENTURA COUNTY MEDICAL CENTER
FOLLOW-UP PARKING STUDY
(6/22/93)

This report is a follow-up study of the parking demand generated by current and proposed uses at the Ventura County Medical Center (VCMC). The original VCMC parking study was prepared by Linscott, Law & Greenspan, Engineers (LLG) to assess the parking demand associated with current on-site uses, as well as those needs that would be generated by the proposed expansion of the facility. The purpose of this study is to re-examine the assumptions in that study to determine whether the level of parking recommended will actually be needed to accommodate current and future parking demand.

PROJECT BACKGROUND

In mid-1992, the County of Ventura proposed a 78,133 square-foot expansion of the facilities on the VCMC campus. The proposal included the construction of four new structures totalling 157,558 square feet, and the demolition or removal of 13 buildings/trailers totalling 79,425 square feet.

In August 1992, LLG prepared a study of VCMC parking demand for the County, analyzing both current parking needs on the site and the increase in parking demand that would be generated by the proposed expansion. That study found that a total of 378 additional parking spaces would be needed on the campus following the proposed expansion, including a current demand for 205 additional spaces and a demand for 173 additional spaces that would be generated by 115 new employees anticipated to be generated the proposed VCMC expansion.

Based on the siting of the proposed new structures on the site, it was determined that the new construction would result in the removal of 186 existing surface parking spaces. Consequently, these spaces would need to be replaced in addition to the 378 spaces needed to accommodate current parking shortages and the increase in demand associated with the proposed expansion. It was therefore determined that a 564-space parking structure would be needed to accommodate projected onsite parking demand.

Since the preparation of the August 1992 parking study, the construction and demolition totals associated with the project have been slightly revised. Total building area proposed to be constructed has been downward revised to 144,003 square feet while one additional building (the existing Coroner's Building) is proposed to be demolished, bringing total demolition to 81,888 square feet. Based on these revised figures, the total increase in on-site building area would be 62,115 square feet. In addition, the projected increase in onsite employment associated with the expansion has been downward revised to 56 employees, including 44 day-shift employees.

PARKING REQUIREMENT ANALYSIS

As discussed above, the August 1992 VCMC parking study analyzed the additional demand for parking associated with both current on-site uses and the facility expansion. This report therefore re-examines the assumptions used to assess both current and projected future demand. In addition, the assumption that 186 surface parking spaces would be removed as part of the proposed expansion will be re-examined.

Current Demand

On-site Supply/Demand

The August 1992 LLG parking study found a surplus of 40 parking spaces on the VCMC site (excluding the 69-space surplus at Lot A, which, because of its location at the northeast corner of the site, is used exclusively by the employees and visitors of the HCA Administration and the Mental Health Outpatient Clinic). This 40-space surplus translates into a parking occupancy rate of 95 percent (848 observed demand / 888 existing supply), meaning that the site is essentially in balance.

Although onsite parking is considered essentially "balanced", the August 1992 parking study recommends a 10 percent circulation factor to ensure that the last vehicle to be parked does not have to search for the last vacant space. To achieve this factor, an additional 45 onsite spaces would be needed, bringing total onsite parking to 933 spaces. The assumptions used for this analysis appear to be reasonable; therefore, no change in onsite parking associated with current onsite demand is recommended.

Off-site Demand

Field surveys conducted by LLG as part of its 1992 parking study indicated that up to 145 VCMC-related vehicles are parked on adjacent streets on a daily basis. Providing a 19 percent factor for circulation, a need for 160 additional spaces was determined to be needed to move current on-street parkers onsite.

LLG's analysis of on-street parking assumed that all on-street parkers on Agnus Drive, Hillmont Avenue, St. Paul's Drive, San Pablo Street, and segments of Loma Vista Road within an approximately one block radius are associated with the VCMC facility. This was based on the finding, based on interviews with VCMC staff, that VCMC employees and visitors consistently park on each of these road segments.

Some of the on-street parking that occurs on Loma Vista Road may, however, be associated with other medical facilities and businesses across Loma Vista Road from the VCMC site. Consequently, the 145 vehicles determined to be associated with the VCMC may overstate the actual level of on-street parking from VCMC operations to some degree.

Nevertheless, no accurate estimate of the proportion of total on-street parking that can be attributed to VCMC operations can be made. This "worst-case" estimate of additional parking needed to bring on-street parkers onto the site therefore appears to be reasonable. No change to the 160 additional spaces suggested in the August 1992 parking study is recommended.

Expansion-Generated Demand

LLG's analysis of parking demand generated by the VCMC expansion was based upon the assumption the expansion would generate 115 new employees on the site. Since that time, it has been determined that the actual increase in onsite employment would be considerably lower. The 15-bed expansion of the Mental Health In-Patient Unit would be expected to generate 22 new employees, approximately 10 of whom would work on the day shift. In addition, 34 new office employees may occupy the existing Mental Health Unit.

However, neither the new Medical Examiner facility nor the ACC would be expected to generate any new employees. Rather, these facilities would serve to relieve overcrowding conditions that currently exist at the existing Medical Examiner facility and various VCMC clinics. Consequently, the increase in the staffing on the site is expected to be only 56 employees. An estimated 44 of these new employees would work on the day shift. Only these employees would contribute to daytime peak demand for onsite parking.

Based on the August 1992 parking study, the current parking demand ratio for VCMC employees is 1.38 parked vehicles per employee. Providing a 10 percent factor for circulation results in a recommended parking demand ratio of 1.5 spaces per day shift employee.

The application of this recommended ratio to the day shift employees anticipated to be added as a result of the VCMC expansion yields an additional parking demand of 66 spaces (1.5 spaces/employee x 44 employees).

Existing Surface Space Removal

As part of the Initial Study for the VCMC expansion, it was determined that construction of the proposed structures would result in the removal of 186 existing surface parking spaces. However, project implementation as currently proposed would result in the loss of 229 spaces. These include spaces from Lots B, C, D, E, F, I, M, and O (see Table 1). This is 43 more spaces than were anticipated to be removed as part of the Initial Study. Consequently, 229 additional spaces must be provided in order to offset the loss of surface parking associated with the proposed expansion.

Table 1. VCMC Parking Spaces to be Removed

Lot	Parking Spaces to be Removed
B	44
C	74
D	17
E	10
F	5
I	6
M	67
O	6
TOTAL	229

Total Additional On-Site Demand

Based on this re-analysis of the assumptions contained in the August 1992 parking study, the only area in which projected on-site demand can be reduced is in the area of demand created by the proposed VCMC expansion. Because the expansion-generated daytime employment would be only 44 employees rather than the 115 originally anticipated, the additional demand for parking would be only 66 spaces. This is 107 fewer spaces than the 173 originally anticipated to be needed to accommodate new employees on the site.

As shown in Table 2, total parking demand on the VCMC site following buildout of the proposed expansion would be 271 additional spaces. This includes 205 additional spaces needed for current uses on the site, as well as 66 spaces needed to accommodate the projected increase in employment on the site. Because construction of the proposed facilities on the VCMC site would result in the removal of 229 existing surface spaces, this number of additional spaces would also be needed to compensate for this loss. Thus, the proposed parking structure for the campus would need to accommodate 500 spaces.

Table 2. Parking Structure Requirements

Source of Need	Spaces
Current Onsite Demand	45
Current Offsite Demand	160
Expansion-generated Demand	66
Replacement of Removed Spaces	229
TOTAL	500

VCMC ALTERNATIVES' PARKING REQUIREMENTS

Spaces Removed: Proposed Project, Alts 1,3		Spaces Removed: Alt 2		Spaces Removed: Alt 4	
Lot B	44	Lot B	44	Lot B	44
Lot C	74	Lot C	74	Lot C	74
Lot D	17	Lot D	17	Lot D	22
Lot E	10	Lot E	10	Lot E	10
Lot F	5	Lot F	5	Lot F	5
Lot I	6	Lot I	162	Lot I	6
Lot M	67	Lot M	67	Lot M	67
Lot O	6	Lot O	6	Lot O	6
Total	229	Total	385	Total	234

Parking Requirements

Assumptions:

Existing Mental Health Site Area =	38400	sf
Proposed Parking Structure Site Area =	44800	sf
Parking Structure Site (if surface pkg) =	80000	sf
Lot I Site Area =	52800	sf
Proposed ACC/Parking Structure Site =	178400	sf
Area per surface parking space =	350	sf
Area per structure parking space =	300	sf
Parking Demand =	271	spaces

Proposed Project

Parking:	
Parking Structure	
Spaces per Floor	149
Total Number of Floors	3.35

Alternative 1

Parking:	
Parking Structure Site	229
M.H. Parking Structure	
Spaces per Floor	128
Total Number of Floors	2.12

Alternative 2

Parking:	
Parking Structure Site	229
Lot I Parking Structure	
Spaces per Floor	176
Total Number of Floors	2.43

Alternative 3

Parking:	
Parking Structure	
Spaces per Floor	149
Total Number of Floors	3.35

Alternative 4

Parking:	
ACC/Parking Structure Site	510

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APPENDIX 5.4
AIR EMISSION CALCULATIONS

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Project: VCMC
Date: July 1993

Heavy Duty Construction Emissions

Equipment Type	HP	Gal/hr	Total Hrs	Emission Factors (lbs/1000 gallons)					Emissions (lbs)				
				CO	THC	NOx	SOx	PM	CO	THC	NOx	SOx	PM
Track Tractor(CAT D6)	165	6.5	8.0	78.50	27.60	284.92	31.10	25.30	4.1	1.4	14.8	1.6	1.3
Wheeled Tractor	225	8.3	0.0	268.50	64.60	436.67	31.10	46.50	0.0	0.0	0.0	0.0	0.0
Scraper(CAT 623E)	330	11.5	8.0	84.60	19.00	258.60	31.20	27.30	7.8	1.7	23.8	2.9	2.5
Grader (CAT 140G)	150	6.0	0.0	54.65	12.73	253.84	31.10	22.20	0.0	0.0	0.0	0.0	0.0
W. Loader (CAT 966E)	216	7.5	16.0	98.66	43.20	321.23	31.20	29.30	11.8	5.2	38.5	3.7	3.5
Tracked Loader	78	3.0	0.0	82.85	40.55	339.82	31.20	24.00	0.0	0.0	0.0	0.0	0.0
Off-Highway	450	7.2	0.0	123.46	13.16	286.10	31.20	17.70	0.0	0.0	0.0	0.0	0.0
Roller	30	2.1	0.0	188.37	30.09	404.51	31.10	24.20	0.0	0.0	0.0	0.0	0.0
Misc.	70	4.6	0.0	153.51	33.70	368.01	31.10	30.10	0.0	0.0	0.0	0.0	0.0
								Total	23.7	8.4	77.2	8.2	7.3

Note: Hourly fuel use from the Caterpillar Performance Handbook
Emission factors from EPA AP-42, Volume II

Project Name : VCMC

Date : 07-13-1993

Analysis Year = 1995 Temperature = 60
EMFAC7 VERSION : EMFAC7D ...11/88

Unit Type	Trip Rate	Size	Tot Trips	Days Op.
ruck Trips	62.5/Day	1	63	1

	Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Work	Non-Work
rip Length	8.4	3.7	3.9	13.0	13.0
Started Cold	88.2	40.1	58.0	5.0	5.0
rip Speed	35	35	35	35	35
ercent Trip	27.0	17.0	56.0		

Vehicle Fleetmix

Vehicle Type	Percent Type	Leaded	Unleaded	Diesel
Light Duty Autos	0.0	1.7	95.6	2.7
Light Duty Trucks	0.0	2.2	95.0	2.8
Medium Duty Trucks	0.0	5.3	94.7	0.0
Heavy Duty Trucks	0.0	29.8	70.3	N/A
Heavy Duty Trucks	100.0	N/A	N/A	100.0
Motorcycles	0.0	100.0	N/A	N/A

Project Emissions Report in Lb/Day

Unit Type	TOG	CO	NOx
	ROC = TOG * 0.907		
Truck Trips	4.5	12.2	23.0
Total	= 4.1	12.2	23.0

Project Emissions Report in Lb/Day

Unit Type	FUEL USE	PM10	SOx
Truck Trips	140.1	3.3	5.6
Total	140.1	3.3	5.6

Project: VCMC
Date: July 1993

BULLDOZING - FUGITIVE DUST

E (lb/hr): 0.75*(silt) ^ 1.5/moisture ^ 1.4

Silt (%)	Moisture (%)	lb PM10/hr	hrs/day	lb PM10/day
65	4	56.4	8.0	451.5

Emission factors from EPA AP-42, Section 8.24
Silt content from 1970 Soil Survey of the Ventura Area (Sorrento loam)

BULLDOZING - FUGITIVE DUST (Mitigated)

E (lb/hr): 0.75*(silt) ^ 1.5/moisture ^ 1.4

Silt (%)	Moisture (%)	lb PM10/hr	hrs/day	lb PM10/day
65	15	8.9	8.0	71.0

Project: VCMC
Date: July 1993

BATCH DROP DUST

E (lb/ton): 0.35(0.0032)*(wind/5) ^ 1.3/(moisture/2) ^ 1.4

Moisture (%)	Wind (mph)	Tons/Day	lb PM/Ton	lb/day PM	lb PM10/Day
4	10	3000	0.00299	8.96	3.13

BATCH DROP DUST (Mitigated)

E (lb/ton): 0.35(0.0032)*(wind/5) ^ 1.3/(moisture/2) ^ 1.4

Moisture (%)	Wind (mph)	Tons/Day	lb PM/Ton	lb/day PM	lb PM10/Day
15	10	3000	0.00047	1.41	0.49

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: VCMC : Parking Lot
RUN: WORST WIND (WORST CASE ANGLE)
POLLUTANT: CO

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	130. (FT)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	5 (E)	VS=	.0 CM/S		
MIXH=	50. M	AMB=	3.0 PPM		
SIGTH=	25. DEGREES	TEMP=	10.0 DEGREE (C)		

II. LINK VARIABLES

	LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A.	LINK A	0	0	0	220	PK	26	161.0	.0	26.0
B.	LINK B	0	220	90	220	PK	26	161.0	.0	26.0
C.	LINK C	90	245	90	0	PK	26	161.0	.0	26.0
D.	LINK D	90	0	-25	0	PK	26	161.0	.0	26.0
E.	LINK E	0	0	0	220	PK	20	161.0	11.0	26.0
F.	LINK F	0	220	90	220	PK	20	161.0	11.0	26.0
G.	LINK G	90	220	90	0	PK	20	161.0	11.0	26.0
H.	LINK H	90	0	0	0	PK	20	161.0	11.0	26.0
I.	LINK I	0	0	0	220	PK	10	161.0	22.0	26.0
J.	LINK J	0	220	90	220	PK	10	161.0	22.0	26.0
K.	LINK K	90	220	90	0	PK	10	161.0	22.0	26.0
L.	LINK L	90	0	0	0	PK	10	161.0	22.0	26.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. RECPT 1	55	-186	5.0
2. RECPT 2	300	-70	5.0
3. RECPT 3	-20	-100	5.0
4. RECPT 4	160	220	5.0

JOB: VCMC : Parking Lot
RUN: WORST WIND (WORST CASE ANGLE)
POLLUTANT: CO

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. RECPT 1	358.	3.8	.1	.0	.2	.1	.0	.0	.0	.0
2. RECPT 2	307.	3.6	.0	.0	.1	.0	.0	.0	.0	.0
3. RECPT 3	18.	4.1	.2	.0	.2	.2	.1	.0	.1	.0
4. RECPT 4	257.	4.0	.1	.2	.3	.0	.0	.1	.1	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L
1. RECPT 1	.0	.0	.0	.0
2. RECPT 2	.0	.0	.0	.0
3. RECPT 3	.0	.0	.0	.0
4. RECPT 4	.0	.0	.0	.0

EMFAC7PC EMISSION FACTORS - FOR CALINE4
VERSION :EMFAC7D ...11/88

YEAR : 1995 TEMPERATURE : 50
PERCENT VMT COLD : 100.0 PERCENT VMT HOT : 0.0

PM10 Percent Exhaust : 99.1 Tire Wear : 40.0
Sulfur Content Leaded :450.0 ppm Unleaded :200.0 ppm
Sulfur Content Diesel :0.280 %

GRAMS PER MILE

Speed	TOG	CO	NOX
5 MPH	12.83	161.03	1.92

Idle Emission Factors

TOG	0.13	Gr/Min	Fuel Use	24.0	MPG
CO	1.22	Gr/Min	PM10	0.096	GR/MILE
NOx	0.08	Gr/Min	Sox	0.064	Gr/Mile

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APPENDIX 5.5
NOISE LEVEL READINGS/
CONSTRUCTION NOISE MODELING

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Fu[illegible]o ⊠ McClelland

AMBIENT NOISE MEASUREMENT DATA SHEET

Job Name: VCMC
Job Number:
Location: VCMC (in front of generator)
Date: 7/2/93
Operator: Joe Power
Day of Week: Friday
Conditions: Sky Overcast
Wind Still

Noise Sources (List): (primary source) Autos, Laundry facility, mechanical operations, garbage trucks, movers delivering laundry

Distance From Primary Source(s): 50-100 feet

93.4 (calibration)

Begin Time: 8:05 a.m.
End Time: 8:25 a.m.
Leq: 56.7
Max Hold Peak:
SEL:
Max Hold Slow:

NOTES:

Noise Meter: B&K Type 2222

Leq Range:
85-145 ___
65-125 ___
45-105 ✓
25- 85 ___

Function: Max Hold Peak ___
Max Hold Slow ___
SEL ___
Leq ___

Calibrator: B&K Type 4230

Calibrated at: _____ dBA

~~Source at~~ feet

FUGRO ◘ McClelland

AMBIENT NOISE MEASUREMENT DATA SHEET

Job Name: VCMC
Job Number: 9361-8067
Location: VCMC (behind laundry)
Date: 7/2/93
Operator: Joe Power
Day of Week: Friday
Conditions: Sky. Overcast
Wind Still

Noise Sources (List): Laundry room operations, mechanical equipment, birds

Distance From Primary Source(s): 30 feet

Begin Time: 8:27 a.m.
End Time: 8:47
Leq: 54.7
Max Hold Peak:
SEL:
Max Hold Slow:

NOTES:

Noise Meter: B&K Type 2222

Leq Range: 85-145 ___
65-125 ___
45-105 ___
25- 85 ___

Function: Max Hold Peak ___
Max Hold Slow ___
SEL ___
Leq ___

Calibrator: B&K Type 4230
Calibrated at: _____ dBA Correct

Source - top of bldg. (laundry)
Wall - 8 ft.

CONSTRUCTION NOISE IMPACT PROJECTION

Assumed Attenuation: 6 dBA per doubling of distance

NOISE SOURCE	NUMBE OF UNIT	ASSUME USE FACTOR	MAX SOUND PRESSURE LEVEL @ 50 FT (dBA)	DISTAN (Feet)	NOISE LEVEL Leq (dBA)
BACKHOE	0	0.73	85	30	NA
COMPACTOR	0	0.73	83	30	NA
CONCRETE MIXER	0	0.73	85	30	NA
CONCRETE PUMP	0	0.73	82	30	NA
COMPRESSORS	0	0.73	81	30	NA
CRANE	0	0.73	83	30	NA
DERRICK	0	0.73	88	30	NA
D8 DOZER (no muffler or en	0	0.73	90	30	NA
D8H DOZER (muffler & part	0	0.73	83	30	NA
D8K (muffler, engine enc., lub	1	0.73	80	30	83
ELECTRIC GENERATOR	0	0.73	90	30	NA
FORKLIFT	0	0.73	80	30	NA
ARBAGE TRUCK (COMP	0	0.73	90	30	NA
ADER	0	0.73	85	30	NA
HOE EXCAVATOR	0	0.73	85	30	NA
JACK HAMMERS	0	0.73	88	30	NA
LOADER	1	0.73	83	30	86
PAVER	0	0.73	89	30	NA
PICK-UP TRUCK	0	0.73	79	30	NA
PICK-UP (2.5 tn)	0	0.73	79	30	NA
PICK-UP (4-W DRIVE)	0	0.73	75	30	NA
PILE DRIVER (PEAK)	0	0.73	101	30	NA
PNEUMATIC TOOLS	0	0.73	86	30	NA
PUMP	0	0.73	66	30	NA
ROCK DRILL	0	0.73	98	30	NA
SCRAPER	1	0.73	88	30	91
SHEEPSFOOT ROLLER	0	0.73	78	30	NA
SHREDDER	0	0.73	75	30	NA
TRUCK TRACTOR	0	0.73	82	30	NA
VACUUM TRUCK	0	0.73	76	30	NA
VAN	0	0.73	77	30	NA
WATER TRUCK	0	0.73	88	30	NA
WATER WAGON	0	0.73	83	30	NA

TOTAL Leq DURING NORMAL OPERATIONS: 93

CONSTRUCTION NOISE IMPACT PROJECTION

Assumed Attenuation: 6 dBA per doubling of distance

NOISE SOURCE	NUMBE OF UNIT	ASSUME USE FACTOR	MAX SOUND PRESSURE LEVEL @ 50 FT (dBA)	DISTAN (Feet)	NOISE LEVEL Leq (dBA)
BACKHOE	0	0.73	85	100	NA
COMPACTOR	0	0.73	83	100	NA
CONCRETE MIXER	0	0.73	85	100	NA
CONCRETE PUMP	0	0.73	82	100	NA
COMPRESSORS	0	0.73	81	100	NA
CRANE	0	0.73	83	100	NA
DERRICK	0	0.73	88	100	NA
D8 DOZER (no muffler or en	0	0.73	90	100	NA
D8H DOZER (muffler & par	0	0.73	83	100	NA
D8K (muffler, engine enc., lub	1	0.73	80	100	73
ELECTRIC GENERATOR	0	0.73	90	100	NA
FORKLIFT	0	0.73	80	100	NA
GARBAGE TRUCK (COM	0	0.73	90	100	NA
GRADER	0	0.73	85	100	NA
HOE EXCAVATOR	0	0.73	85	100	NA
JACK HAMMERS	0	0.73	88	100	NA
LOADER	1	0.73	83	100	76
PAVER	0	0.73	89	100	NA
PICK-UP TRUCK	0	0.73	79	100	NA
PICK-UP (2.5 tn)	0	0.73	79	100	NA
PICK-UP (4-W DRIVE)	0	0.73	75	100	NA
PILE DRIVER (PEAK)	0	0.73	101	100	NA
PNEUMATIC TOOLS	0	0.73	86	100	NA
PUMP	0	0.73	66	100	NA
ROCK DRILL	0	0.73	98	100	NA
SCRAPER	1	0.73	88	100	81
SHEEPSFOOT ROLLER	0	0.73	78	100	NA
SHREDDER	0	0.73	75	100	NA
TRUCK TRACTOR	0	0.73	82	100	NA
VACUUM TRUCK	0	0.73	76	100	NA
VAN	0	0.73	77	100	NA
WATER TRUCK	0	0.73	88	100	NA
WATER WAGON	0	0.73	83	100	NA

TOTAL Leq DURING NORMAL OPERATIONS:	82
ASSUMED DAYTIME AMBIENT WITHOUT CONSTRUCTION:	50
ASSUMED NIGHTTIME AMBIENT:	40
NUMBER OF DAYTIME HOURS OPERATING:	11
NUMBER OF EVENING HOURS OPERATING:	0
NUMBER OF NIGHTIME HOURS OPERATING:	0
ESTIMATED Ldn:	79
ESTIMATED CNEL:	79

CONSTRUCTION NOISE IMPACT PROJECTION

Assumed Attenuation: 6 dBA per doubling of distance

NOISE SOURCE	NUMBE OF UNIT	ASSUME USE FACTOR	MAX SOUND PRESSURE LEVEL @ 50 FT (dBA)	DISTAN (Feet)	NOISE LEVEL Leq (dBA)
BACKHOE	0	0.73	85	150	NA
COMPACTOR	0	0.73	83	150	NA
CONCRETE MIXER	0	0.73	85	150	NA
CONCRETE PUMP	0	0.73	82	150	NA
COMPRESSORS	0	0.73	81	150	NA
CRANE	0	0.73	83	150	NA
DERRICK	0	0.73	88	150	NA
D8 DOZER (no muffler or en	0	0.73	90	150	NA
D8H DOZER (muffler & part	0	0.73	83	150	NA
D8K (muffler, engine enc., lub	1	0.73	80	150	69
ELECTRIC GENERATOR	0	0.73	90	150	NA
FORKLIFT	0	0.73	80	150	NA
GARBAGE TRUCK (COMP	0	0.73	90	150	NA
LADER	0	0.73	85	150	NA
HOE EXCAVATOR	0	0.73	85	150	NA
JACK HAMMERS	0	0.73	88	150	NA
LOADER	1	0.73	83	150	72
PAVER	0	0.73	89	150	NA
PICK-UP TRUCK	0	0.73	79	150	NA
PICK-UP (2.5 tn)	0	0.73	79	150	NA
PICK-UP (4-W DRIVE)	0	0.73	75	150	NA
PILE DRIVER (PEAK)	0	0.73	101	150	NA
PNEUMATIC TOOLS	0	0.73	86	150	NA
PUMP	0	0.73	66	150	NA
ROCK DRILL	0	0.73	98	150	NA
SCRAPER	1	0.73	88	150	77
SHEEPSFOOT ROLLER	0	0.73	78	150	NA
SHREDDER	0	0.73	75	150	NA
TRUCK TRACTOR	0	0.73	82	150	NA
VACUUM TRUCK	0	0.73	76	150	NA
VAN	0	0.73	77	150	NA
WATER TRUCK	0	0.73	88	150	NA
WATER WAGON	0	0.73	83	150	NA

TOTAL Leq DURING NORMAL OPERATIONS: 79

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IDENTIFYING INFORMATION

AVERAGE RUNNING SPEED, MAJOR STREET.. 30

PEAK HOUR FACTOR..... 1

AREA POPULATION..... 150000

NAME OF THE EAST/WEST STREET..... Foothill Road

NAME OF THE NORTH/SOUTH STREET..... Hillmont Avenue

NAME OF THE ANALYST..... REB

DATE OF THE ANALYSIS (mm/dd/yy)..... 07-14-1993

TIME PERIOD ANALYZED..... PM PEAK HOUR

OTHER INFORMATION.... EXISTING CONDITIONS

INTERSECTION TYPE AND CONTROL

INTERSECTION TYPE: T-INTERSECTION

MAJOR STREET DIRECTION: EAST/WEST

CONTROL TYPE NORTHBOUND: STOP SIGN

TRAFFIC VOLUMES

	EB	WB	NB	SB
LEFT	0	10	37	--
THRU	432	261	0	--
RIGHT	36	0	51	--

NUMBER OF LANES

	EB	WB	NB	SB
LANES	1	2	1	--

ADJUSTMENT FACTORS

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	N
WESTBOUND	0.00	90	20	N
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	-----	---	---	-

VEHICLE COMPOSITION

	% SU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	0	0	0
NORTHBOUND	0	0	0
SOUTHBOUND	---	---	---

CRITICAL GAPS

		TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS	NB	5.50	5.50	0.00	5.50
MAJOR LEFTS	WB	5.00	5.00	0.00	5.00
MINOR LEFTS	NB	6.50	6.50	0.00	6.50

IDENTIFYING INFORMATION

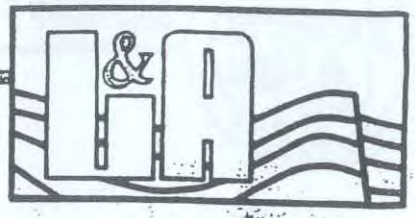
NAME OF THE EAST/WEST STREET..... Foothill Road
NAME OF THE NORTH/SOUTH STREET.... Hillmont Avenue
DATE AND TIME OF THE ANALYSIS..... 07-14-1993 ; PM PEAK HOUR
OTHER INFORMATION.... EXISTING CONDITIONS

MOVEMENT	FLOW-RATE v(pcph)	POTENTIAL CAPACITY c_p (pcph)	ACTUAL MOVEMENT CAPACITY c_M (pcph)	SHARED CAPACITY c_{SH} (pcph)	RESERVE CAPACITY $c_R = c_{SH} - v$	LOS
MINOR STREET						
NB LEFT	41	355	352	352	312	B
RIGHT	56	664	664	484 / 664	387 / 608	B / A
MAJOR STREET						
WB LEFT	11	739	739	739	728	A

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... Foothill Road
NAME OF THE NORTH/SOUTH STREET.... Hillmont Avenue
DATE AND TIME OF THE ANALYSIS..... 07-14-1993 ; PM PEAK HOUR
OTHER INFORMATION.... EXISTING CONDITIONS

APPENDIX 5.6
MEDICAL EXAMINER FACILITY
GEOLOGICAL (FAULT HAZARD) STUDY AND GEOTECHNICAL REPORT
(1992)



LEIGHTON AND ASSOCIATES

Geotechnical and Environmental Engineering Consultants

000745

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98889

LEIGHTON AND ASSOCIATES, INC.
Geotechnical and Environmental Engineering Consultants

FOUNDATION INVESTIGATION FOR THE THE PROPOSED MEDICAL EXAMINER FACILITY SOUTHEAST CORNER OF FOOTHILL ROAD AND HILLMONT AVENUE, VENTURA, CALIFORNIA (COUNTY SPEC. NO. 92-44)

Project No. 2920579-01

September 21, 1992

Prepared for:

County of Ventura, Public Works Agency
800 South Victoria Avenue
Ventura, California 93009

6430 INDEPENDENCE AVENUE, WOODLAND HILLS, CALIFORNIA 91367
(818) 587-9470
FAX (818) 587-9484

LEIGHTON AND ASSOCIATES, INC.
Geotechnical and Environmental Engineering Consultants

September 21, 1992

Project No. 2920579-01

To: County of Ventura
Public Works Agency
L #1600
800 South Victoria Avenue
Ventura, CA 93009

Attention: Mr. Larry Tanouye

Subject: Foundation Investigation for the Proposed Medical Examiner Facility, Southeast Corner of Foothill Road and Hillmont Avenue, Ventura, California (County Spec. No. 92-44)

Introduction and Scope of Work

In accordance with your request and authorization we have conducted a preliminary foundation investigation for the proposed Medical Examiner Facility on the southeast corner of Foothill Road and Hillmont Avenue, Ventura, California.

The scope of work included the following tasks:

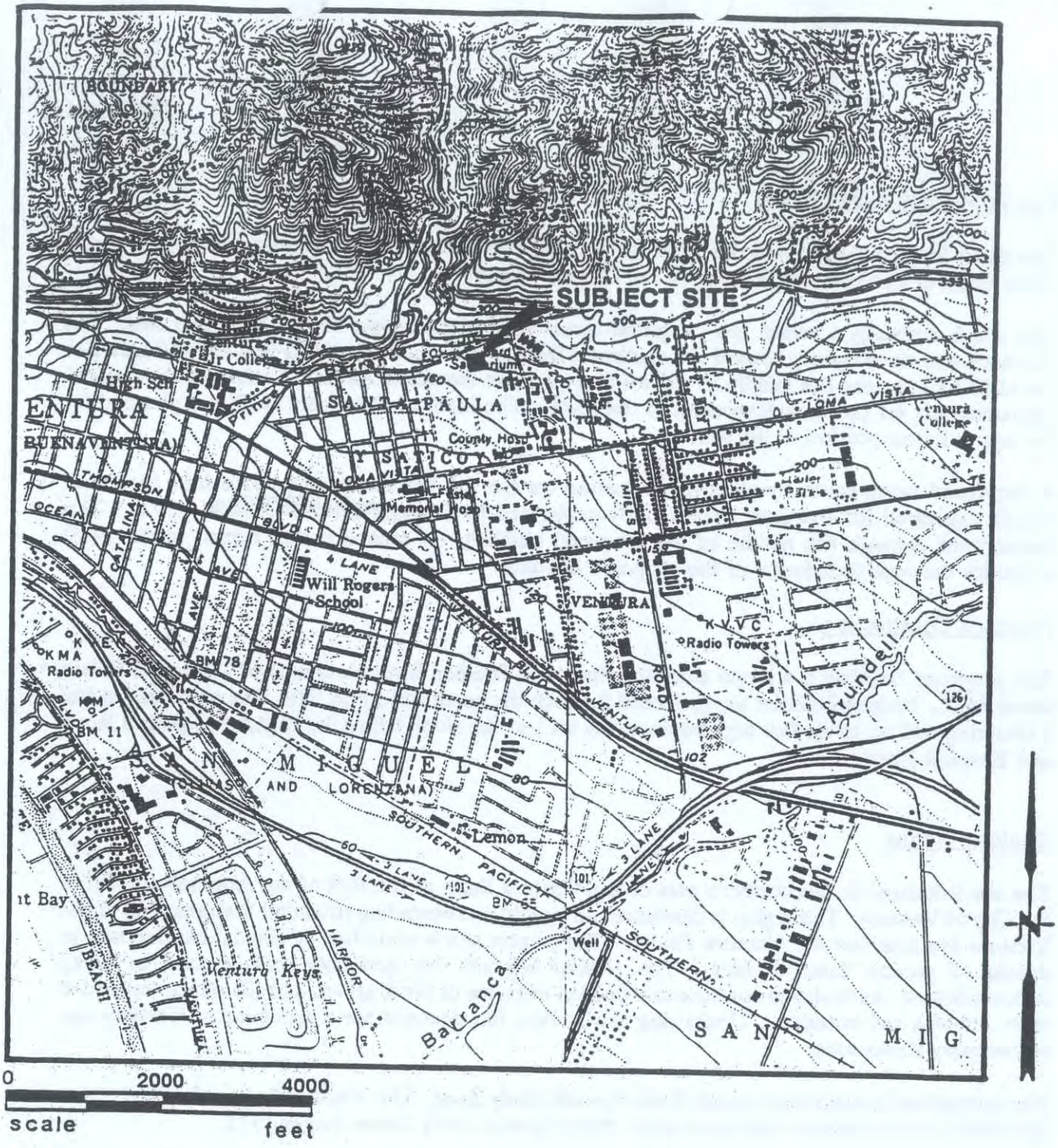
- Excavate four soil borings, three to 25 feet deep and one to 40 feet deep, in the footprint of the proposed structure and the parking area;
- Log the boring cuttings and collect bulk and relatively undisturbed samples of the subsurface materials;
- Perform laboratory tests to verify field soil classifications and to define soil engineering characteristics of surface soils (moisture and dry density, gradation, expansion potential, shear strength and consolidation characteristics);
- Review the historic groundwater levels at the site;
- Analyze the geotechnical data obtained; and
- Prepare this report summarizing our findings, conclusions and recommendations for the building foundations.

A fault hazard study of this site had been done by others (Staal, Gardner & Dunne, 1992) for the possible location of the Ventura Fault because this site lies within the Alquist Priolo Special Study Zone.

Accompanying Maps, Appendices and Illustrations

000748

744



SITE LOCATION MAP

BASE MAP: USGS 7.5 MINUTE VENTURA AND SATICOY QUADRANGLES

MEDICAL EXAMINER FACILITY

CITY OF VENTURA, CALIFORNIA

Project No. 2920579-01

Date 9/92

H&A

1040 889

Figure No. 1

745

Site Location and Description

The site is located in the southeast corner of Foothill Road and Hillmont Avenue, approximately 1½ miles north of the Ventura Freeway in the City of Ventura.

The site is currently a vacant lot. A paved access road extends onto the lot from the east. The northern end slopes gently toward the southwest from an elevation about 225 feet above Mean Sea Level (MSL) to near the middle of the lot (approximate elevation 200 MSL) where it then slopes approximately 4:1 (horizontal:vertical) to the south. The Medical Examiners Facility is planned for the upper flatter portion of the lot.

A depressed north-south trending linear feature on the site represents a previous four foot wide trench excavated for the fault hazard study performed by Staal[redacted] (1992). This trench runs through the middle of the proposed building. A second earlier trench (circa 1976) underlies the west foundation of the proposed building.

Proposed Construction

The proposed building is a single story structure with finished floor elevations of 210 and 207 feet above MSL. Parking facilities are proposed for both the north and south side. The northern lot has a retaining wall up to six feet high between the lot and the slope below the corner of Foothill Road and Hospital Road.

Geologic Setting

The site is located in the northern part of the Ventura Basin at the foot of the mountains north of the City of Ventura. The region is characterized by east-west-trending structural features such as the Ventura Syncline and the Ventura Faults. The project site is underlain by alluvial fan deposits to depths of greater than 40 feet. The alluvial deposits are generally characterized as being unconsolidated, lenticular to continuously bedded mixtures of sand, gravel, and silt with interbedded clays, cobbles and boulders. Underlying the alluvial fan deposits are a sequence of Tertiary age sedimentary formations.

The subject site is within the Alquist Priolo Special Study Zone. The Ventura fault is classified active by CDMG in accordance with the Alquist Priolo Special Study Zones Act of 1972.

Ground Water

No ground water was encountered in the borings drilled in this investigation. Low to medium (damp to moist) moisture contents were observed in all the borings. Ventura County Department of Public Works (1975) hydrologic data indicates that historic ground water levels in this area are at a gradient of 0.6 percent towards the southwest at an elevation of 40 feet above MSL two miles to the south of the site. This corresponds to an estimated ground water elevation of approximately 60 feet above MSL at the subject site, i.e. approximately 150 feet deep at the site.

Seismicity

The previous studies of the site have concluded that the Ventura Fault is active ([redacted]d Dunne 1992). Their study found that the vertical movement on the faults observed is less than one foot. In the same study, the horizontal movement associated with the faults observed was reported to be 17 inches.

Analysis of the fault trench in the reference report indicates that beneath the proposed building footprint, the maximum vertical offset was about five inches averaging less than three inches. Ziony (1985) reports Predicted Modified Mercalli intensities for the subject site to be between VI and VII.

Previous Work

Previous geotechnical studies on the site have been documented by [redacted]. They noted that the site falls within a California Division of Mines and Geology Special Study Zone for the Ventura fault. They found evidence of past faulting primarily represented by the steep slope between the lower and upper portions of the lot.

Field Investigation

Four 6-inch diameter hollow-stem borings were drilled in the footprint of the proposed building on the site. Two borings were drilled to 25 feet, one to 26 feet and the fourth to a depth of 40 feet. We logged and collected samples from the borings during the drilling operations. Relatively undisturbed split-barrel ring samples and representative bulk samples were collected from the four borings. All borings were backfilled with on-site earth materials. The boring logs are presented in Appendix B and the approximate locations are depicted on Figure 2, page 6 (Site Plan).

Boring B-1 was drilled through the recent fault trench that had been excavated and backfilled for the fault hazard study.

Laboratory Testing

Laboratory soil testing to determine the physical and engineering characteristic of representative soil samples included field moisture, field density, sieve analysis, consolidation, direct shear, Expansion Index, and maximum density. The laboratory test results are presented in Appendix C, except for the field moisture and dry density test which are depicted in the boring logs, Appendix B.

The in-situ dry density varied from 95.6 pcf to 113 pcf and the moisture contents varied from 3.7 to 16.3 percent.

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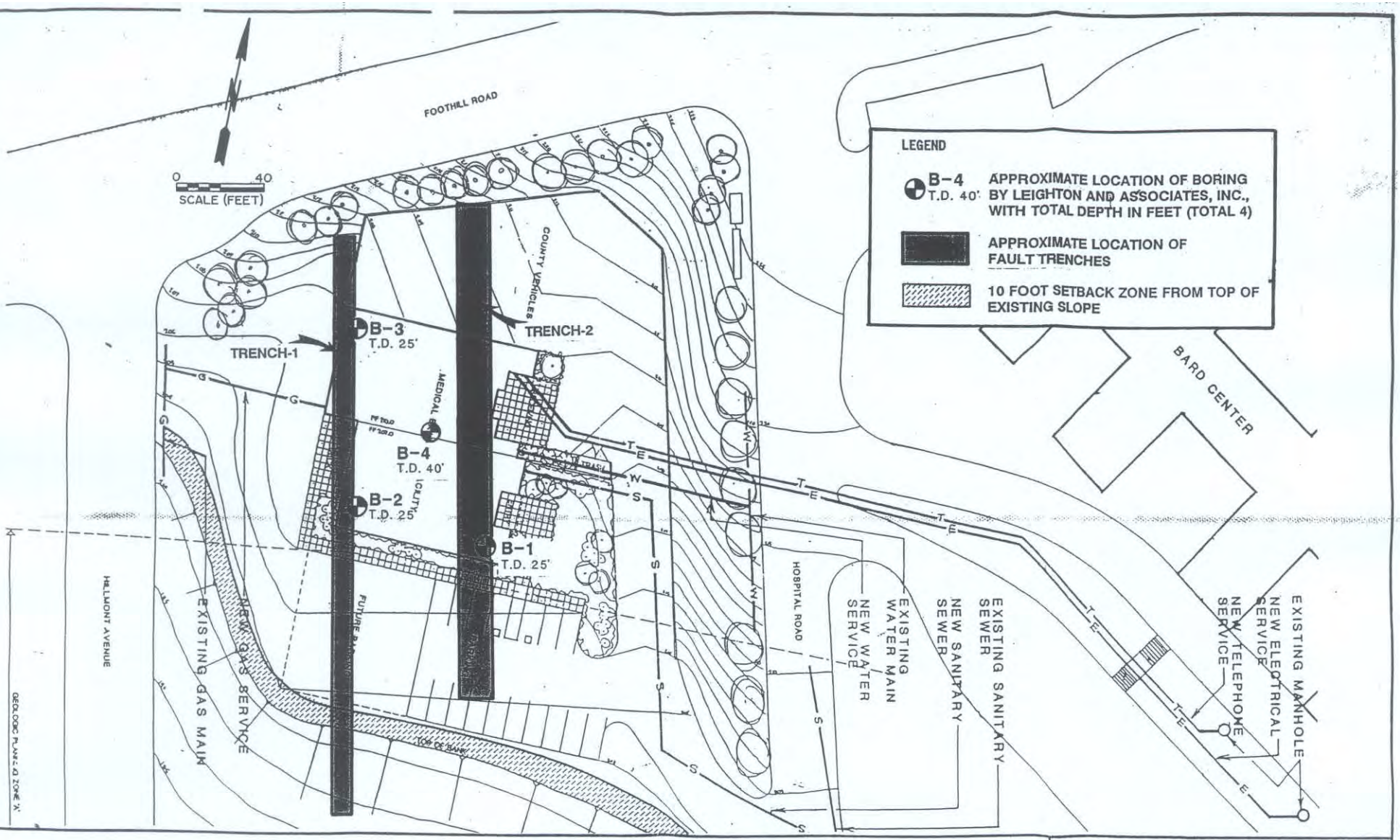


SITE PLAN

VENTURA COUNTY MEDICAL EXAMINERS FACILITY
CITY OF VENTURA, CALIFORNIA

BASE MAP PREPARED BY RASMUSSEN & ASSOCIATES.

Project No.	2920579-01
Scale	1"=40'
Engr./Geol.	FG/--
Drafted By	hnj
Date	9/92

1045 889
Figure No. 2

The consolidation tests on the near-surface sample yielded a collapse potential of 1.5 percent, a maximum past pressure of 1.5 ksf (kips per square foot), a coefficient of compression of 0.1, and a coefficient of recompression of 0.005. The results of the tests on the deeper sample indicated low compressibility within the appropriate stress range.

The direct shear test was performed on two samples. The friction angle and the cohesion of the two samples were 25 degrees, Ø psf and 31 degrees at 9 psf.

The results of the sieve analysis on the two samples showed that both samples contained material with 59 percent passing the No. 200 sieve. Therefore, the materials tested were classified as ML according to the USCS Classification.

Two maximum dry density tests performed yielded optimum moisture contents of 126 pcf and maximum dry densities of 10.5 percent and 125 pcf with 10;0 percent moisture.

The Expansion Index of the surficial material was 15.

Soil Conditions

Our borings indicate relatively uniform subsurface conditions through out the site. With the exception of the trench backfills, the site is underlain by alluvial soils. The alluvial soils consist of interbedded silty sands(SM) and Sandy Silts(ML). Minor amounts of gravel and clean sands are also present. Generally the soils are damp to moist. Generally the upper 10 to 15 feet of the soils in the site are medium in density and consistency; the soils get denser and stiffer with depth. The trench backfill had dry densities similar to the undisturbed soils but was observed to be softer with substantially lower blow counts.

Geotechnical Engineering Analysis

Bearing Capacity: The bearing capacity of the subsurface soils was calculated for continuous and isolated footings. The allowable bearing capacity was evaluated based on averaged strength parameters from our laboratory test results and a factor of safety of three. The average strength parameters were zero cohesion and a friction angle of 28 degrees. The laboratory test results are presented in Appendix C, and the analysis is presented in Appendix D.

The allowable bearing capacities are presented in Table 1 for continuous footings and Table 2 for isolated footings.

Table 1

ALLOWABLE BEARING CAPACITY FOR CONTINUOUS FOOTINGS
ALLOWABLE BEARING CAPACITY (IN PSF) FOR EMBEDMENT OF:

Width (Ft.)	1 Ft.	1.5 Ft.	2 ft.
1	1,320	1,760	2,200
2	1,760	2,200	2,640
3	2,200	2,640	3,080
4	2,640	3,080	3,520

Table 2

ALLOWABLE BEARING CAPACITY FOR ISOLATED SQUARE FOOTINGS
ALLOWABLE BEARING CAPACITY (IN PSF) FOR EMBEDMENT OF:

Width (Ft.)	1 Ft.	1.5 Ft.	2 Ft.
1	1,360	1,890	2,420
2	1,670	2,200	2,730
3	1,980	2,510	3,040
4	2,290	2,820	3,340

Lateral Earth Pressures: The lateral earth pressures were computed based on a an average friction angle of 28 degrees and a moist unit weight of 120 pounds per cubic feet (pcf). The Rankine active and passive earth pressures were computed for level and 2:1 h:v (horizontal to vertical) sloping back fill. The computations are presented in Appendix D and the results are in Table 3.

Table 3

LATERAL EARTH PRESSURES

Backfill Configuration	Equivalent Fluid Pressures	
	Active (pcf)	Passive (psf/ft)
Level Backfill	38	350
Sloping Backfill (2:1 h:v)	71	350

Settlement: Settlement of the existing soils was evaluated using results of the two consolidation tests and considerations accorded to practical footing widths and allowable bearing pressures. The consolidation test results are presented in Appendix C. Differential settlement was computed based on the assumption that adjacent footings will experience maximum and minimum settlements. The maximum settlement is ¼ of the computed maximum settlement.

For normal footing widths and allowable bearing pressures of 2500 psf, the settlement of the soils in the top eight feet is expected to be 2 and 3 inches for isolated and continuous footings respectively.

slab foundation

For the same conditions but assuming 3 feet of overexcavation, the computed settlements are 0.8 and 1.6 inches for isolated and continuous footings respectively. This corresponds to differential settlements of 0.6 and 1.2 inches isolated and continuous footings, respectively.

The consolidation test on the surficial sample showed a collapse of 1.5 percent. The results of the consolidation test on the deeper samples did not show a collapse potential. Based on three feet of overexcavation, collapse potential is not considered to be significant.

Liquefaction: Liquefaction is defined as the loss of strength of cohesionless soils when the pore water pressures induced in the soil becomes equal to the confining pressures. This phenomenon is limited to the top 40 feet. For liquefaction to occur, therefore, there needs to be a groundwater table in the top 40 feet of the site. None of the borings drilled to a maximum depth of 40 feet, in this investigation, nor the fault trench excavated to a depth of 20 feet by Staal Gardner & Dunne in January of 1992 encountered a water table.

Future rainy seasons are not expected to lead to a rise in the water table to the top 40 feet. The depth of the water table is extrapolated to be 150 feet at the subject site (For discussion, see Groundwater Section of this report.). The proposed development is not expected to cause the development of a perched ground water table at the project site.

Expansion: A representative sample of the near-surface soils was tested for expansion characteristics by Test Method UBC 29-2. The results indicated that this material possesses an Expansion Index of 15; this corresponds to a UBC classification of Very Low.

Slope Stability: A natural 4:1 slope is located in the southern portion of the subject site. The slope is approximately 40 feet high. In the northeast of the property a 7:1 (h:v) 7-foot high natural slope. Improper drainage of the slopes could lead to surficial erosion. A drain can be used to intercept storm run-off at the top of the slope. Landscape plants may be used to increase surficial stability.

To avoid surcharge loads from the proposed building onto the existing slope and possibly reducing its stability, the building footprint may be setback from the top.

Relative Compaction of the Loose Backfill in the Fault Trench: The in-place dry density of the soils in the area of the fault trench is 98.3 to 105 pcf. Based on the average maximum dry density of 125 pcf as per ASTM D1557; the in-place relative compaction of the soils ranges between 78 and 83 percent.

The average optimum moisture content is 10 percent. The in-place moisture content varies between 9.7 to 13.9%.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. Although the site for the proposed medical examiners facility is within the Alquist-Priolo Special Studies Zone for the Ventura fault, the site is suitable for the proposed structures provided the conclusions and recommendations of this report are incorporated into the design and construction.

2. The proposed construction should be limited to the northern portion of the lot. This area appears to be less affected by possible future faulting than is the steeper areas on the southern part of the lot.

3. The backfill in the fault trenches is unsuitable for structural fill and must be removed and replaced as compacted fill.

4. The site is not subject to liquefaction because the depth to ground water is greater than 40 feet. Furthermore, the ground water is not expected to rise appreciably due to the landscape watering of the proposed construction.

5. Although the subgrade soils have a Very Low expansion potential special foundation design will be required to limit the effects of possible faulting. The special design considerations include overexcavating and recompacting the near-surface soils beneath the building footprint, constructing a mat foundation (post-tensioned concrete), and installing flexible utility connections with pressure sensitive shut-off valves for gas and water.

6. The predicted composite maximum Modified Mercalli intensities from 87 postulated earthquakes that may affect the site is 7, i.e. "damage negligible in buildings of good design and construction, slight to moderate in well-built ordinary structures, and considerable in poorly built or badly designed structures". If the structure is designed and properly constructed according to today's Uniform Building Code Standards, it is not expected to suffer incapacitating damage due to earthquakes.

Recommendations

1. The upper three feet of soils beneath the lowest footing elevation should be removed and recompacted to at least 90 percent of maximum within the building footprint plus five feet beyond. Before backfilling, the upper eight inches of subgrade should be scarified and recompacted to at least 90 percent of maximum. All backfill soils should be placed in loose lifts of six inches or less and moisture conditioned to bring between optimum and two percent above before compacting.

   All earthwork should be done in accordance with the enclosed General Earthwork and Grading Specifications. See Appendix E.

2. The fault trenches should be over-excavated at least eight feet and then backfilled in six-inch loose lifts, and compacted to a minimum relative compaction of 90 percent.

3. The subgrade beneath the pavement base material should be scarified eight inches and recompacted to a minimum relative compaction of 90 percent of maximum. This subgrade should also be moisture conditioned as set forth above.

4. The foundation for the building should be a post-tensioned concrete slab designed for a vertical offset of at least three inches. Any increase in slab thickness for exterior footings should not be deeper than six inches below the bottom of the slab. The subgrade should be moisture treated to 120 percent of optimum to a depth of 18 inches below subgrade within 24 hours of pouring concrete.

5. Concrete patios and walks should be at least four inches thick and reinforced with #3 bars at 24 inches, both directions.

6. Retaining walls should be designed for the following conditions:

Allowable bearing capacity:	1320 psf at one foot deep and one foot wide plus 440 psf for each additional foot of width plus 520 psf for each additional six inches of depth
Active pressures:	38 pcf (EFP) for flat backfill 71 pcf (EFP) for 2:1 (H:V) backfill
Lateral Resistance:	350 psf per foot of depth to a maximum of 3500 psf
Coefficient of Friction:	0.4

(NOTE: When both lateral resistance and friction are used, one should be reduced by 50 percent.)

All walls should be designed and constructed with a subdrain system. See Figure 3 for typical details.

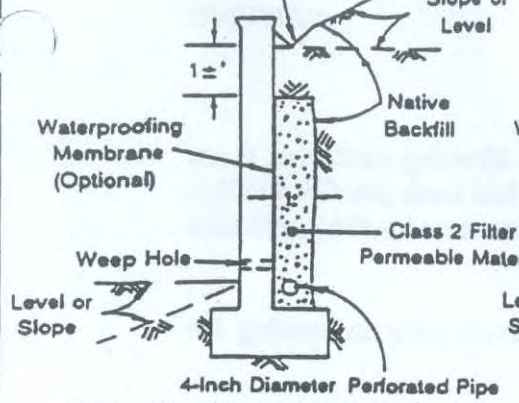
7. All runoff should be directed away from the slope in the middle of the lot to prevent saturation, slumping and erosion of the slope.

8. All habitable buildings should be setback at least ten feet from the top of the slope in the middle of the lot.

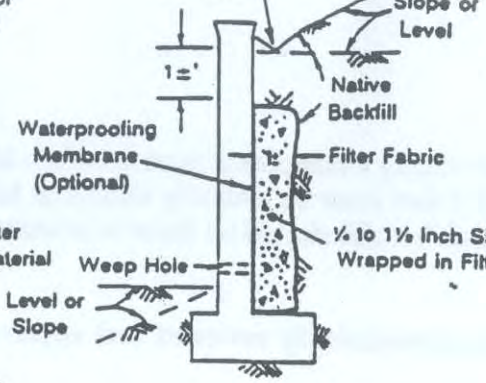
9. Preliminary design for parking lot pavement should be two inches of Asphalt Cement over four inches of Crushed Miscellaneous Base. All pavement sections should be constructed in accordance with the applicable sections of the Standard Specifications for Public Works Construction (The Green Book).

SUBDRAIN OPTIONS FOR NATIVE MATERIAL BACKFILL

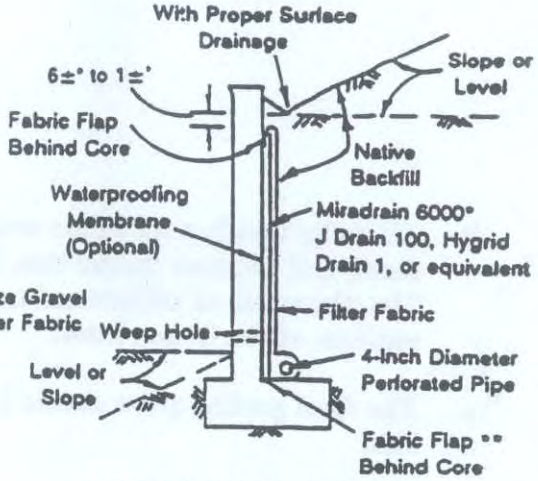
OPTION N2: Pipe Surrounded with Class 2 Material



OPTION N1: Gravel Wrapped in Filter Fabric



OPTION N3: Geotextile Drain



Class 2 Filter Permeable Material Grading Per Caltrans Specifications

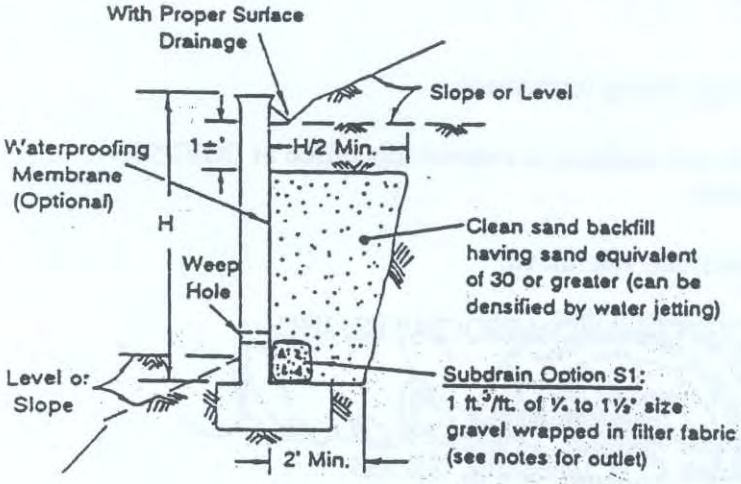
Sieve Size	Percent Passing
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

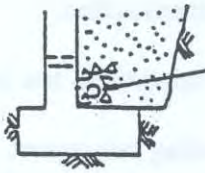
Proper Outlet Should be Provided for Gravel Subdrain (See Notes)

*Miradrain 6000 or J Drain 100 for non-waterproofed walls; Miradrain 6200 or J Drain 200 for completed waterproofed walls

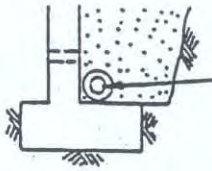
**Peel back the bottom fabric flap, place pipe next to core, wrap fabric around pipe and tuck behind core.

SUBDRAIN OPTIONS FOR CLEAN SAND BACKFILL





Subdrain Option S2:
4" diameter perforated pipe surrounded with 1 ft.³/ft. of Class 2 filter material per Caltrans specifications as above



Subdrain Option S3 for Corrugated Pipes Only:
4" diameter corrugated perforated pipe wrapped in filter fabric (this option should not be used for non-corrugated, smooth pipes because fine particle earth materials may accumulate at the perforated holes and reduce the flow of water into the pipe)

Notes:

- Pipe type should be ASTM D1527 Acrylonitrile Butediene Styrene (ABS) SDR35 or ASTM D1785 Polyvinyl Chloride plastic (PVC), Schedule 40, Armco A2000 PVC, or approved equivalent. Pipe should be installed with perforations down.
- Filter fabric should be Mirafi 140N, 140NS, Supac 4NP, Amoco 4545, Trevira 1114, or approved equivalent.
- All drains should have a gradient of 1 percent minimum.
- Outlet portion for gravel subdrain should have a 4"-diameter pipe with the perforated portion inserted into the gravel approximately 2" minimum and the nonperforated portion extending approximately 1' outside the gravel. Proper sealing should be provided at the pipe insertion enabling water to run from the gravel portion into rather than outside the pipe.
- Waterproofing membrane may be required for a specific retaining wall such as a stucco or basement wall.
- Weephole should be 2" minimum diameter and provided at 25' minimum in length of wall. If exposure is permitted, weephole should be located at 3±" above finished grade. If exposure is not permitted such as for a wall adjacent to a sidewalk/curb, a pipe under the sidewalk to discharge through the curb face or equivalent should be provided, or for a basement-type wall, a proper subdrain outlet system should be provided. Open vertical masonry joints (i.e., omit mortar from joints of first course above finished grade) at 32" maximum intervals may be substituted for weepholes. Screening such as with a filter fabric should be provided for weepholes/open joints to prevent earth materials from entering the holes/joints.

RETAINING WALL BACKFILL AND SUBDRAIN DETAIL

Figure No. 3

3067 292

10. All utility trenches should be evaluated by a competent person before allowing anyone to enter them, and trenches deeper than five feet must be properly shored or laid back per Cal OSHA. The placement of utilities and trench backfill should be done in accordance with the applicable sections of the Green Book.

11. The final grading plans should be geotechnically reviewed and approved prior to sending for bids.

12. All earthwork grading and excavation should be performed under the observation/testing of the geotechnical engineer at the following stages:

- During grading operations, including clearing, removals, recompaction and filling operations, and during utility trench backfilling.
- After excavation for footings and subgrade saturation but prior to placement of concrete.
- After backfilling but prior to paving or other construction over backfill.
- During pavement construction.
- When any unusual conditions are encountered during construction.

If you have questions regarding our report, please do not hesitate to contact this office at (818) 587-9470. We appreciate this opportunity to be of service.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

REGISTERED PROFESSIONAL ENGINEER
FREDERICK C.E. GEBHARDT
No. 335
Exp. 3-31-93
GEOTECHNICAL
STATE OF CALIFORNIA

Frederick C. E. Gebhardt, GE 335
Director of Engineering

FM/FG/bw

Distribution: (3) Addressee

APPENDIX A

LEIGHTON AND ASSOCIATES, INC.

APPENDIX A

REFERENCES

Staal Gardner & Dunne (1992) Fault Hazard Study, Medical Examiner's Facility Ventura, California, Project Number V91206, dated January 1992

Ventura County Flood Control District (1975) Biennial Report of Hydrologic Data, Public Works Agency of the County of Ventura

Ziony, J. J. (1985), 'Evaluating Earthquake Hazards in the Los Angeles Region, An Earth-Science Perspective', U.S.G.S. Professional Paper 1360, p. 176

APPENDIX B

LEIGHTON AND ASSOCIATES, INC.

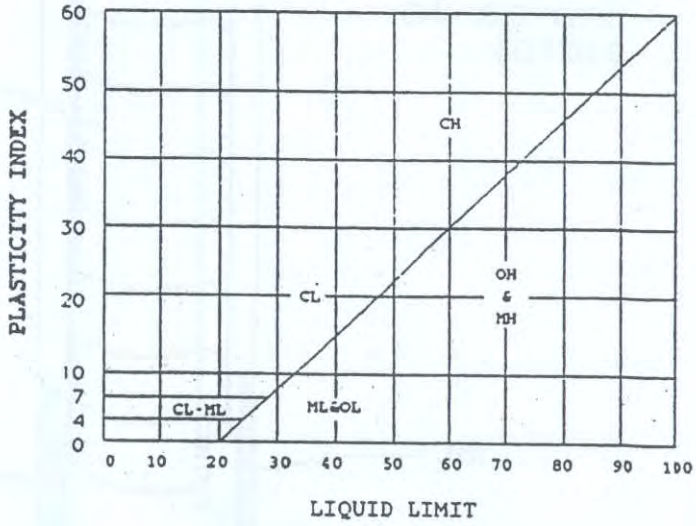
MAJOR DIVISIONS		SYMBOLS		TYPICAL NAMES
COARSE-GRAINED SOILS (More than 1/2 of soil > no. 200 sieve)	GRAVELS (More than 1/2 of coarse fraction > no. 4 sieve size)	GW		Well-graded gravels or gravel mixtures, little or no fines
		GP		Poorly graded gravels or gravel-sand mixtures, little or no fines
		GM		Silty gravels, gravel-sand-silt mixtures
		GC		Clayey gravels, gravel-sand-clay mixtures
	SANDS (More than 1/2 of coarse fraction < no. 4 sieve size)	SW		Well-graded sands or gravelly sands, little or no fines
		SP		Poorly graded sands or gravelly sands, little or no fines
		SM		Silty sands, sand-silt mixtures
		SC		Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (More than 1/2 of soil < no. 200 sieve)	SILTS & CLAYS LL < 50	ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL		Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS LL > 50	MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH		Inorganic clays of high plasticity, fat clays
		OH		Organic clays of medium to high plasticity, organic silty clays, organic silts
	HIGHLY ORGANIC SOILS	Pt		Peat and other highly organic soils

CLASSIFICATION CHART

(UNIFIED SOIL CLASSIFICATION SYSTEM)

CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	ABOVE 12"	ABOVE 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL	3" to No. 4	76.2 to 4.76
COARSE	3" to 3/4"	76.2 to 19.1
FINE	3/4" to No. 4	19.1 to 4.76
SAND	No. 4 to 200	4.76 to 0.074
COARSE	No. 4 to 10	4.76 to 2.00
MEDIUM	No. 10 to 40	2.00 to 0.420
FINE	No. 40 to 200	0.420 to 0.074
SILT & CLAY	BELOW No. 200	BELOW 0.074

GRAIN SIZE CHART

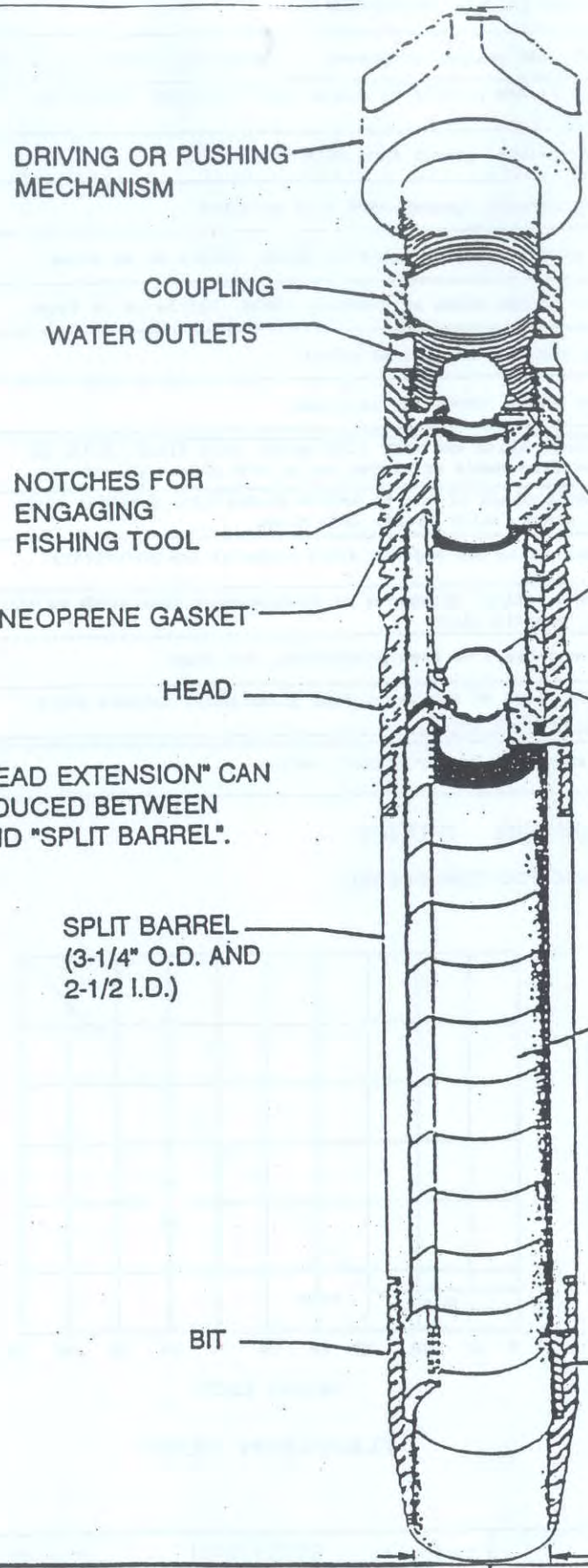


PLASTICITY CHART

METHOD OF SOIL CLASSIFICATION

Project No. 2920579-01
Project Name Med.Exam.Facility
Date 9/92 Figure No. B-i

L&A 2080 389



SPLIT-CORE BARREL DRIVE SAMPLER
EASTERN TRANSPORTATION CORRIDOR
TRANSITION SECTION ED-09
GEOTECHNICAL INVESTIGATION

Project No. 2920579-01

Date 9/92

H&A

GEOTECHNICAL BORING LOG B-1

Date 8-21-92 | Sheet 1 of 1

Project MEDICAL EXAMINER FACILITY/VENTURA | Project No. 2920579-01

Drilling Co. GEOLOGICAL DRILLING | Type of Rig MOBIL B-80

Hole Diameter 6" | Drive Weight 140 LBS. | Drop 30"in.

Elevation Top of Hole 206' | Ref. or Datum SEE GEOTECHNICAL MAP

Logged By HA

Sampled By HA/CRN

Elevation Feet	Depth Feet	Graphic Log	Comments	Tube Sample No.	Blows Per Foot	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	GEOTECHNICAL DESCRIPTION
205	0			1	BAG			ML	ARTIFICIAL FILL SANDY SILT: brown, moist, soft
				2	8	105	11.8		
	5			3	5	102	13.9		@ 5'- grayish brown, moist soft
200				4	BAG				@ 7'- brown
	10			5	7	102	13.8		@ 10'- trace of gravel
195				7A	BAG				
	15			6	8	98.3	9.7	SM	SILTY FINE SAND: yellowish-brown, moist, loose
190				7B	BAG			ML	ALLUVIUM SANDY SILT: brown, moist, medium stiff; trace of gravel
	20			8	44	—	—		@ 20'- stiff
185				9	BAG			SM	SILTY SAND: light brown, moist, medium dense
				10	34	—	—		@ 24'- medium dense with trace of gravel
	25								NOTES: Total depth 25' No ground water Boring backfilled with onsite material on 8/21/92
180	30								

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GEOTECHNICAL BORING LOG B-2

Date 8-21-92 | Sheet 1 of 1

Project MEDICAL EXAMINER FACILITY/VENTURA | Project No. 2920579-01

Drilling Co. GEOLOGICAL DRILLING | Type of Rig MOBIL B-8

Hole Diameter 6" | Drive Weight 140 LBS. | Drop 30

Elevation Top of Hole 208" | Ref. or Datum SEE GEOTECHNICAL MAP

Logged By HA

Sampled By HA/CRN

Elevation Feet	Depth Feet	Graphic Log	Comments	Tube Sample No.	Blows Per Foot	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	GEOTECHNICAL DESCRIPTION
	0			11	BAG			ML	ALLUVIUM SANDY CLAYEY SILT: brown, dry, stiff
				12	60	113	7.2		@ 2'- fine grained, dark brown, moist, hard
				13	BAG			SM	SILTY FINE SAND: dark brown, moist
	5			14	10	95.6	9.1	ML	SANDY SILT: dark brown, moist, soft
				15	BAG				
	10			16	25	111	11.4	SM	SILTY SAND: brown, moist, medium dense
				17	BAG				
	15			18	28	108	3.7		@ 15'- yellowish light brown, dense
				19	BAG				@ 16'- yellowish-brown
	20			20	35	—	—	ML	SANDY SILT: light brown, moist, hard
				21	BAG			SM	SILTY SAND: yellowish brown, moist
				22	17	—	—	ML	SANDY SILT: brown, moist, stiff
	25								NOTES: Total depth 25' No ground water Boring backfilled with onsite material on 8/21/92
	30								

GEOTECHNICAL BORING LOG B-3

Date 8-21-92 Sheet 1 of 1

Project MEDICAL EXAMINER FACILITY/VENTURA Project No. 2920579-01

Drilling Co. GEOLOGICAL DRILLING Type of Rig MOBIL B-80

Hole Diameter 6" Drive Weight 140 LBS. Drop 30"in.

Elevation Top of Hole 209' Ref. or Datum SEE GEOTECHNICAL MAP

Logged By HA

Sampled By HA/CRN

Elevation Feet	Depth Feet	Graphic Log	Comments	Tube Sample No.	Blows Per Foot	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	GEOTECHNICAL DESCRIPTION
	0			23	BAG			SM	ALLUVIUM SILTY FINE SAND: dark brown, moist
				24	11	100.	10.3	ML	SANDY SILT: dark brown, moist, soft to medium stiff
205	5			25	33	104.	8.0		@ 5'- stiff
				26	BAG				@ 7'- yellow
200	10			27	50	108.	4.3		@ 10'- light brown, moist, stiff to hard
				28	BAG			SM	SILTY FINE SAND: yellow, moist
195	15			29	34	101	5.2	ML	FINE SANDY SILT: light brown, moist, stiff to hard
				30	BAG			SM	SILTY FINE SAND: yellowish light brown, moist
190									@ 19'- 4" layer of clean sand, few round gravels
	20			31	50	101	16.3	ML	FINE SANDY SILT: light brown, moist, hard
				32	BAG			SM	SILTY FINE SAND: light brown, moist
185	25			33	72	—	—	ML	SANDY SILT: light brown, moist, hard
180	30								NOTES: Total depth 26' No ground water Boring backfilled with onsite material on 8/21/92

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GEOTECHNICAL BORING LOG B-4

Date 8-21-92 | Sheet 1 of 2
Project MEDICAL EXAMINER FACILITY/VENTURA | Project No. 2920579-01
Drilling Co. GEOLOGICAL DRILLING | Type of Rig MOBIL B-80
Hole Diameter 6" | Drive Weight 140 LBS. | Drop 30"
Elevation Top of Hole 209' | Ref. or Datum SEE GEOTECHNICAL MAP

Logged By HA
Sampled By HA/CRN

Elevation Feet	Depth Feet	Graphic Log	Comments	Tube Sample No.	Blows Per Foot	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	GEOTECHNICAL DESCRIPTION
	0								ALLUVIUM SANDY SILT: brown with dark brown, moist, medium stiff
				34	7	102.	11.6	ML	
205				35	BAG				@ 3'- fine grained sand
	5			36	10	101.4	11.8	SM	SILTY SAND: brown to black, moist, loose; fine grained with trace of gravel
200									
	10			37	6	—	—	ML	SANDY SILT: brown, moist, medium stiff
				38	BAG				
195									
	15			39	16	96.2	9.0		@ 15'- as above
				40	BAG				@ 17'- brown, moist, trace of gravel
190									
	20			41	49	—	—	SM	SILTY SAND: light brown, moist, dense
185									
	25			42	36	—	—	ML	SANDY SILT: brown, moist, stiff
				43	BAG				@ 26'- trace of gravel
180									
	30								

GEOTECHNICAL BORING LOG -4

Date 8-21-92 | Sheet 2 of 2

Project MEDICAL EXAMINER FACILITY/VENTURA | Project No. 2920579-01

Drilling Co. GEOLOGICAL DRILLING | Type of Rig MOBIL B-80

Hole Diameter 6" | Drive Weight 140 LBS. | Drop 30"in.

Elevation Top of Hole 209' | Ref. or Datum SEE GEOTECHNICAL MAP

Logged By HA

Sampled By HA/CRN

Elevation Feet	Depth Feet	Graphic Log	Comments	Tube Sample No.	Blows Per Foot	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	GEOTECHNICAL DESCRIPTION
	30			44	49	113..	10.8	ML/CL	SANDY SILT TO CLAY: brown, moist, hard
				45	BAG			SM	SANDY SILT: brown, moist
175									
	35			46	33	—	—		@ 35'- dark brown, hard
				47	BAG				
170									
	40			48	79	—	—		@ 39'- light brown, moist, hard
									NOTES: Total depth 40'
									No ground water
									Boring backfilled with onsite material on 8/21/92
165	45								
160	50								
155	55								
150	60								

505A(11/77)

LEIGHTON & ASSOCIATES

000775

770

APPENDIX C

LEIGHTON AND ASSOCIATES, INC.

LABORATORY TESTING PROCEDURES

Moisture and Density Tests: Moisture content and dry density determinations were performed on relatively undisturbed samples obtained from the test borings and/or trenches. The results of these tests are presented in the boring and/or trench logs. Where applicable, only moisture content was determined from "undisturbed" or disturbed samples.

Classification Tests: Typical materials were subjected to mechanical grain-size analysis by wet sieving from U. S. Standard brass screens (ASTM D422-65). Hydrometer analyses were performed where appreciable quantities of fines were encountered. The data was evaluated in determining the classification of the materials. The grain-size distribution curves are presented in the test data and the Unified Soil Classification is presented in both the test data and the boring and/or trench logs.

Atterberg Limits: The Atterberg Limits were determined in accordance with ASTM D4318-84 for engineering classification of the fine-grained materials.

Direct Shear Tests: Direct shear tests were performed on selected remolded and/or undisturbed samples which were soaked for a minimum of 24 hours under a surcharge equal to the applied normal force during testing. After transfer of the sample to the shear box, and reloading the sample, pore pressures set up in the sample due to the transfer were allowed to dissipate for a period of approximately 1 hour prior to application of shearing force. The samples were tested under various normal loads, a different specimen being used for each normal load. The samples were sheared in a motor-driven, strain-controlled, direct-shear testing apparatus at a strain rate of 0.05 inch per minute. After a travel of 0.300 inch of the direct shear machine, the motor was stopped and the sample was allowed to "relax" for approximately 15 minutes. The "relaxed" and "peak" shear values were recorded. It is anticipated that, in a majority of samples tested, the 15 minutes relaxing of the sample is sufficient to allow dissipation of pore pressures set up in the samples due to application of shearing force. The relaxed values are therefore judged to be a good estimation of effective strength parameters. The test results were plotted on the "Direct Shear Summary".

For residual direct shear test, the samples were sheared, as described in the preceding paragraph, with the rate of shearing of 0.001 inch per minute. The upper portion of the specimen was pulled back to the original position and the shearing process was repeated until no further decrease in shear strength was observed with continued shearing (at least three times resheared). There are two methods to obtain the shear values: (a) the shearing process was repeated for each normal load applied and the shear value for each normal load was recorded. One or more than one specimen can be used in this method; (b) only one specimen was needed, and a very high normal load (approximately 9000 psf) was applied from the beginning of the shearing process. After the equilibrium state was reached (after "relaxed"), the shear value for that normal load was recorded. The normal loads were then reduced gradually without shearing the sample (the motor was stopped). The shear values were recorded for different normal loads after they were reduced and the sample was "relaxed".

Maximum Density Tests: The maximum dry density and optimum moisture content of typical materials were determined in accordance with ASTM D1557-78 (five layers). The results of these tests are presented in the test data.

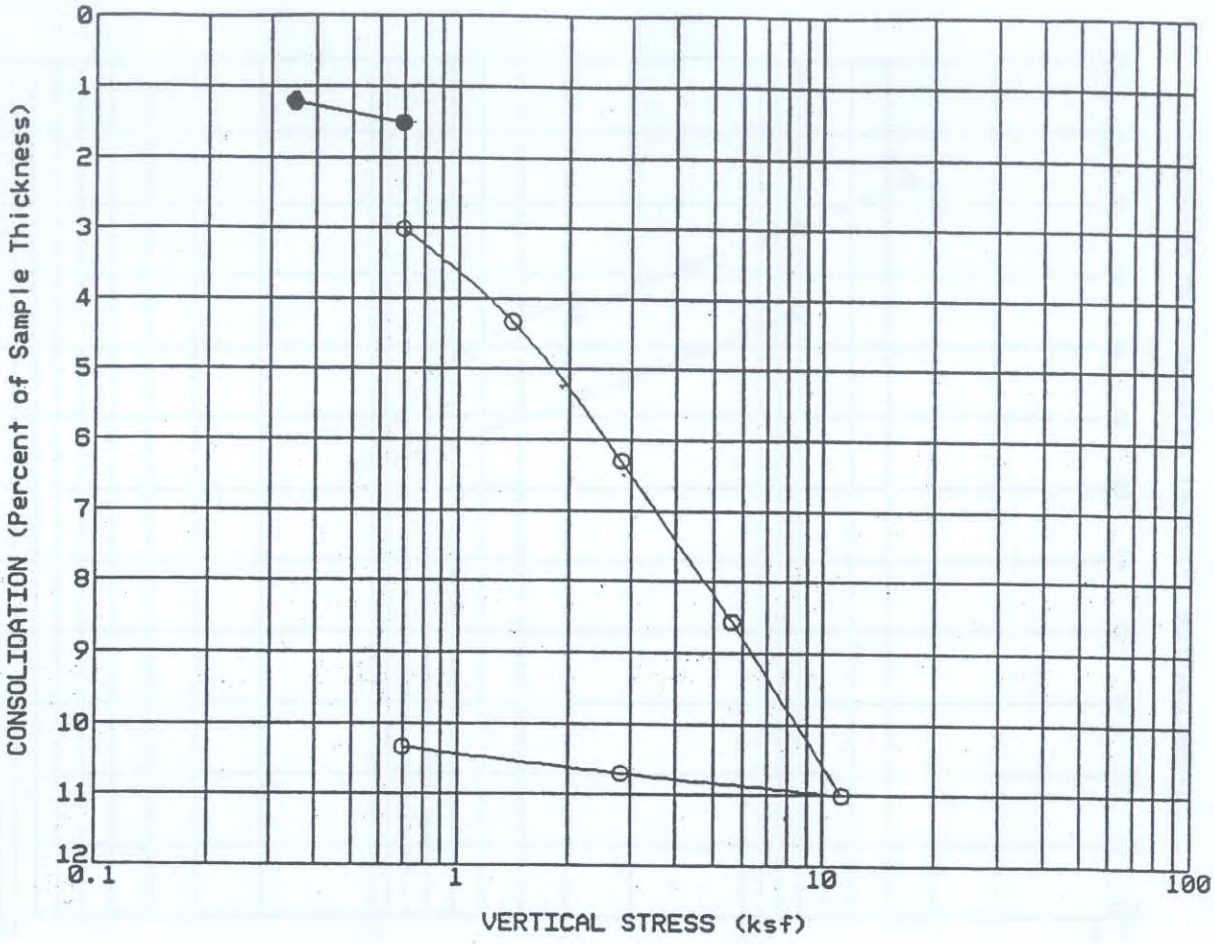
Expansion Index Tests: The expansion potential of selected materials was evaluated by the Expansion Index Test, U.B.C. Standard No. 29-2. Specimens are molded under a given compactive energy to approximately the optimum moisture content and approximately 50 percent saturation or approximately 90 percent relative compaction. The prepared 1-inch thick by 4-inch diameter specimens are loaded to an equivalent 144 psf surcharge and are inundated with tap water until volumetric equilibrium is reached. The results of these tests are presented in the test data.

Consolidation Tests: Consolidation tests were performed on selected, relatively undisturbed samples recovered from the sampler. Samples were placed in a consolidometer and loads were applied in geometric progression. The percent consolidation for each load cycle was recorded as the ratio of the amount of vertical compression to the original 1-inch height. The consolidation pressure curves are presented in the test data. Where applicable, time-rates of consolidation were also recorded. A plot of these rates can be used to estimate time of consolidation.

Soluble Sulfates: The soluble sulfate contents of selected samples were determined by the California Materials Method No. 417.

"R"-Value: The resistance "R"-value was determined by the California Materials Method No. 301 for base, subbase, and basement soils. Three samples were prepared and exudation pressure and "R"-value determined on each one. The graphically determined "R"-value at exudation pressure of 300 psi is reported.

Triaxial Compression Tests: Triaxial compression tests were performed on selected remolded and/or undisturbed samples according to ASTM 2166-85 (unconfined) and ASTM 2850-87 (confined).

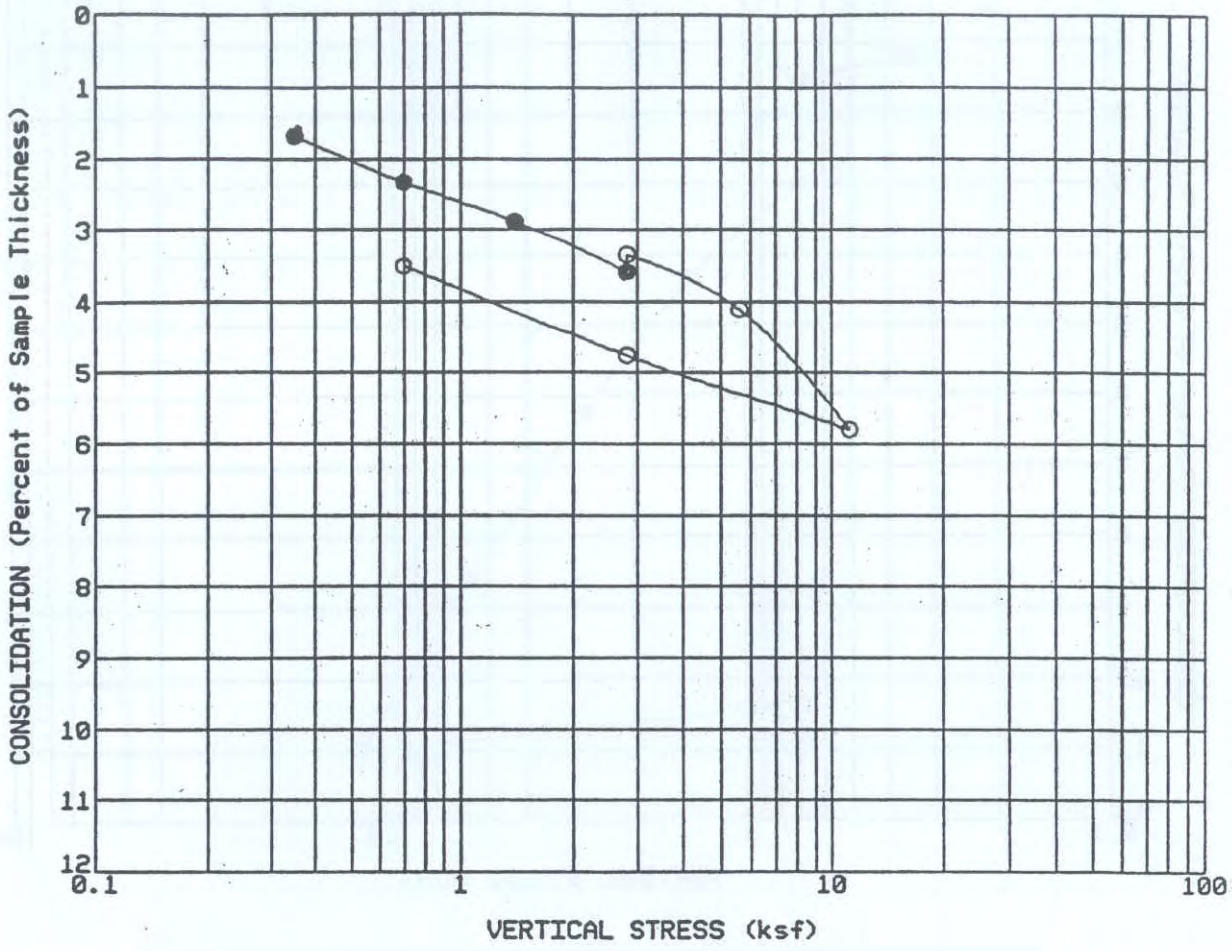


LEGEND: ● At Field Moisture
○ After Addition of Water

Boring No.	B-3	Initial Dry Density (pcf)	102
Sample No.	25	Moisture Content (%):	
Depth (ft)	5	Before	6.7
Soil Type	ML	After	17.1
Soil Description	Sandy Silt		

CONSOLIDATION CURVE

Project No. 2920579-01
Project Name MEDICAL EXAMINER FACILITY/VENTURA
Date 9/92 Figure No. C-1

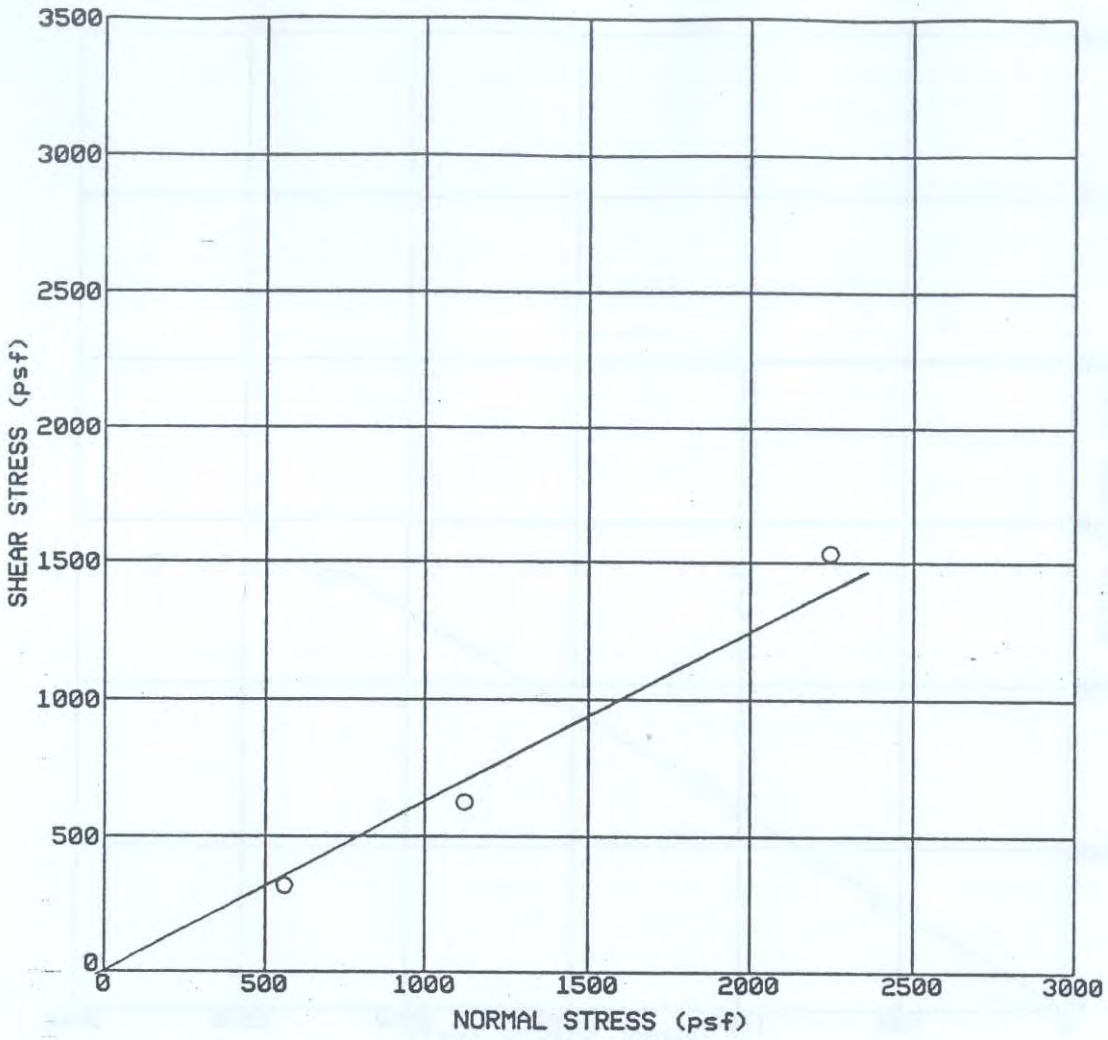


LEGEND: ● At Field Moisture
○ After Addition of Water

Boring No.	B-3	Initial Dry Density (pcf)	102
Sample No.	31	Moisture Content (%):	
Depth (ft)	20	Before	16.3
Soil Type	ML	After	24.0
Soil Description	Fine Sandy Silt		

CONSOLIDATION CURVE

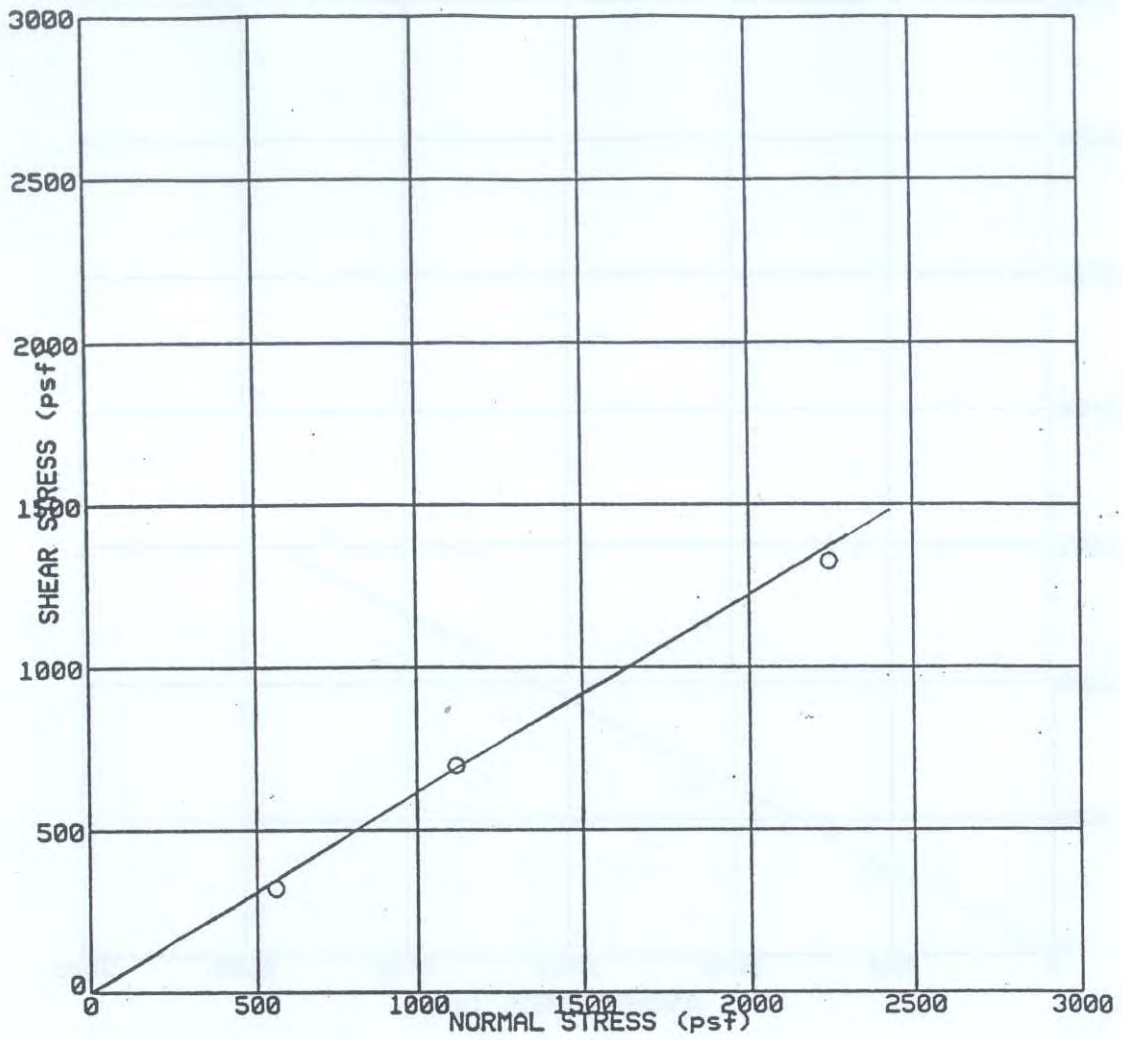
Project No. 2920579-01
Project Name MEDICAL EXAMINER FACILITY/ VENTURA
Date 9/92 Figure No. C-2



Boring No.	B-4	After Test (Average Values):	
Sample No.	36	Dry Density (pcf)	99
Depth (ft)	5	Moisture Content (%):	23.1
Soil Type	SM		
Remarks	Brown Silty Sand w/ Trace of Gravel		
	Friction Angle (deg.)	25	
	Cohesion (psf)	0	

DIRECT SHEAR

Project No. 2920579-01
Project Name MEDICAL EXAMINER FACILITY/ VENTURA
Date 9/92 Figure No. C-3



Boring No.	B-4	After Test (Average Values):	
Sample No.	34	Dry Density (pcf)	103
Depth (ft)	2	Moisture Content (%):	22.5
Soil Type	ML		
Remarks	Brown Sandy Silt		
	Friction Angle (deg.)	31	
	Cohesion (psf)	9	

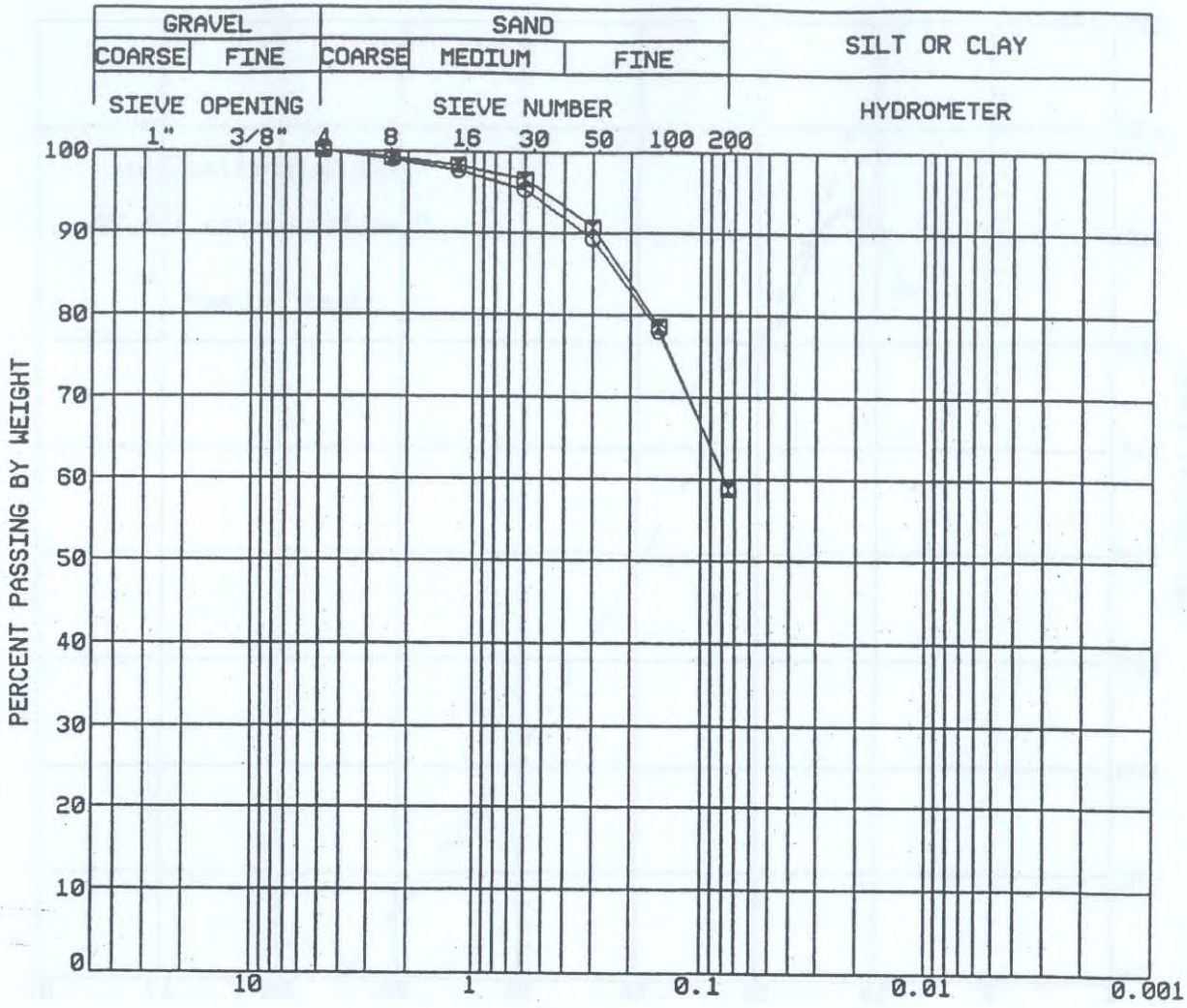
DIRECT SHEAR

Project No. 2920579-01

Project Name MEDICAL EXAMINER FACILITY/ VENTURA

Date 9/92 Figure No. C-4

L&A



Symbol	Boring Number	Sample Number	Sample Depth (feet)	Field Moisture (%)	Soil Type
○	B-1	1	1	–	ML
⊠	B-3	26	7	–	ML

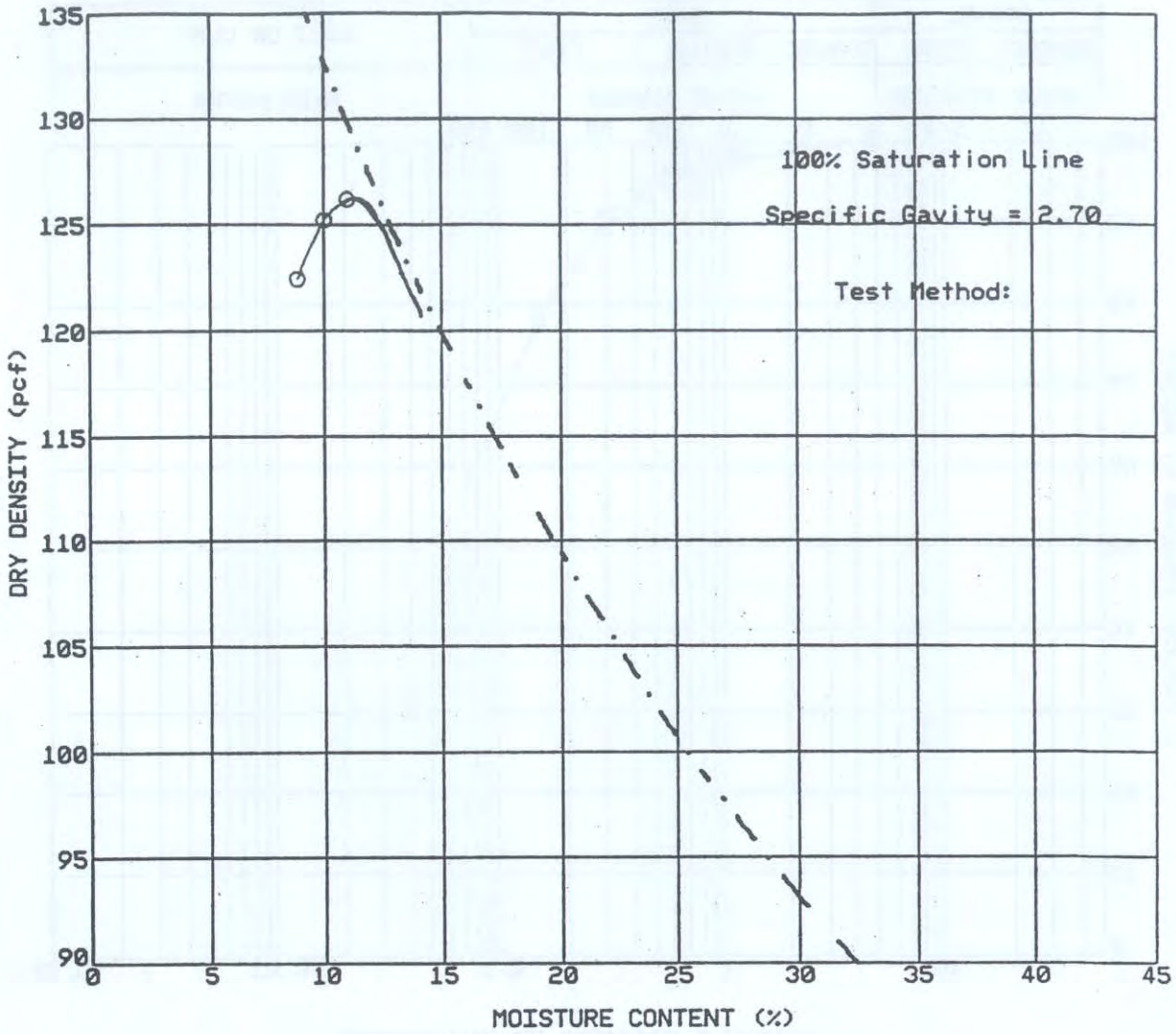
GRAIN SIZE DISTRIBUTION CURVE

Project No. 2920579-01

Project Name MEDICAL EXAMINER FACILITY/VENTURA

Date 9/92

Figure No. C-5



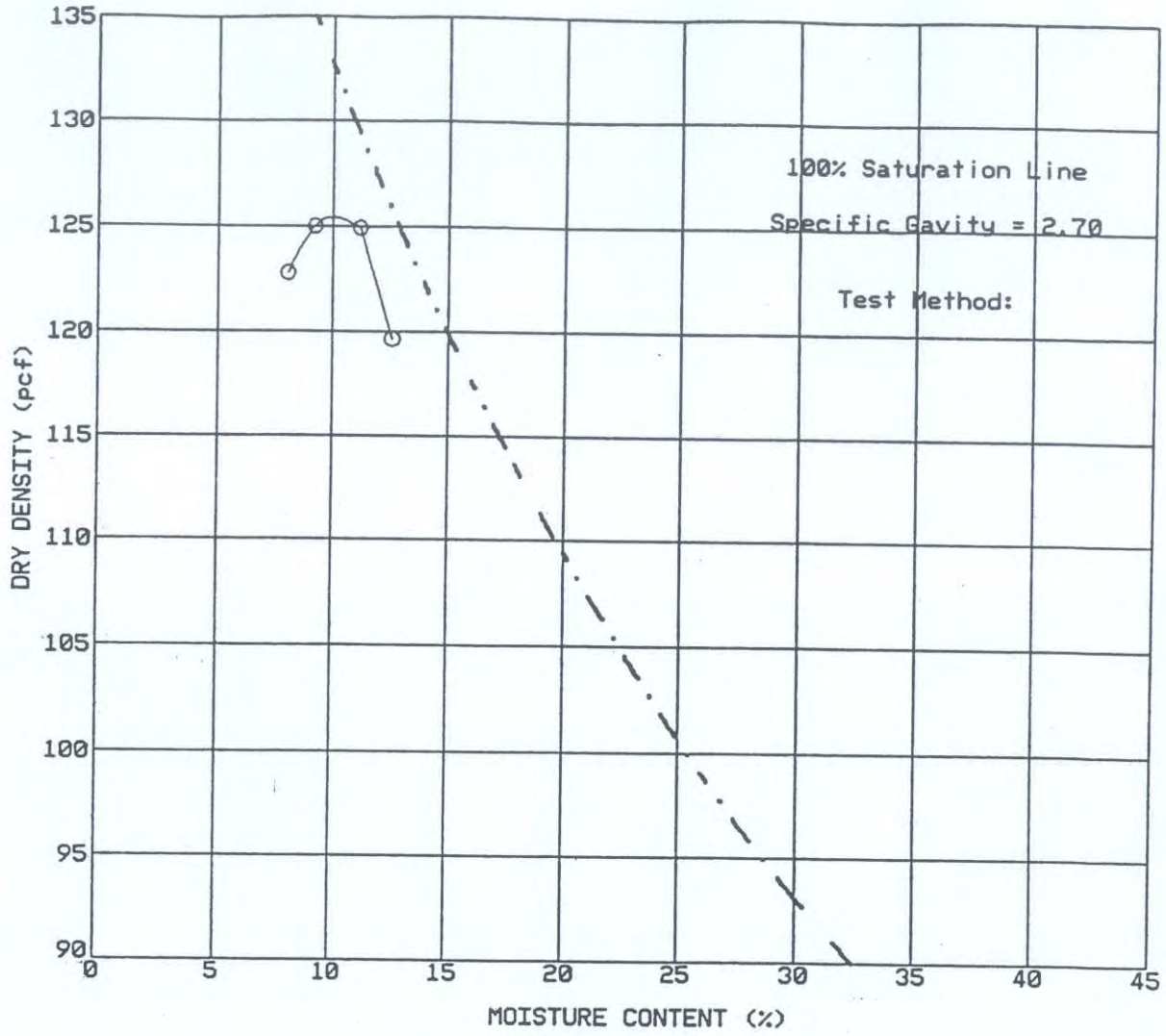
Symbol	Boring Number	Depth (feet)	Soil Description	Optimum Moisture (%)	Maximum Dry Density (pcf)
○	B-1	13	Sandy Silt	10.5	126

MAXIMUM DENSITY TEST

Project No. 2920579-01

Project Name MEDICAL EXAMINER FACILITY/VENTURA

Date 9/92 Figure No. C-6



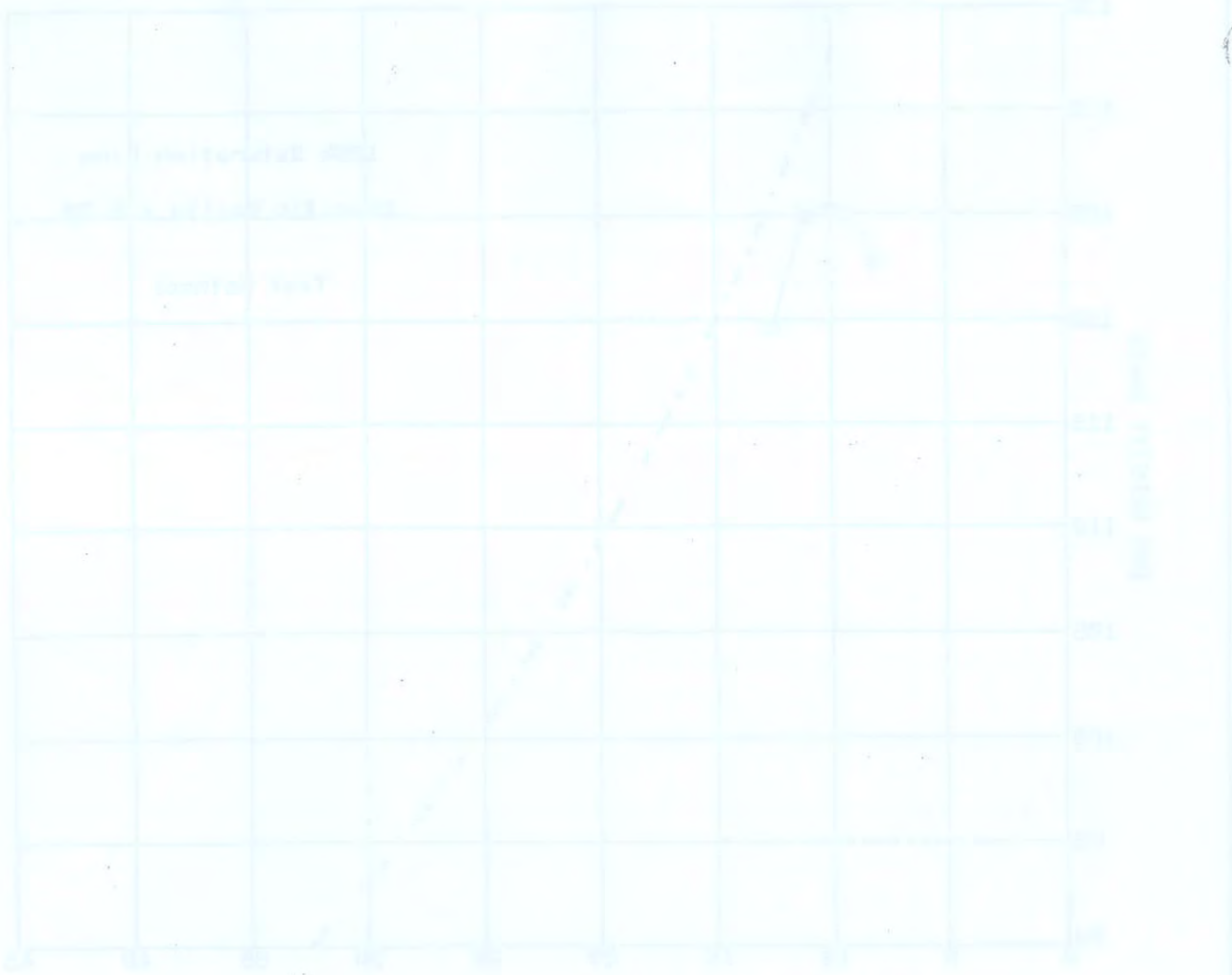
Symbol	Boring Number	Depth (feet)	Soil Description	Optimum Moisture (%)	Maximum Dry Density (pcf)
○	B-1	7	Sandy Silt	10.0	125

MAXIMUM DENSITY TEST

Project No. 2920579-01

Project Name MEDICAL EXAMINER FACILITY/VENTURA

Date 9/92 Figure No. C-7



APPENDIX D

Medical Examiners facility

Bearing Capacity - (For Strip footing)

$$q_{ult} = \left(\frac{\gamma B}{2} N_\gamma + \gamma d N_q\right)$$

$q_{allow} = q_{ult}/3$

for Average $\phi_{Avg} = \left(\frac{25+31}{2}\right) = 28$

$N_\gamma = 22$ } Terzaghi & Peck Pg 206

$N_q = 22$ }

$\gamma_w = 120$ pcf ← Assumed

B = width in ft.

d = embedment in ft

F.S = 3

Allowable Bearing Capacity for Embedment of

Width (B)	1 ft	1.5 ft	2 ft
1 ft	1320 psf	1760 psf	2200 psf
2 ft	1760 psf	2200 psf	2640 psf
3 ft	2200 psf	2640 psf	3080 psf
4 ft	2640 psf	3080 psf	3520 psf

Project No. 2920579-01
Date Aug/92
Engineer/~~Geologist~~ FM
Drafting By —

Bearing Capacity (Isolated footing)

Lambe & Whitman (210)

$$q_{ult} = \frac{1}{2}\gamma B N_\gamma \left(1 - 0.3\frac{B}{L}\right) + \gamma d N_q \left(1 + 0.2\frac{B}{L}\right)$$

$$q_{all} = q_{ult}/F.S.$$

Allowable Bearing Capacity for isolated footings with embedment (D) of

Width (B)	1 ft	1.5 ft	2 ft
1 ft	1364 psf	1892 psf	2420 psf
2 ft	1672 psf	2200 psf	2728 psf
3 ft	1980 psf	2508 psf	3036 psf
4 ft	2288 psf	2816 psf	3344 psf

Project No. 2920579-01
Date 8/92
Engineer/~~Geologist~~ FM
Drafting By —

Relative Compaction in the Boring with in fault trench.

Maximum Dry Density & Moisture

@ 7' - Brown Sandy Silt - = 125 Pcf 10%

@ 13' - Brown Sandy Silt - 126 Pcf 10.5%

Avg = 125.5 Pcf ; 90% RC ⇒ 113 Pcf.

from Boring log

Depth	DD	RC
2	105.3	83%
5	102.6	81%
10	102.3	81%
15	98.3	78%

Project No. 2920579-01
Date 8/92
Engineer/~~Geologist~~ FM
Drafting By

Lateral Earth Pressures (Bowles (1988))

For level backfill

```
::\ :CD SOILS

::\SOILS :KAP
Please Enter "Alpha (deg)": 90
Please Enter "Beta (deg)": 0
Please Enter Ratio "delta/fi": .667
Please Enter Density "gama (pcf)": 120 pcf
Please Enter Friction Angle (deg):28
**********************************************************

Coefficient of Active Earth Pressure, (Ka)=     .321  <---
Equivalent Fluid Pressure, (EFP)=     38.554  pcf
**********************************************************

Coefficient of Passive Earth Pressure, (Kp)=    5.154  <---
Equivalent Fluid Pressure, (EFP)=    618.527  pcf  <---
Stop - Program terminated.

::\SOILS :


**********************************************************


Stop - Program terminated.
```

For sloping 2(H):1(V) backfill

```
::\SOILS :KAP
Please Enter "Alpha (deg)": 90
Please Enter "Beta (deg)": 26
Please Enter Ratio "delta/fi": .667
Please Enter Density "gama (pcf)": 120 pcf
Please Enter Friction Angle (deg):28
**********************************************************

Coefficient of Active Earth Pressure, (Ka)=     .598  <---
Equivalent Fluid Pressure, (EFP)=     71.810  pcf.
**********************************************************


Stop - Program terminated.

::\SOILS :
```

Settlement

from laboratory Results: (B-3, @ 5')

$C_c = 0.1$

$C_r = 0.005$

$P_p = 1.5$ ksf.

(1) Assume 4 ft square footing

8 ft layer -

Bearing Pressure 2288 psf.

influence @ mid layer = 0.34 (Lambe & Whitman P903)

(2) Assume 4 ft wide Continuous footing

8 ft layer, Bearing Pressure = 2640

Removed: influence @ mid layer = 0.55 (Lambe & Whitman P905)

(1) $S = 8' \times \left(0.005 \log \frac{1500}{480} + 0.1 \log \frac{2278}{1500}\right)$

$S = 0.161' \equiv 1.93''$

(2) $S = 8 \times \left(0.005 \log \frac{1500}{480} + 0.1 \log \frac{2952}{1500}\right)$

$= 0.251' = 3.01''$

Project No. 29205 79-01

Date 5/92

Engineer/~~Geologist~~ FM

Drafting By

Settlement (Continued).

If Overexcavation of 3 ft in the area of footing

for isolated footings (square) $I = 0.21$

$$S = 5 \times \left(0.005 \log \frac{1500}{480} + 0.1 \log \frac{875}{1500}\right)$$

$S_{max} = 0.06\ ft \equiv 0.84''$

$\Rightarrow S_{min} = 0.84/4 = 0.21''$

$\Rightarrow$ diff settl. $= S_{max} - S_{min} = 0.63''$

for Continuous footings (Strip) $I = 0.42$

$$S = 5 \times \left(0.005 \log \frac{1500}{480} + 0.1 \log \frac{2608}{1500}\right)$$

$S_{max} = 0.130\ ft \equiv 1.6''$

$\Rightarrow S_{min} = \frac{1.6''}{4} = 0.4$

Differential Settl $= S_{max} - S_{min} = 1.2''$

Project No. _____

Date _____

Engineer/Geologist _____

Drafting By _____

APPENDIX E

LEIGHTON AND ASSOCIATES

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

1.0 General Intent

These specifications present general procedures and requirements for grading and earthwork as shown on the approved grading plans, including preparation of areas to be filled, placement of fill, installation of subdrains, and excavations. The recommendations contained in the geotechnical report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict. Evaluations performed by the consultant during the course of grading may result in new recommendations which could supersede these specifications or the recommendations of the geotechnical report.

2.0 Earthwork Observation and Testing

Prior to the commencement of grading, a qualified geotechnical consultant (soils engineer and engineering geologist, and their representatives) shall be employed for the purpose of observing earthwork procedures and testing the fills for conformance with the recommendations of the geotechnical report and these specifications. It will be necessary that the consultant provide adequate testing and observation so that he may determine that the work was accomplished as specified. It shall be the responsibility of the contractor to assist the consultant and keep him apprised of work schedules and changes so that he may schedule his personnel accordingly.

It shall be the sole responsibility of the contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the consultant, unsatisfactory conditions, such as questionable soil, poor moisture condition, inadequate compaction, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the consultant will be empowered to reject the work and recommend that construction be stopped until the conditions are rectified.

Maximum dry density tests used to determine the degree of compaction will be performed in accordance with the American Society for Testing and Materials test method ASTM D1557-78.

3.0 Preparation of Areas to be Filled

3.1 Clearing and Grubbing: All brush, vegetation and debris shall be removed or piled and otherwise disposed of.

3.2 Processing: The existing ground which is determined to be satisfactory for support of fill shall be scarified to a minimum depth of 6 inches. Existing ground which is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until the soils are broken down and free of large clay lumps or clods and until the working surface is reasonably uniform and free of uneven features which would inhibit uniform compaction.

3.3 Overexcavation: Soft, dry, spongy, highly fractured or otherwise unsuitable ground, extending to such a depth that surface processing cannot adequately improve the condition, shall be overexcavated down to firm ground, approved by the consultant.

3.4 Moisture Conditioning: Overexcavated and processed soils shall be watered, dried-back, blended, and/or mixed, as required to attain a uniform moisture content near optimum.

3.5 Recompaction: Overexcavated and processed soils which have been properly mixed and moisture-conditioned shall be recompacted to a minimum relative compaction of 90 percent.

3.6 Benching: Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. The lowest bench shall be a minimum of 15 feet wide, shall be at least 2 feet deep, shall expose firm material, and shall be approved by the consultant. Other benches shall be excavated in firm material for a minimum width of 4 feet. Ground sloping flatter than 5:1 shall be benched or otherwise overexcavated when considered necessary by the consultant.

3.7 Approval: All areas to receive fill, including processed areas, removal areas and toe-of-fill benches shall be approved by the consultant prior to fill placement.

4.0 Fill Material

4.1 General: Material to be placed as fill shall be free of organic matter and other deleterious substances, and shall be approved by the consultant. Soils of poor gradation, expansion, or strength characteristics shall be placed in areas designated by the consultant or shall be mixed with other soils to serve as satisfactory fill material.

4.2 Oversize: Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 12 inches, shall not be buried or placed in fills, unless the location, materials, and disposal methods are specifically approved by the consultant. Oversize disposal operations shall be such that nesting of oversize material does not occur, and such that the oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 feet vertically of finish grade or within the range of future utilities or underground construction, unless specifically approved by the consultant.

4.3 Import: If importing of fill material is required for grading, the import material shall meet the requirements of Section 4.1.

5.0 Fill Placement and Compaction

5.1 Fill Lifts: Approved fill material shall be placed in areas prepared to receive fill in near-horizontal layers not exceeding 6 inches in compacted thickness. The consultant may approve thicker lifts if testing indicates the grading procedures are such that adequate compaction is being achieved with lifts of greater thickness. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to attain uniformity of material and moisture in each layer.

5.2 Fill Moisture: Fill layers at a moisture content less than optimum shall be watered and mixed, and wet fill layers shall be aerated by scarification or shall be blended with drier material. Moisture-conditioning and mixing of fill layers shall continue until the fill material is at a uniform moisture content at or near optimum.

5.3 Compaction of Fill: After each layer has been evenly spread, moisture-conditioned, and mixed, it shall be uniformly compacted to not less than 90 percent of maximum dry density. Compaction equipment shall be adequately sized and shall be either specifically designed for soil compaction or of proven reliability, to efficiently achieve the specified degree of compaction.

5.4 Fill Slopes: Compacting of slopes shall be accomplished, in addition to normal compacting procedures, by backrolling of slopes with sheepsfoot rollers at frequent increments of 2 to 3 feet in fill elevation gain, or by other methods producing satisfactory results. At the completion of grading, the relative compaction of the slope out to the slope face shall be at least 90 percent.

5.5 Compaction Testing: Field tests to check the fill moisture and degree of compaction will be performed by the consultant. The location and frequency of tests shall be at the consultant's discretion. In general, the tests will be taken at an interval not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of embankment. In addition, on slope faces, at least one test shall be taken for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope.

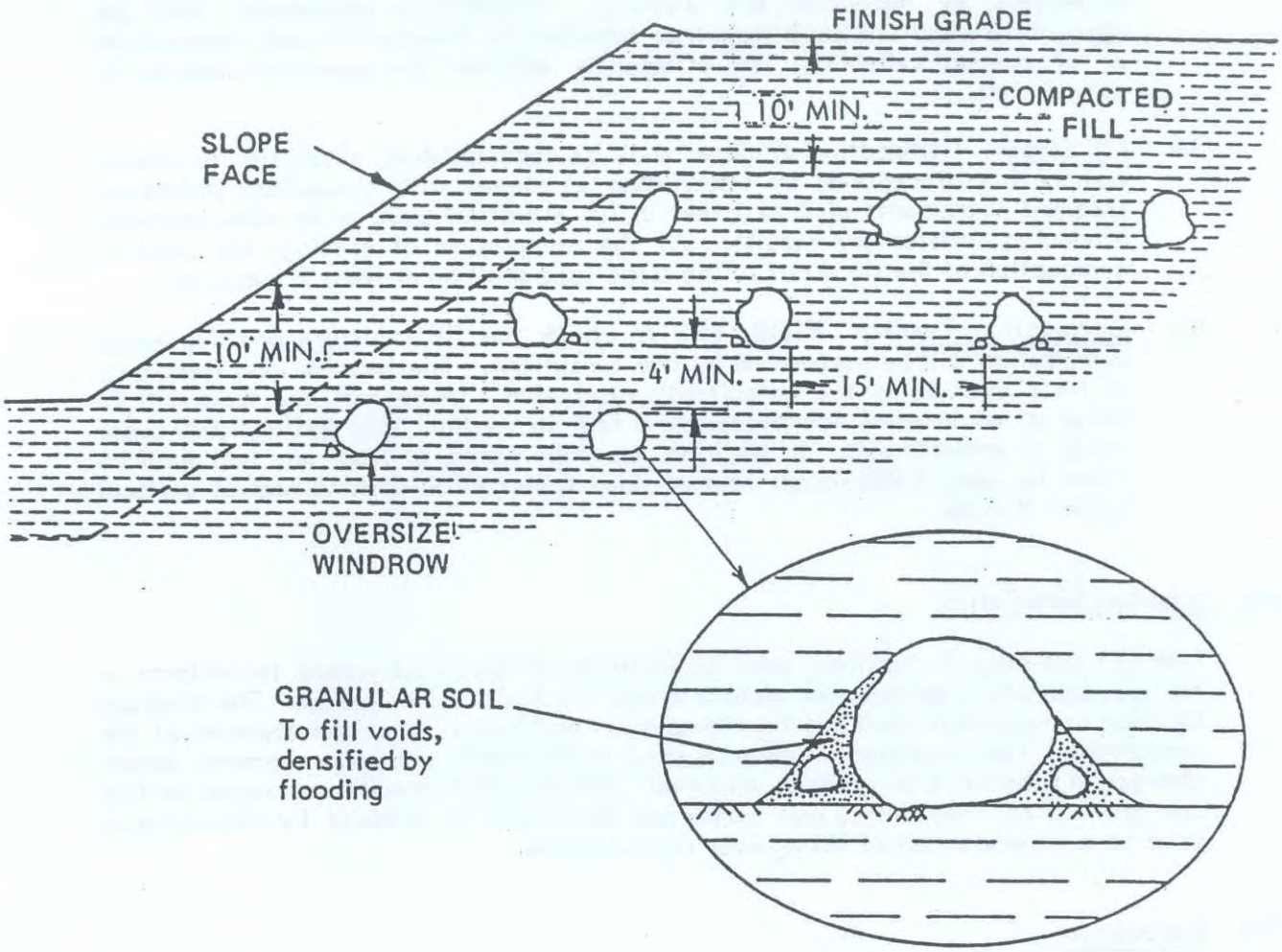
6.0 Subdrain Installation

Subdrain systems, if required, shall be installed in approved ground to conform to the approximate alignment and details shown on the plans or herein. The subdrain location or materials shall not be changed or modified without the approval of the consultant. The consultant, however, may recommend and upon approval, direct changes in subdrain line, grade or material. All subdrains should be surveyed for line and grade after installation and sufficient time shall be allowed for the surveys, prior to commencement of filling over the subdrains.

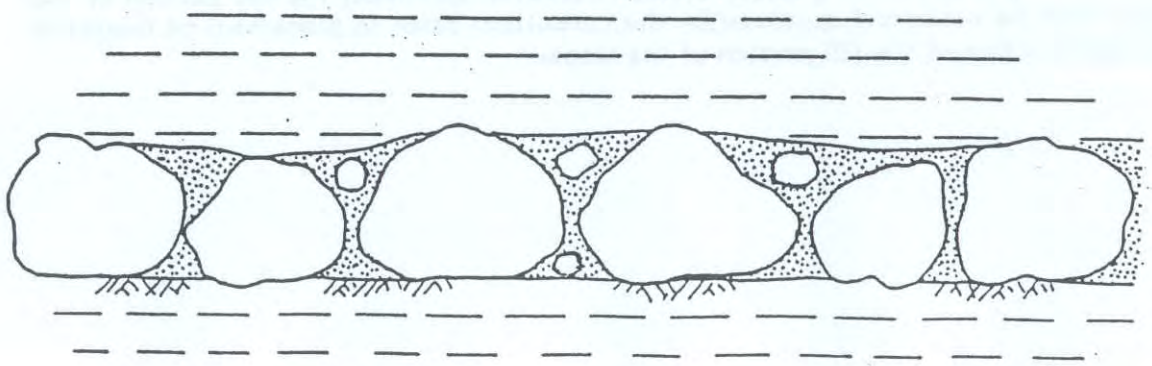
7.0 Excavation

Excavations and cut slopes will be examined during grading. If directed by the consultant, further excavation or overexcavation and refilling of cut areas shall be performed, and/or remedial grading of cut slopes shall be performed. Where fill-over-cut slopes are to be graded, unless otherwise approved, the cut portion of the slope shall be made and approved by the consultant prior to placement of materials for construction of the fill portion of the slope.

ROCK DISPOSAL DETAIL

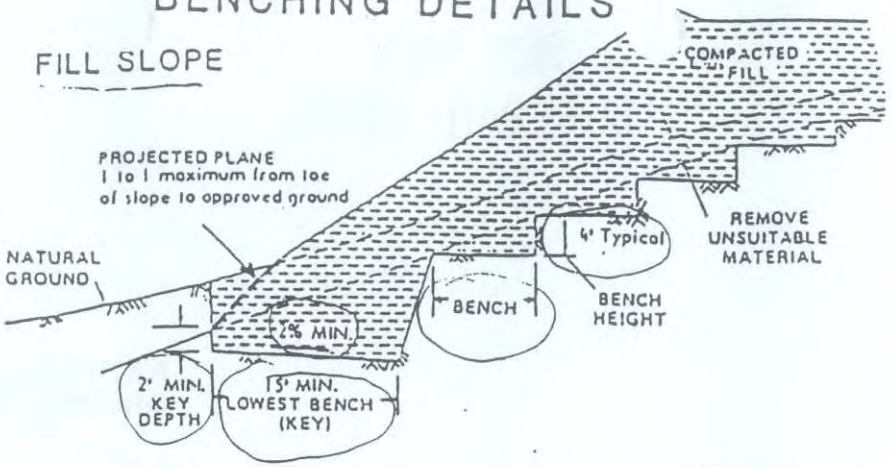


PROFILE ALONG WINDROW

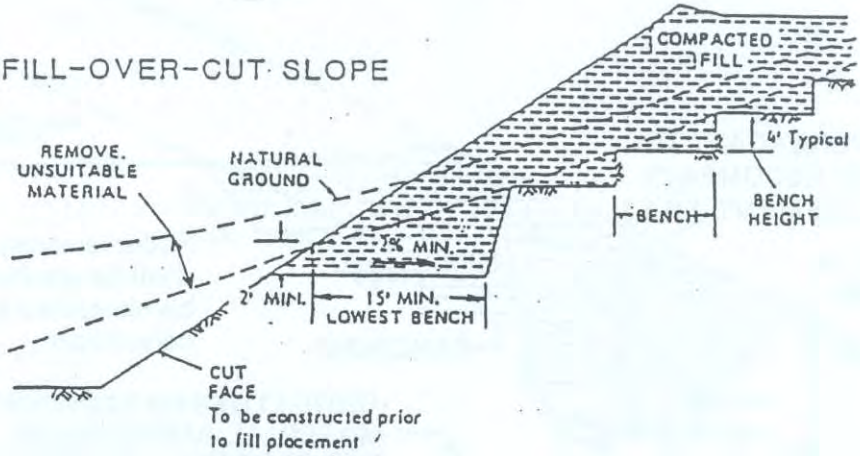


BENCHING DETAILS

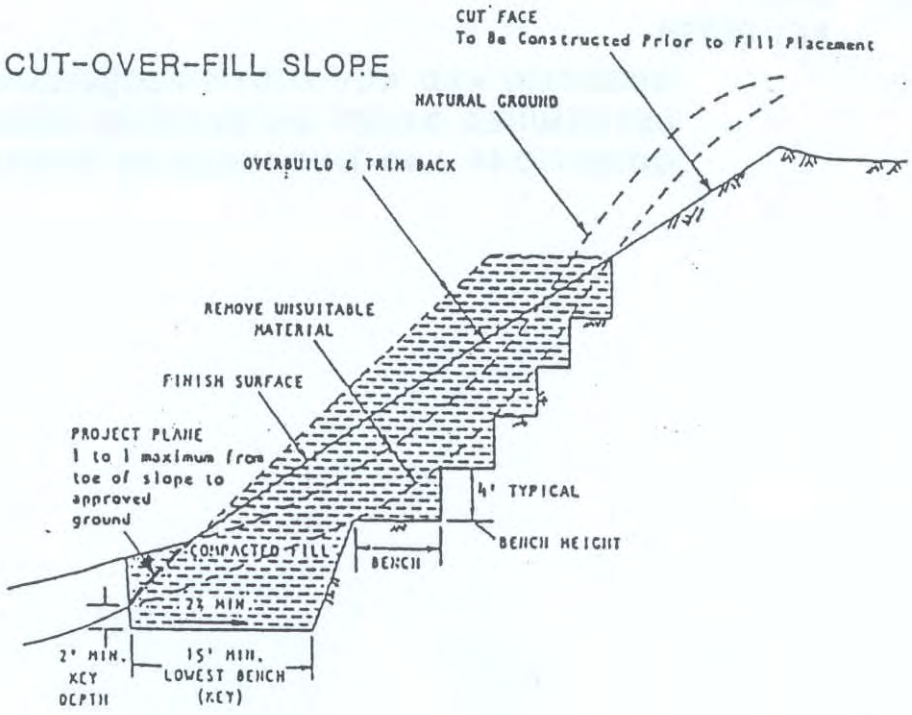
FILL SLOPE



FILL-OVER-CUT SLOPE



CUT-OVER-FILL SLOPE



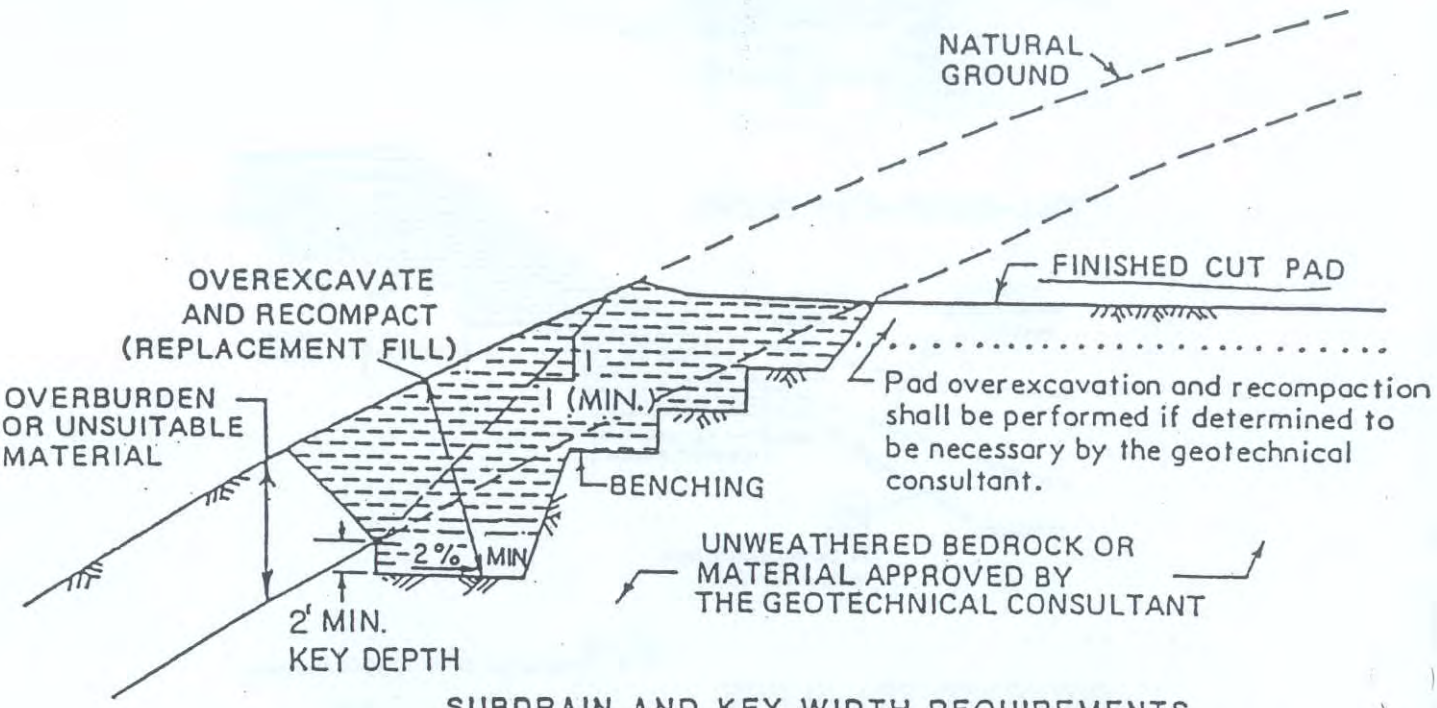
NOTES:

LOWEST BENCH: Depth and width subject to field change based on consultant's inspection.

SUBDRAINAGE:. Back drains may be required at the discretion of the geotechnical consultant.

000803

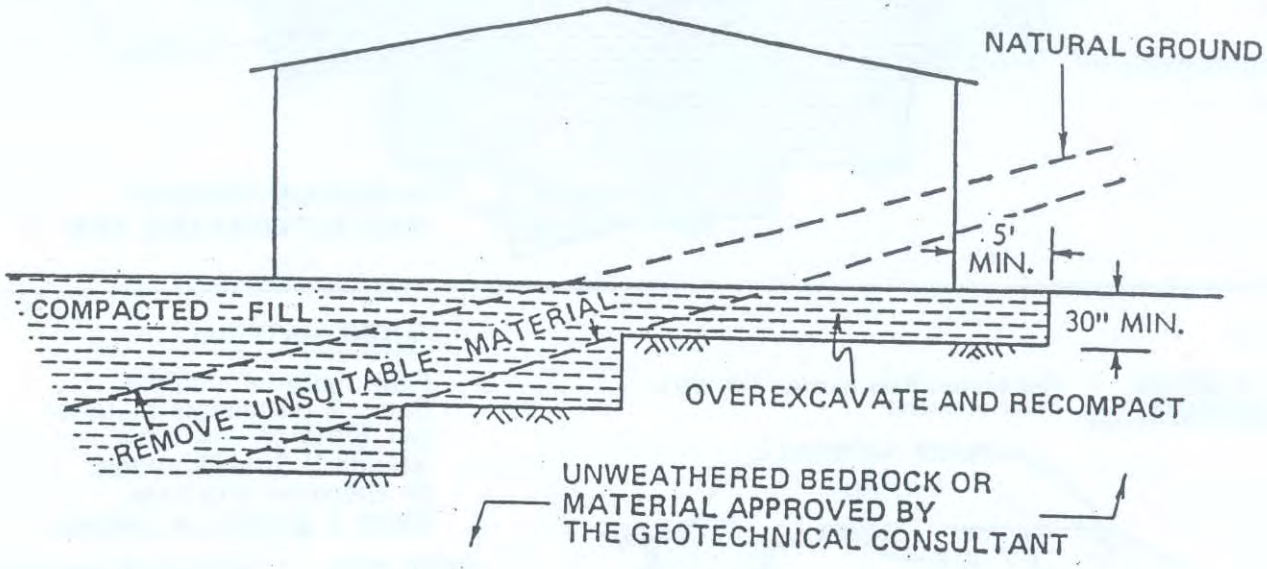
SIDE HILL
CUT PAD DETAIL



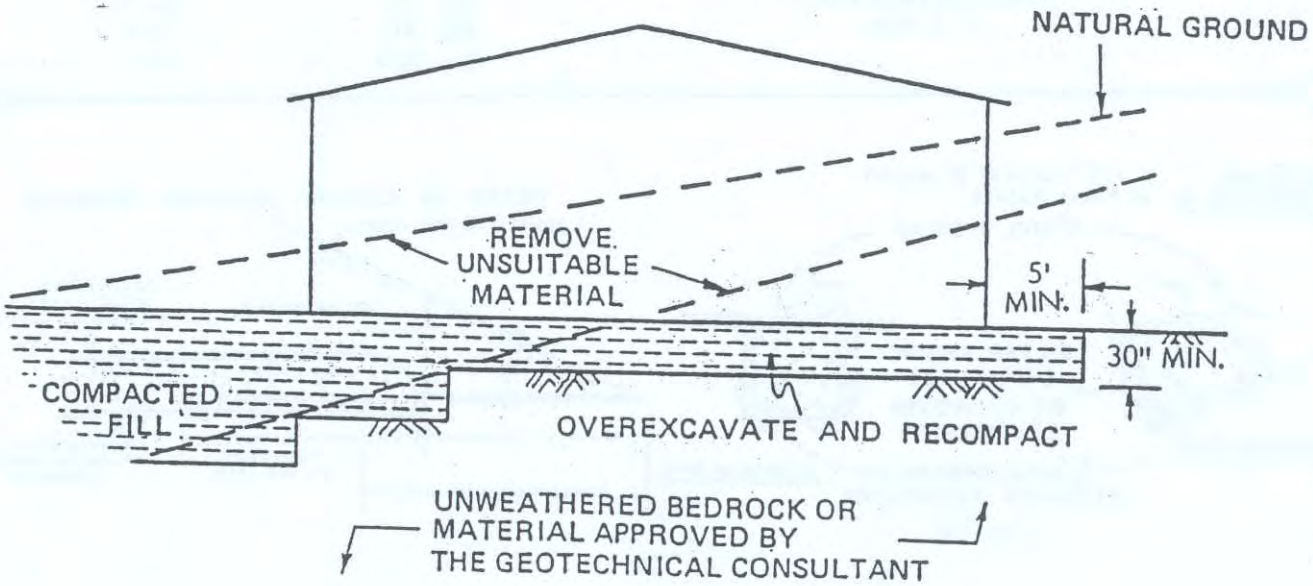
SUBDRAIN AND KEY WIDTH REQUIREMENTS DETERMINED BASED ON EXPOSED SUBSURFACE CONDITIONS AND THICKNESS OF OVERBURDEN

TRANSITION LOT DETAILS

CUT-FILL LOT

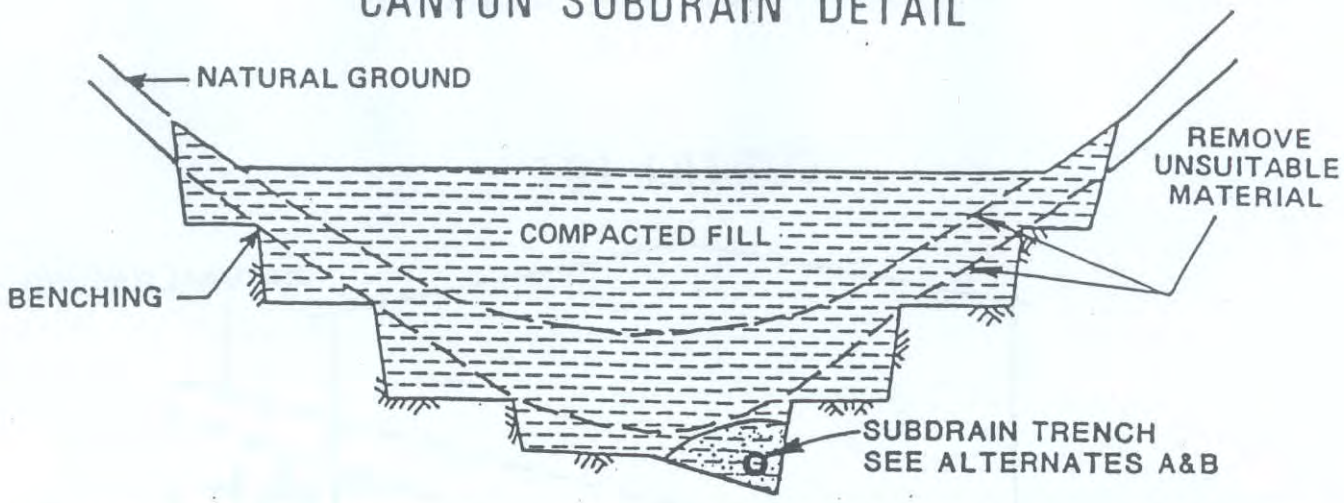


CUT LOT

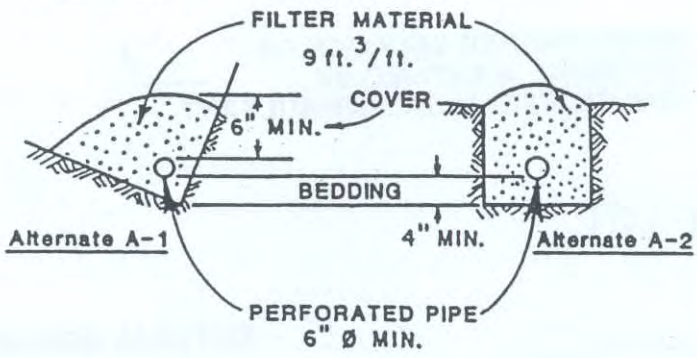


NOTE:
Deeper overexcavation and recompaction shall be performed if determined to be necessary by the geotechnical consultant.

CANYON SUBDRAIN DETAIL



SUBDRAIN ALTERNATE A: Perforated Pipe Surrounded With Filter Material

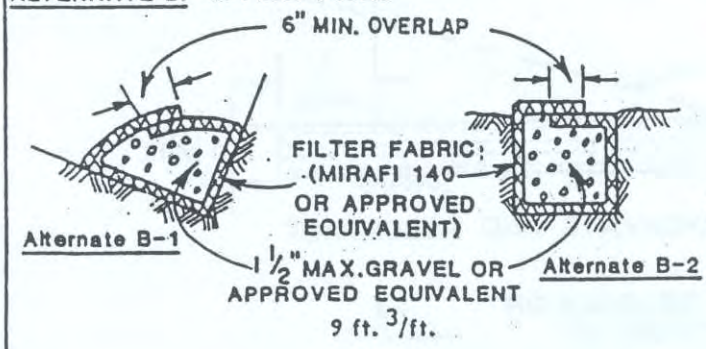


FILTER MATERIAL

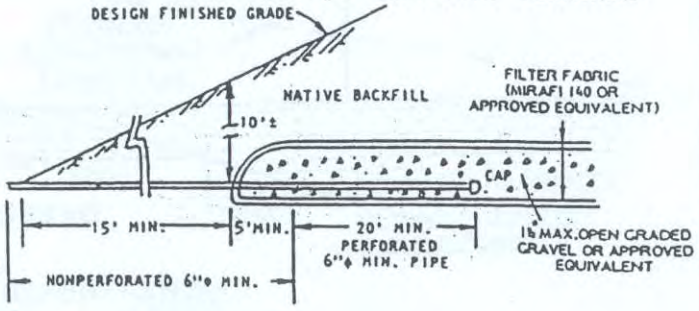
Filter material shall be Class 2 permeable material per State of California Standard Specifications, or approved alternate. Class 2 grading as follows:

SIEVE SIZE	PERCENT PASSING
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

SUBDRAIN ALTERNATE B: 1 1/2" Gravel Wrapped In Filter Fabric

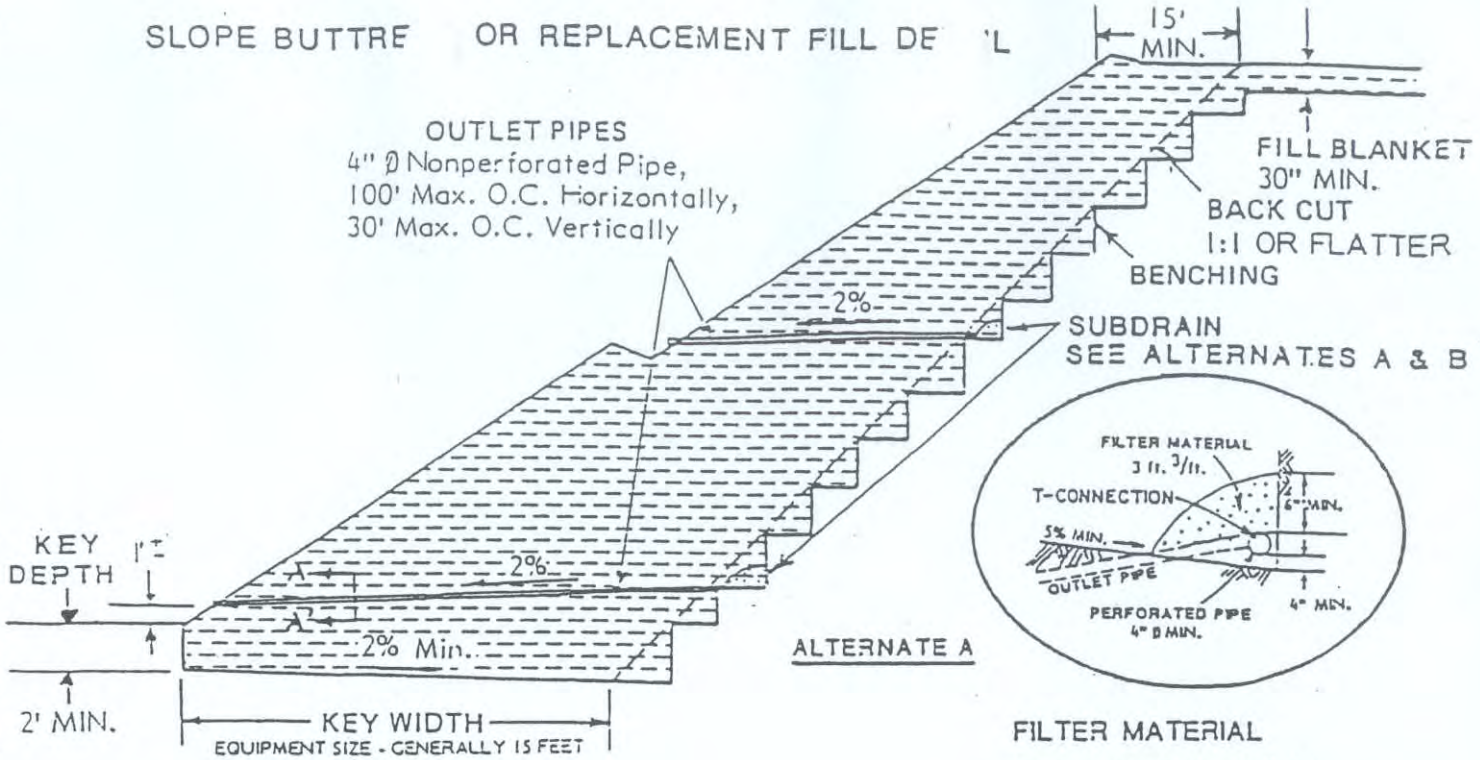


DETAIL OF CANYON SUBDRAIN TERMINAL



- SUBDRAIN INSTALLATION - Subdrain pipe shall be installed with perforations down or, at locations designated by the geotechnical consultant, shall be nonperforated pipe.
- SUBDRAIN TYPE - Subdrain type shall be ASTM C508 Asbestos Cement Pipe (ACP) or ASTM D2751, SDR 23.5 or ASTM D1527, Schedule 40 Acrylonitrile Butadiene Styrene (ABS) or ASTM D3034 SDR 23.5 or ASTM D1785, Schedule 40 Polyvinyl Chloride Plastic (PVC) pipe or approved equivalent.

SLOPE BUTTRE OR REPLACEMENT FILL DE 'L

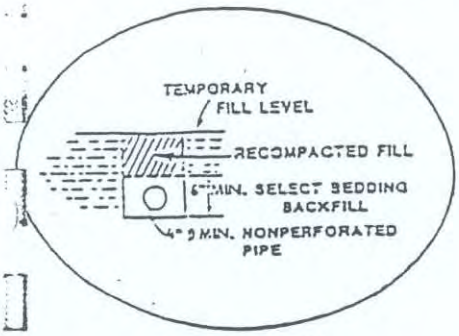


ALTERNATE A

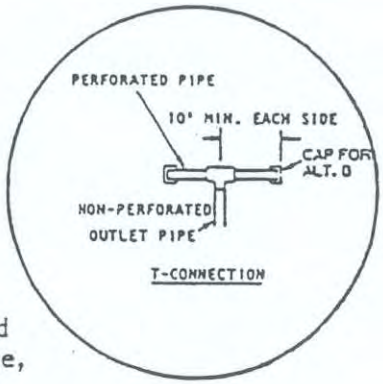
FILTER MATERIAL

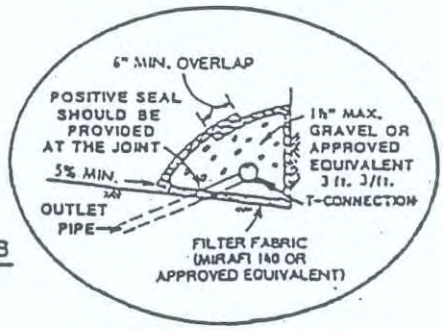
Filter material shall be Class 2 permeable material per State of California Standard Specifications, or approved alternate. Class 2 grading as follows:

SIEVE SIZE	PERCENT PASSING
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3



DETAIL A-A'



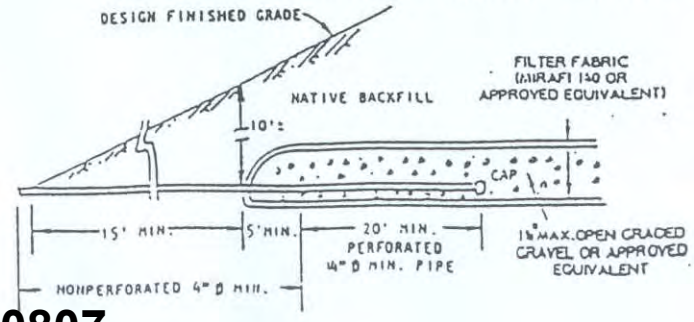


ALTERNATE B

NOTES:

- Fill blanket, back cut, key width and key depth are subject to field change, per report/plans.
- Key heel subdrain, blanket drain, or vertical drain may be required at the discretion of the geotechnical consultant.
- SUBDRAIN INSTALLATION - Subdrain pipe shall be installed with perforations down or, at locations designated by the geotechnical consultant, shall be nonperforated pipe.
- SUBDRAIN TYPE - Subdrain type shall be ASTM C508 Asbestos Cement Pipe (ACP) or ASTM D2751, SDR 23.5 or ASTM D1527, Schedule 40 Acrylonitriile Butadiene Styrene (ABS) or ASTM D3034 SDR 23.5 or ASTM D1785, Schedule 40 Polyvinyl Chloride Plastic (PVC) pipe or approved equivalent.

DETAIL OF BUTTRESS SUBDRAIN TERMINAL



FAULT HAZARD STUDY

MEDICAL EXAMINER'S FACILITY

VENTURA, CALIFORNIA

FOR

COUNTY OF VENTURA
PUBLIC WORKS AGENCY

JANUARY 1992

STAAL GARDNER & DUNNE INC
Geotechnical, Hydrogeological & Environmental Consultants

STAAL
GARDNER
& DUNNE
INC
Geotechnical,
Hydrogeological
& Environmental
Consultants

Ivar Staal
1939-1991
David A. Gardner
President
Timothy N. Dunne
Secretary/C.F.O.
John R. Powell
Vice President
Martin B. Feeney
Vice President

FAULT HAZARD STUDY

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5855 Olivas Park Drive • Ventura, California 93003-7672 • 805/650-7000 • Fax: 805/650-7010

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INTRODUCTION

GENERAL STATEMENT

Presented in this report are findings, conclusions, and recommendations developed for a geologic fault hazards study at the site of the proposed Ventura County Medical Examiner's Facility in Ventura, California. As shown on Figure 1 - Site Location Map, the site is located at the southeastern corner of the intersection of Hillmont Avenue and Foothill Road, on the Ventura County Medical Center Facility property in the City of Ventura, California.

PURPOSE AND SCOPE

The purpose of this study was to evaluate the presence or absence of near-surface faulting on the property. The potential for other geohazards such as landsliding, liquefaction, seismic shaking, tsunamis, etc., and the on-site geotechnical conditions were not addressed in this study. Additional design level geotechnical studies will be necessary prior to site development.

PROPOSED PROJECT

As presently proposed, the Ventura County Medical Examiner's Facility will include the construction of a 9,200-square-foot metal or wood frame structure. The structure is proposed as a single story, split-level building with an exterior stucco facade and an interior sheet-rock finish. Based on the planning study (Rasmussen & Associates, 1989), the facility will house two autopsy rooms, a refrigerator and freezer, x-ray and tissue laboratories, lockers, offices, and various ancillary facilities. The proposed facility will be flanked to the north and south by paved parking areas.

WORK PERFORMED

The scope of work for this study was developed through discussions with Mr. Hugh Clabaugh, formerly with the County of Ventura Engineering Services Department, and was reviewed by Mr. Jim Fischer, Geologist, with the County of

Ventura. As outlined in our letter of proposal dated October 31, 1991, the scope of work consisted of:

- **Utility Location and Fence Installation.** Prior to performing subsurface exploration, subsurface utilities were located through consultation with Underground Service Alert (USA) and individual utility contractors. In addition, temporary fencing was installed around the perimeter of the study area prior to initiation of excavation. The fencing was needed to inhibit persons other than Ventura County or Staal, Gardner & Dunne, Inc. (SGD) personnel, or their agents, from entering the work area.

- **Geologic Map Preparation.** A geotechnical map at a scale of 1-inch equals 40 feet (1" = 40') was prepared. The map was prepared after reviewing available data including published maps and other information available from the United States Geological Survey (USGS), California Division of Mines and Geology (CDMG), previous consultant data, available stereo aerial photographs, and data collected as part of this study. The geologic map is presented as Plate 2 - Geotechnical Map. The reference materials reviewed as part of this study are listed in the References Cited section at the end of this report text.

- **Subsurface Exploration.** The subsurface exploration program included the excavation and geologic logging of one exploratory trench. The trench was about 233 feet in length and varied in depth from about 15 to 20 feet. The trench was logged and sampled by an engineering geologist. Upon completion of the geologic logging and sampling, the trench was backfilled with the native trench spoil. As discussed in the proposal, no effort was made to compact the soils used to backfill the exploratory trench. A description of the exploration program is presented in Appendix A - Supporting Geotechnical Data. The trench log generated as part of this study is presented as Plate 4 - Log of Trench. The subsurface exploration program also included a site visit by Dr. Tom Rockwell. A brief letter prepared by Dr. Rockwell is presented in Appendix B.

- **Radiocarbon Dating.** One sample of carbonaceous material was collected from within the trench and dated using C^{14} radiocarbon dating techniques. The results of the dating and the methods employed are included in Appendix C - Radiocarbon Dating.

- **Report Preparation.** This report was prepared to present the findings, conclusions, and recommendations of the study.

PREVIOUS WORK

Regionally, the area of the proposed Medical Examiner's Facility has been included in a number of published and unpublished, geologic studies. Early published geologic studies included Putnam (1942) and Bailey (1951), who

performed geologic and geomorphic mapping in the area as part of regional studies in the Ventura basin. A regional geologic map was later compiled from previous work by Weber et al. (1973), and it was followed by an additional regional study of the soils, geology, and neotectonics of the north-central Ventura basin, prepared by Rockwell (1984).

In addition, there have been many authors who have completed studies that have contributed to the present understanding of the geologic conditions of the Ventura fault zone. Those studies were performed by Quick (1973), Cilweck (1975), Sarna-Wojcicki et al. (1976), Geotechnical Consultants, Inc. ([GTC] 1977, 1978), Yeats (1982), Sarna-Wojcicki and Yerkes (1982), Yeats (1991), and Prentice and Powell (1991). Most notable of the above-noted papers are Cilweck (1975) and Sarna-Wojcicki (1976), which present data obtained from a fault trench exposure located within the project site. That trench was located about 100 feet west of the exploratory trench excavated for this study. Based on data presented in those two papers, Fault Evaluation Report FER-13 (Smith, 1976, 1977, and 1978), and additional studies, CDMG zoned the Ventura fault zone as "active" in accordance with the Alquist-Priolo Special Study Zones Act of 1972.

FAULT STUDY

One continuous fault trench was excavated in a north-south direction south of Foothill Road, as shown on Plate 1 - Generalized Geologic Map. That trench had a total length of about 233 feet and it varied in depth between about 15 feet and 20 feet, as shown on Plate 4.

The trench was excavated using a Case 125B series track-mounted backhoe with a 48-inch-wide bucket. To provide safe working conditions, the trench was excavated to the indicated depths (Plate 4) with benches stepped down to the bottom of the trench, in general conformance with California Occupational Safety and Health Administration (Cal OSHA) regulations. The trench-wall exposures were logged by an engineering geologist and that log is presented as Plate 4.

FINDINGS

SITE CONDITIONS

The site is situated on the southern flank of the Ventura Avenue anticline, between Hall and Barlow Canyons. The topography of the site gently descends towards the south, above and below a prominent topographic scarp formed by the Ventura fault. Those gradually descending inclinations vary from about 1 degree south of the scarp to about 6 degrees north of the scarp. Inclinations along the scarp face are as steep as about 14 degrees. The elevations of the site vary from a high of about 220 feet above mean sea level (MSL) on the north, to a low of about 160 feet above MSL on the south.

The site is currently maintained as open, landscaped space. It had previously been graded and improved for a helicopter landing pad; however, that landing pad is no longer used and the pad is currently maintained as an irrigated lawn area. To the east of the trench site, a paved access road extends onto the helicopter pad from Hospital Road.

Regional Geologic Setting. The site of the proposed Medical Examiner's Facility is located on the northern flank of the Ventura basin, a major structural trough within the larger Transverse Ranges Geomorphic Province of California. The Ventura basin is a structurally controlled basin bordered on the north by the Red Mountain and the San Cayetano faults, and on the south by the Oak Ridge fault. This region is characterized by east-west-trending structural features such as the Ventura Avenue anticline, the Ventura syncline, and the Red Mountain, Oak Ridge, San Cayetano, and Ventura faults. The regional geologic conditions are shown on Plate 3 - Regional Geology.

Site Geologic Conditions. The project site is underlain by alluvial fan deposits of Quaternary geologic age (Qal). Based on drill hole data from Cilweck (1975), the alluvial fan deposits are estimated to be about 35 feet deep. Beneath those sediments is reportedly a sequence of Tertiary-age sedimentary formations including the Santa Barbara, Saugus, and Pico Formations (Sarna-

Wojcicki et al., 1976). The alluvial deposits are unconsolidated, lenticular to continuously bedded mixtures of sand, gravel, silt, with minor interbedded clay and some cobbles and boulders. Two buried soils (paleosols) were observed within the alluvial fan deposits. The upper paleosol is located at a depth of about 11 feet and consists of a weakly developed A horizon. The lower paleosol is located at a depth of about 16 feet and consists of an A/B horizon sequence.

Artificial fill is present within the helicopter pad and within an older drainage channel exposed at the southern end of the trench, as shown on Plates 1 and 4. Disturbed top soil is also present at the surface of the entire trench and is labeled as soil type Ap on Plate 4. The distribution of the Ap materials is not shown on the geologic map (Plate 1) because those materials are generally very thin, discontinuous, and difficult to map without additional subsurface exploration. Thicker sequences of artificial fill materials are indicated on Plate 1.

EARTH MATERIALS

The alluvial fan deposits encountered in the trench consist of interbedded sandy gravel (GP), gravelly sand (SP), sand (SW-SP), silty sand (SM), clayey sand (SC), and silt (ML). Minor amounts of cobbles are also present. The stratigraphy suggests that those sediments were probably deposited as alluvial fan deposits shed from Hall Canyon, to the west, or other drainages in the vicinity of the exposure.

Generally, the observed sediments are dry to damp, unconsolidated, loose to medium dense, poorly indurated, fine- to coarse-grained, with gravels and cobbles that are subangular to well rounded. Localized gravel lenses containing numerous shell fragments are also present and are probably derived from reworked terrace deposits located on the Ventura Avenue anticline to the north. Those sediments that contain minor amounts of clay are slightly plastic when damp.

Based on a site visit made by Dr. Tom Rockwell on December 11, 1991, the on-site alluvial materials observed within the trench are estimated to range in age from about late Holocene to late Pleistocene (refer to Appendix B) at a depth of about 15 feet. C^{14} dating of sediments obtained at a depth of about 15

feet (refer to Plate 4 for location) indicated that those sediments were deposited 9,770 ±120 years before present, thus substantiating the age estimates provided by Dr. Rockwell.

GROUND WATER

No ground water was encountered in the areas explored for this study. In 1980, ground water was encountered at a depth of about 40 feet in drill holes located about 1,400 feet south of the trench. Those drill holes were excavated in younger alluvium south of the fault scarp, in a different geologic regime. The elevation of ground water beneath the site is unknown, but it is estimated to be about the same as those elevations observed at those drill holes south of the site.

VENTURA FAULT

Previous Studies. The Ventura fault is a north-dipping fault, which bounds the southern limb of the Ventura Avenue anticline. Based on geomorphic evidence, the fault has been mapped by Weber et al. (1973) and Sarna-Wojcicki et al. (1976) to extend from about 1,000 feet east of Kimball Road to about 300 feet east of Ventura Avenue. The Ventura fault may extend farther to the east and intersect the Country Club fault. The relationship between the Ventura fault and Country Club fault is unclear at this time; however, one fault may truncate the other, or the Ventura fault may extend into the Country Club fault. In addition, the Ventura fault has been postulated by Cilweck (1975) to be the onshore component of the west trending, seismically active, Pitas Point fault located west of the City of San Buenaventura. If those postulations are true, then the entire fault system is at least 47 miles in length, with the onshore component having an approximate length of about 6.5 miles.

The Ventura fault is evident in aerial photographs and in field exposures by the prominent south facing, linear, topographic scarp, which is locally up to about 40 feet high. That scarp can be traced along the entire projected fault length, except where very recent sediments cover the exposure or where existing drainages have eroded the feature. Detailed geomorphic mapping

of the fault indicates that the scarp deforms Marine terrace deposits, dated at about 80,000 years old (before present [b.p.]), and the Harmon alluvial fan, estimated to be less than 10,000 years b.p. (Yerkes et al., 1987). In addition, the fault apparently offsets some drainages in a left-lateral direction, indicating that there is probably reverse-oblique deformation associated with fault rupture (Sarna-Wojcicki et al., 1976; Yerkes et al., 1987).

In the vicinity of the site, no near-surface exposures of the main rupture plane of the Ventura fault have been reported; however, numerous secondary, tectonic features have been observed. In the trench exposures on the Hospital property, Cilweck (1975) and Sarna-Wojcicki et al. (1976) observed numerous north-dipping, faults with separation and offsets of generally less than 1 foot per fault. A copy of Sarna-Wojcicki et al.'s normal trench log is shown on Plate 5 - Trench Log from Sarna-Wojcicki et al. (1976). Those studies also noted a few south dipping faults with normal separation and near-vertical faults with reverse separation and similar magnitudes of displacement. Soil infilling and voids along many of those fault features were observed, and many of those faults and tensional features extended into the surface soils, inferring recent activity. In addition, Sarna-Wojcicki et al. (1976) indicates that lateral movement along the fault might also exist based on back-tilted faults at the southern end of the Hospital property trench. Based on exposures in that trench, Sarna-Wojcicki et al. (1976) could not determine the relative lateral sense of movement along the fault.

A trench exposure was logged by both GTC (1977) and Smith (1977) at a location about 2.5 miles to the east of the present study area. That trench exposure yielded fault-related features similar to those reported by Cilweck (1975) and Sarna-Wojcicki et al. (1976). In addition, radiocarbon dating of a charcoal sample obtained from about 8 feet below the ground surface indicated that rupture occurred sometime within the last 15,200 ±350 years (Smith, 1977). Because that radiocarbon sample was obtained at depth and the faults observed in that trench project near the ground surface and are filled with soils derived from the surface, the most recent movement of the faulting is probably more recent than indicated by that radiocarbon date.

An additional trench was excavated by GTC (1978) at a site located on the western projection of the Ventura fault. That trench did not expose any fault related features; however, drill holes excavated by SGD (Prentice and Powell, 1991) just north of GTC's trench encountered two high-angle, north-dipping shears that truncate and displace bedrock materials of the Saugus Formation. Those two shears are possibly faults related to the Ventura fault system.

The seismogenic potential of the Ventura fault is unknown and remains a controversial subject among geologists. Some geologists believe that the Ventura fault is capable of generating strong ground motion, others don't believe the fault is seismogenic, and others doubt the presence of the fault all together. Based on those exposures observed within fault trenches and data obtained from oil and water well logs, Sarna-Wojcicki et al. (1982) postulate that the Ventura Fault is a seismogenic fault with an estimated vertical throw of about 450 to 600 feet in Tertiary age sediments. Sarna-Wojcicki et al. (1976) also indicate that a minimum vertical separation of Late Pleistocene age sediments should be assumed to be about 36 feet, which corresponds to the greatest height of a relatively unmodified portion of the escarpment. In-addition, Sarna-Wojcicki et al. (1982) indicate that a focal plane solution shown in Yerkes and Lee (1979), probably is attributable to a magnitude 3.6 event located along the Ventura fault at a depth of about 8 kilometers.

However, Yeats (1982a, 1982b) argues that the Ventura fault should be characterized as a shallow, bending moment fault that he refers to as a "low shake" fault (i.e., not capable of generating strong ground motion). Yeats (1982a) postulates that the Ventura fault is related to deformation of the Ventura anticline and Santa Clara syncline and does not project deep enough to displace sediments with shear strengths capable of storing sufficient elastic strain to generate strong ground motion. Yeats indicates that well data from oil and water wells does not indicate the presence of the Ventura fault at depth and that the hypocenter of the focal plane solution noted by Sarna-Wojcicki et al. (1982) should be discounted because it was only one event (not statistically viable) and because of the uncertainty of 5 to 10 kilometers generally used for resolution of hypocenters within the Santa Barbara Channel region.

Fault Observations from this Study. As shown on Plate 4, subsurface exploration for this study resulted in observation of similar features as those reported by Cilweck (1975) and Sarna-Wojcicki et al. (1976). Most of the faults shown on Plate 4 are vertical to north-dipping faults with normal separations and displacements of less than 1 foot per fault. A few south dipping faults with normal and reverse separation were also observed along with apparent fissures that truncate but do not displace adjacent alluvial fan deposits. Cumulative vertical deformation across the entire trench length is about 5.6 feet. The amount of vertical deformation that has occurred during a single rupture event is unknown.

In conjunction with the vertical movement, an apparent horizontal component of deformation was also observed. Many of the faults displayed large-scale mullion features and mismatched or unpaired stratigraphic marker beds bounding faults, inferring lateral movement. Excavation into the side wall of the trench was performed at many of the exposed faults in an attempt to match up laterally displaced stratigraphic marker beds or krotovinas (areas disturbed by rodent burrows). At one fault exposure (shown on Plate 4), a coarse-grained sand bed pinches out towards the west. The location where that bed pinches out was located on both sides of the fault and an apparent left-lateral, subhorizontal displacement of about 17 inches was measured. No other suitable stratigraphic or biological markers were found at other faults within the trench; therefore, only that one apparent horizontal displacement was measured.

As shown on Plate 4, many of the faults appear to have experienced dilation during deformation and have since been infilled with colluvium derived from surface soils and/or from adjacent and overlying alluvial fan deposits. Those faults or fissures that display colluvium derived from surface soils might also have been bioturbated by burrowing rodents that often preferentially burrow along zones disturbed by faulting. Laterally continuous voids were observed along portions of some faults that had dilated but had not been infilled. A few fissures were observed with segregated sand infilling, as shown on Detail A of Plate 4. Those features might represent paleoliquefaction features of sand that was injected into those fissures.

Two buried soils (paleosols) along with a weakly developed surface soil were observed within the trench. The upper paleosol consisted of a buried A horizon and the lower of an A/B horizon sequence. Most of the faults were observed to truncate and displace both paleosols and extend into the surficial soil. Because the surficial soil is weakly developed and has a gradational contact with the underlying alluvial fan deposits, it was not possible to evaluate whether the surficial soil was offset by the faulting. However, many of those underlying faults clearly extend into the surficial soil materials. Charcoal materials were obtained from the buried A horizon of the lower paleosol (refer to Plate 4 for the sample location) and radiocarbon dated. The age obtained from those materials indicates that the lower paleosol, located at a depth of about 15 feet, is 9,770 ±120 years old (refer to Appendix C). Based on that date, the surface soils are estimated to be late to mid-Holocene in age, substantiating evaluations of soil profile development by Dr. Rockwell (refer to Appendix B).

It is likely that the faults observed in this trench are secondary features related to faulting of the primary detachment at depth. Figure 2 - Diagrammatic Illustration of Faulting, depicts the probable relationship of the secondary and primary faults. As noted above, most of the faults were observed to have normal separation, implying that they formed under tensional stresses. The most probable model for formation of those faults in a compressional regime is due to bending moments, as shown on Figure 2. In such a model, as the main fault propagates towards the surface, it flattens forming a concave-up warping in the overlying stratigraphy. That warping places the overlying stratigraphy in tension and results in faults with normal separation that dip at differing orientations.

CONCLUSIONS AND RECOMMENDATIONS

1.0 GENERAL STATEMENT

Based on the results of our field exploration, laboratory testing, and consultation with neotectonic specialists, we feel that it is geologically feasible to construct the proposed Medical Examiner's Facility provided the following conclusions and recommendations are incorporated into the facility's design.

2.0 FAULT RUPTURE POTENTIAL

Based on the results of this and other studies, we consider the Ventura fault to be active. The faults observed during this study and in Cilweck (1975), Sarna-Wojcicki et al. (1976), GTC (1977), and Smith (1976, 1977, and 1978) truncate and displace paleosols, extend into weakly developed surface soils, have soil infilling or voids along dilated faults, and were radiocarbon dated at 9,770 ±120 years b.p. Based on those data, we believe that deformation has occurred within the Holocene (the last 11,000 years b.p.). Therefore, based on the definition of fault activity by Hart (1972), the Ventura fault should be considered active because deformation has occurred within the Holocene time period.

Although the Ventura fault is considered active, very little is known about the fault. The most critical unanswered questions about the fault are 1) when did the fault last rupture; and 2) what is the recurrence interval for rupture along the fault? Because we do not know the answers to those two questions, it should be assumed that the surface rupture potential for the Ventura fault at the study site is high.

The controversy about whether the Ventura fault is a seismogenic or a "low shake" fault, as proposed above, is an academic issue. Regardless of the seismogenic potential, the Ventura fault presents a potential hazard due to fault rupture. The fault system could rupture coseismically in relation to seismic events and regional compression along any of the other active faults in the region.

3.0 DEVELOPMENT RECOMMENDATIONS

3.1 **Alternative Sites.** Although we consider it possible to construct the proposed facility at the study site, we recommend avoidance of the potential hazard posed by the Ventura fault. Instead, we recommend that if an alternative site is available, that site should be evaluated for construction of the proposed Medical Examiner's Facility. Ideally, that alternative site should contain fewer significant geohazards, such as active faults or landslides, than the presently proposed site.

3.2 **Proposed Site.** It is geologically feasible to construct the proposed facility on the site studied provided the following recommendations are incorporated into the design. We recommend that the proposed facility be sited on the northern portion of the property to minimize exposure to the increased numbers of faults observed at the southern portion of the area studied, and that a strengthened foundation system be used.

3.2.1 **Foundation System Design.** To minimize the potential damage that might occur to the proposed facility if rupture of the fault was to occur, we recommend that a rigid foundation system be designed. That foundation system should act as a rigid slab that would move as an intact block if faulting were to occur beneath the facility. The foundation should be designed to withstand about 2 feet of vertical and horizontal deformation, respectively. It is desirable to construct the foundation system with minimal embedment depth to minimize lateral rupture forces on the foundation if faulting was to occur. The depth of that embedment should be evaluated during future geotechnical studies.

The foundation should act as an intact block and rotate and/or tilt during faulting. The structure should be designed so that very little damage would occur to the structure and injuries to personnel within the building would be minimized. If that is done, the structure could then potentially be releveled, after fault rupture, with a minimal amount of damage to the facility.

3.2.2 **Lifelines.** In addition to the design of a rigid foundation system, it is recommended that all utility lines leading into and out of the facility be equipped with emergency, strong-motion shutoff valves. Those valves should be located at the curb or at the utility-main connection points and away

from the proposed facility. Those shutoff valves should decrease the potential for secondary catastrophic events related to strong ground motion, such as fires caused by ignited natural gas leaking from severed pipelines, exposure to broken electrical lines, inundation from broken sewer and water pipelines, etc. In addition, all utility lines leading into the proposed facility should be inspected after on-site faulting has occurred to evaluate whether those lines have been damaged during the seismic event.

3.2.3 Securing Equipment/Chemicals. We recommend that all equipment and chemicals that may pose a threat to personnel at the facility during a seismic event be secured. The equipment should be secured in such a way that it is restrained from toppling, sliding, rolling, and/or falling during shaking. Chemicals should be contained and secured from falling, spilling, and/or splashing from their containers during shaking.

3.2.4 Recompaction of Trench Backfill. As noted in our proposal, the trench was backfilled by pushing the excavated soils into the hole and track-walking the backfill surface with the bulldozer. Provisions should be made during construction to remove those loose backfill soils and recompact them into place. Future geotechnical work performed at the site for the proposed facility should address the mitigation of potentially adverse settlement of trench backfill from the trench excavated for this study and from the trench excavated by Cilweck (1975).

4.0 LEGAL CONSIDERATIONS

Staal, Gardner & Dunne, Inc., considers design of a rigid foundation system for the Medical Examiner's Facility a viable mitigation for potential fault rupture. The County of Ventura, however, should obtain advice on the legal aspects of siting a facility at the study area, considering the provisions of the Alquist-Priolo Special Studies Zones Act of 1972. That act might be interpreted to dictate that no structure can be constructed at the area studied, regardless of whether viable engineering mitigations for fault rupture hazard exist.

5.0 ADDITIONAL STUDIES

Additional geotechnical studies should be performed to address design of foundation systems, slope stability, seismic shaking, and other pertinent geotechnical concerns. Those studies should address mitigation of loose trench backfill soils for our trench and for the trenches excavated by Cilweck (1975).

6.0 CLOSURE

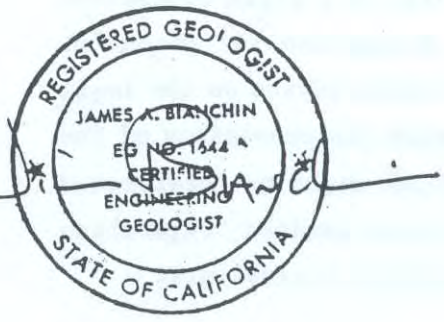
This report has been prepared for the exclusive use of the County of Ventura and their agents, for specific application the proposed Ventura County Medical Examiner's Facility, Ventura, California. The findings, conclusions, and recommendations presented in this report were prepared in accordance with generally accepted geologic and geotechnical engineering practice. No other warranty, express or implied, is made.

The scope of our services did not include any environmental site assessment for the presence or absence of hazardous/toxic materials in the soil, surface water, ground water, or atmosphere. The scope of our services also did not include any geotechnical exploration, analyses, laboratory testing, or report preparation.

The attachments that complete this report are listed in the Table of Contents.

Sincerely,

STAAL, GARDNER & DUNNE, INC.



James A. Bianchin

John R. Powell

JB:ts/44

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FIGURE 1

SITE LOCATION MAP

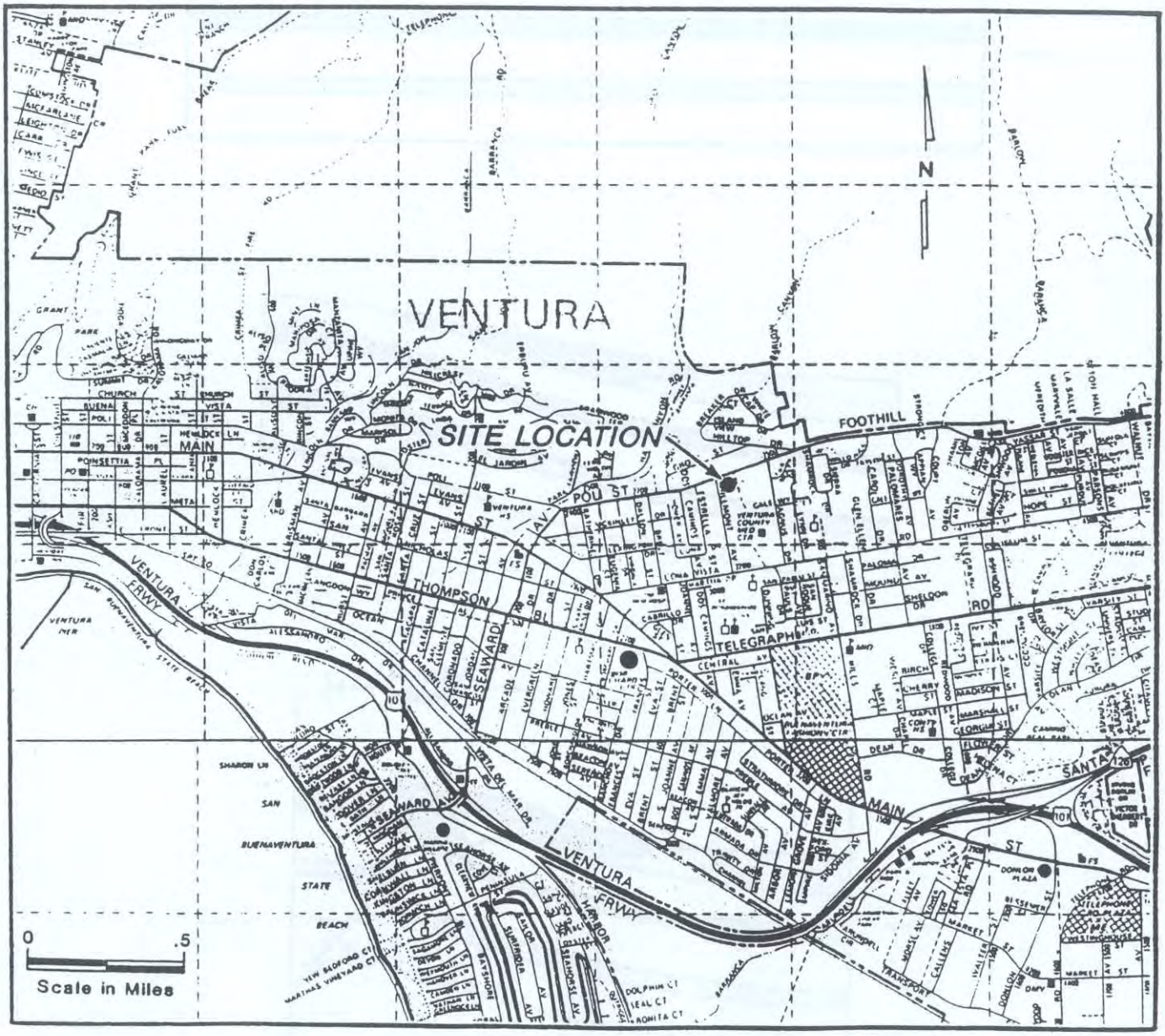
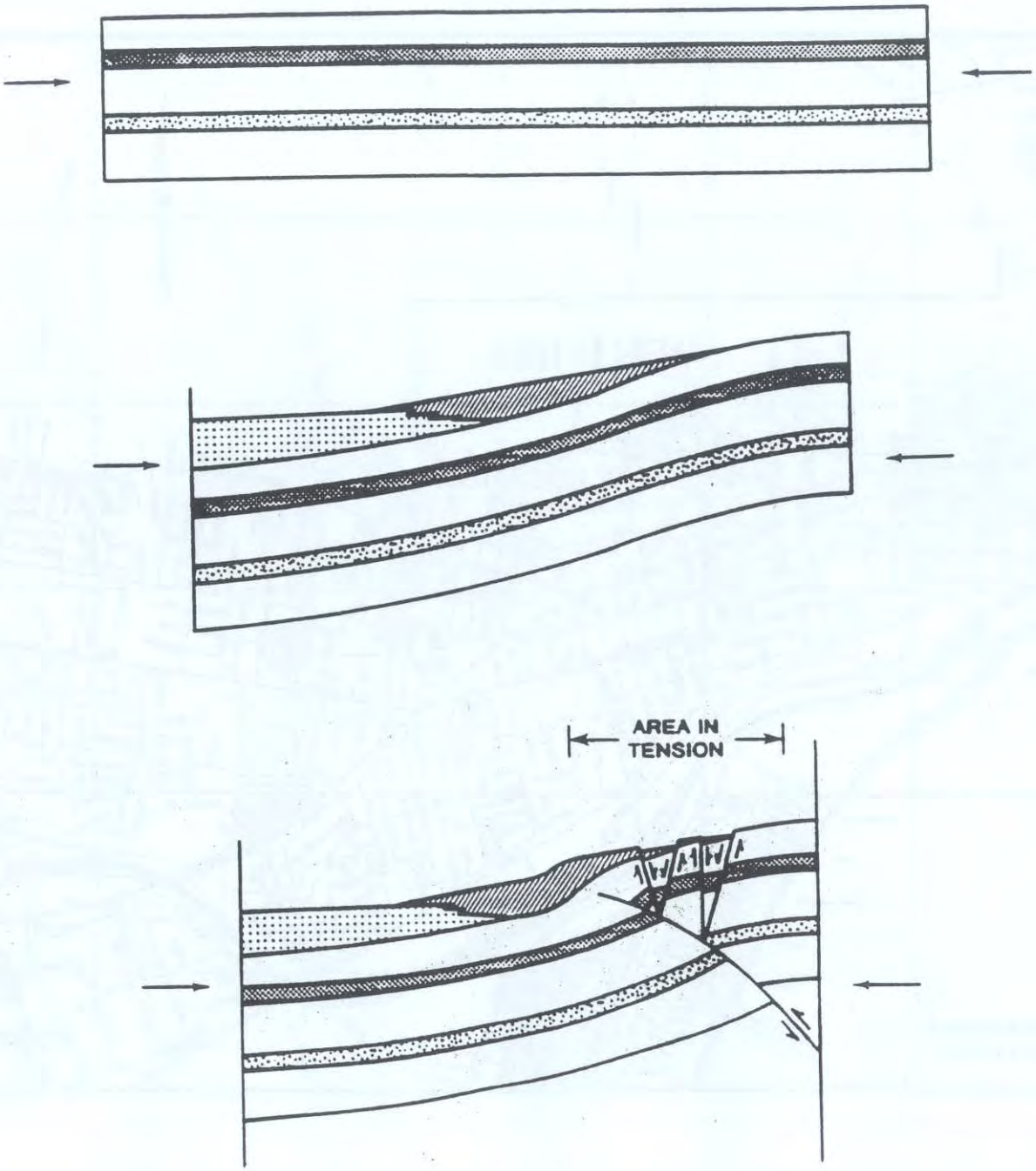
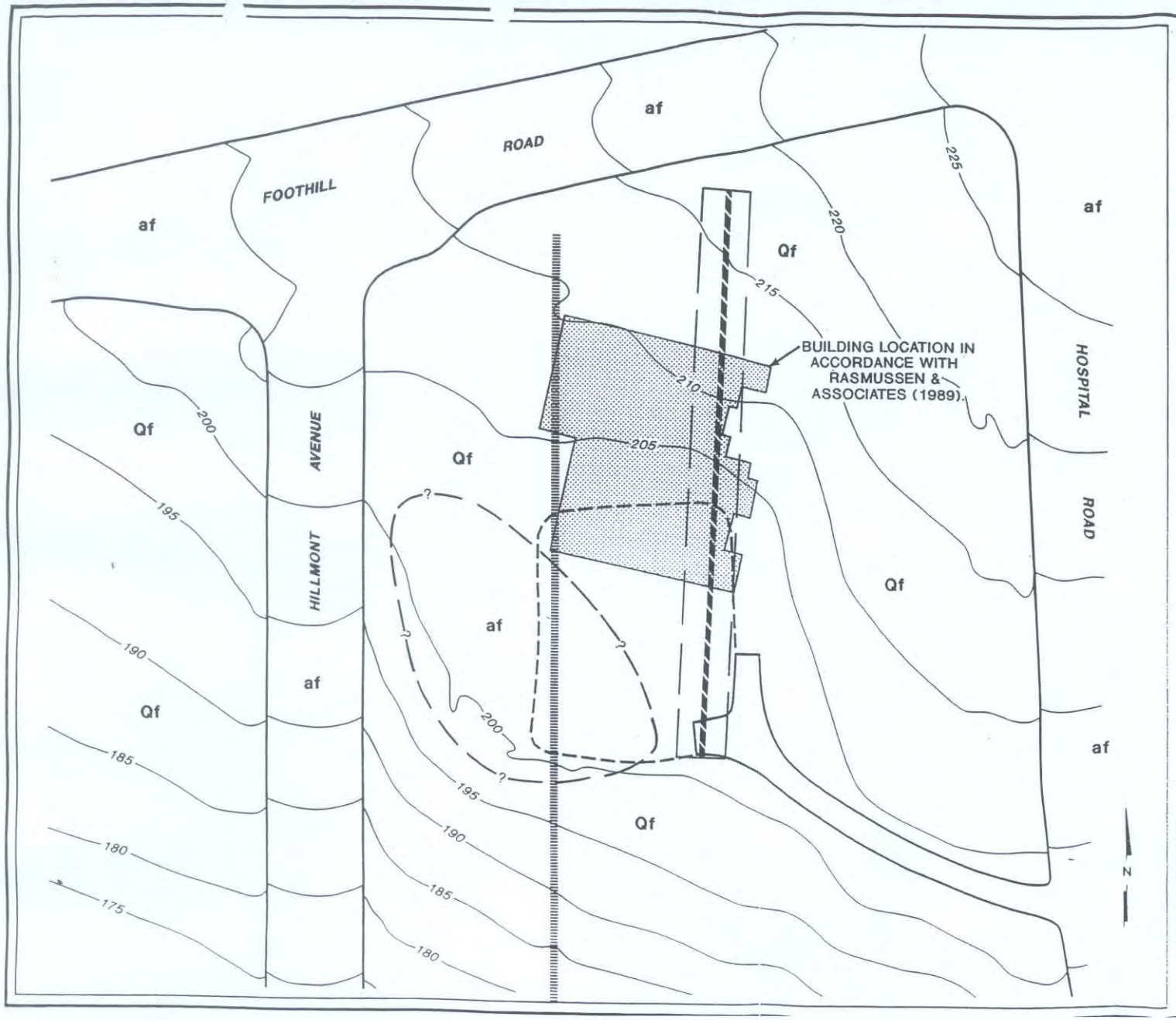


FIGURE 2

DIAGRAMMATIC ILLUSTRATION OF FAULTING



NO SCALE



LEGEND

- APPROXIMATE TRENCH LOCATION OF CILWECK (1976)
- APPROXIMATE LOCATION OF TRENCH EXCAVATED FOR THIS STUDY
- HELICOPTOR LANDING PAD
- af — ARTIFICIAL FILL
- Qf — ALLUVIAL FAN DEPOSITS
- GEOLOGIC CONTACT, DASHED WHERE APPROXIMATELY LOCATED

NOTE: FAULT LOCATIONS SHOWN ON PLATE 2

0 40 80 120
Scale in Feet

GENERALIZED GEOLOGIC MAP
Medical Examiner's Facility

For: COUNTY OF VENTURA

V91206 January 1992 Plate 1

Staal, Gardner & Dunne, Inc.
Consulting Engineers and Geologists

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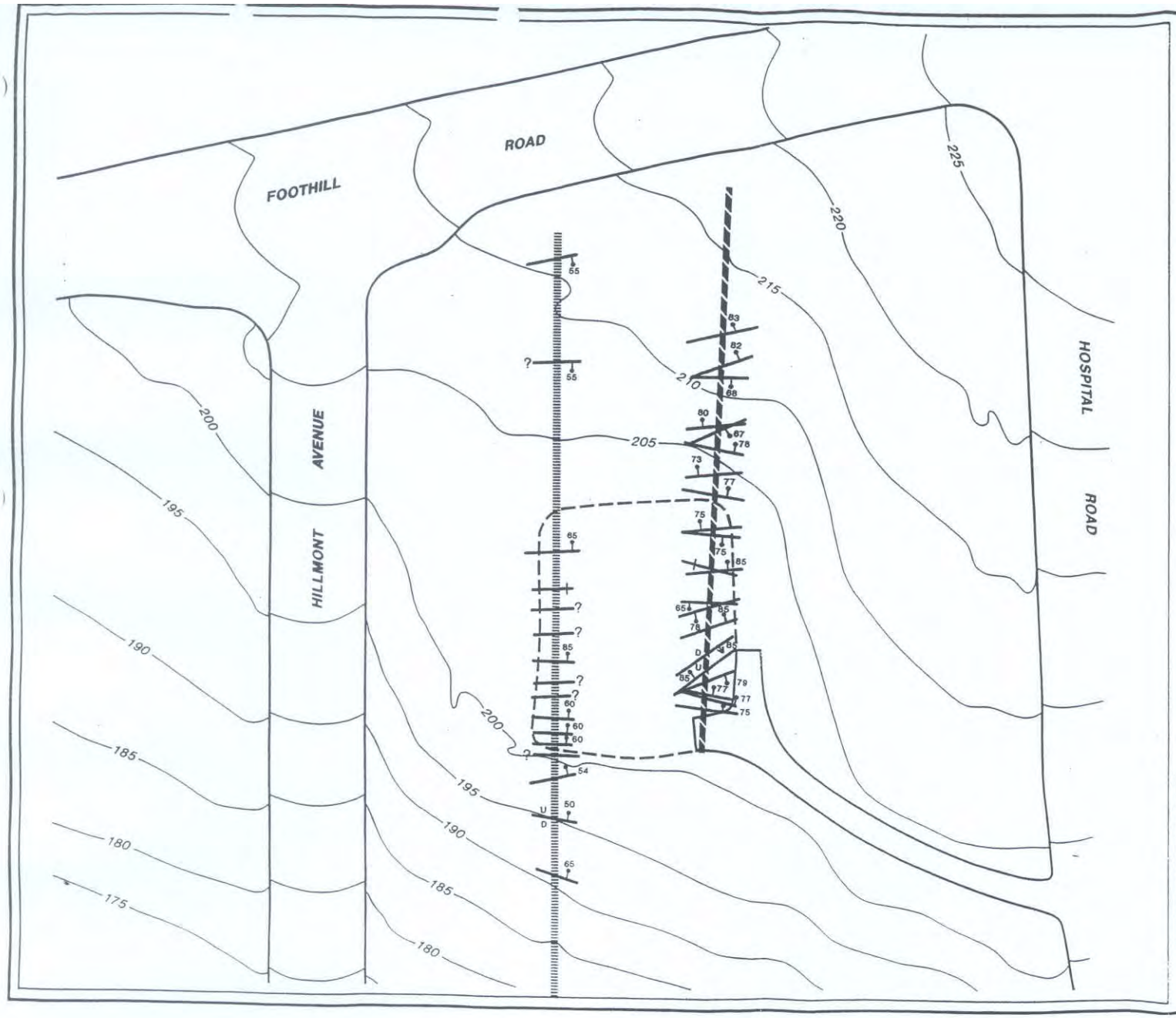

LEGEND

APPROXIMATE TRENCH LOCATION OF CILWECK (1976)

APPROXIMATE LOCATION OF TRENCH EXCAVATED FOR THIS STUDY

NORMAL FAULT, BALL ON DOWNTHROWN SIDE OF FAULT, CROSS FOR VERTICAL FAULT, QUESTION MARK INDICATING UNSPECIFIED ORIENTATION AND/ OR DIP

REVERSE FAULT, ARROW POINTS TOWARD FAULT PLANE DIP DIRECTION, U = UPTHROWN BLOCK, D = DOWNTHROWN BLOCK

N

0 40 80 120

Scale in Feet

GEOTECHNICAL MAP

Medical Examiner's Facility

For: COUNTY OF VENTURA

V91206 January 1992 Plate 2

Staal, Gardner & Dunne, Inc.

Consulting Engineers and Geologists

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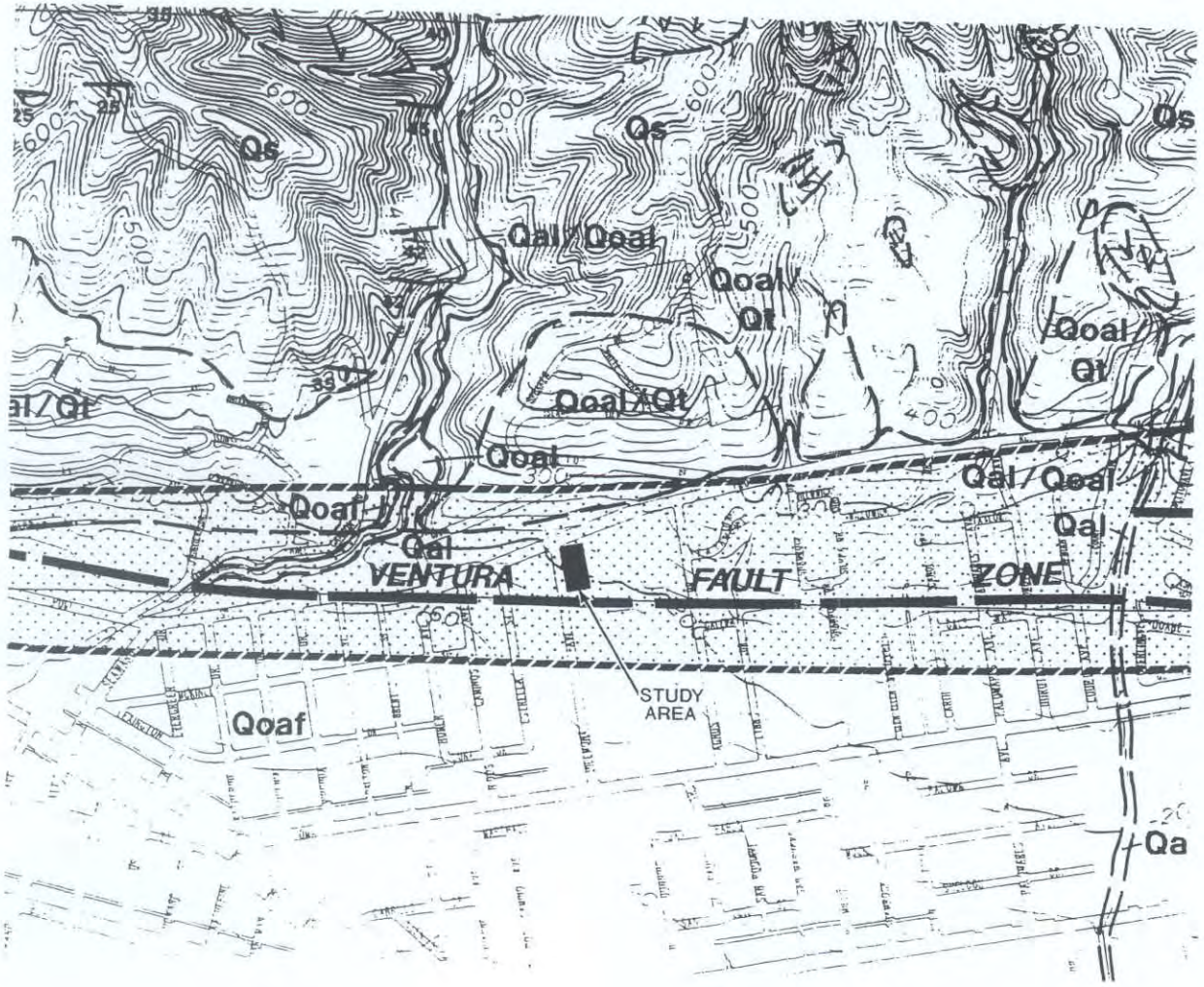
831



LEGEND

- Qal — ALLUVIUM
- Qls — LANDSLIDE DEPOSITS
- Qoal — OLDER ALLUVIAL DEPOSITS
- Qt — TERRACE DEPOSITS
- Qs — SAUGUS FORMATION (INCLUDES) SAN PEDRO FORMATION OF WEBER ET AL. (1973) AND LAS POSAS SAND OF DIBBLEE (1989)
- FAULT, DASHED WHERE APPROXIMATELY LOCATED, DOTTED WHERE BURIED OR INFERRED
- 37 — STRIKE AND DIP OF BEDDING
- CALIFORNIA DIVISION OF MINES AND GEOLOGY SPECIAL STUDIES ZONE

N

0 800 1600 2400

Scale in Feet

REGIONAL GEOLOGY

For: COUNTY OF VENTURA

V91206 January 1992 Plate 3

Staal, Gardner & Dunne, Inc.
Consulting Engineers and Geologists

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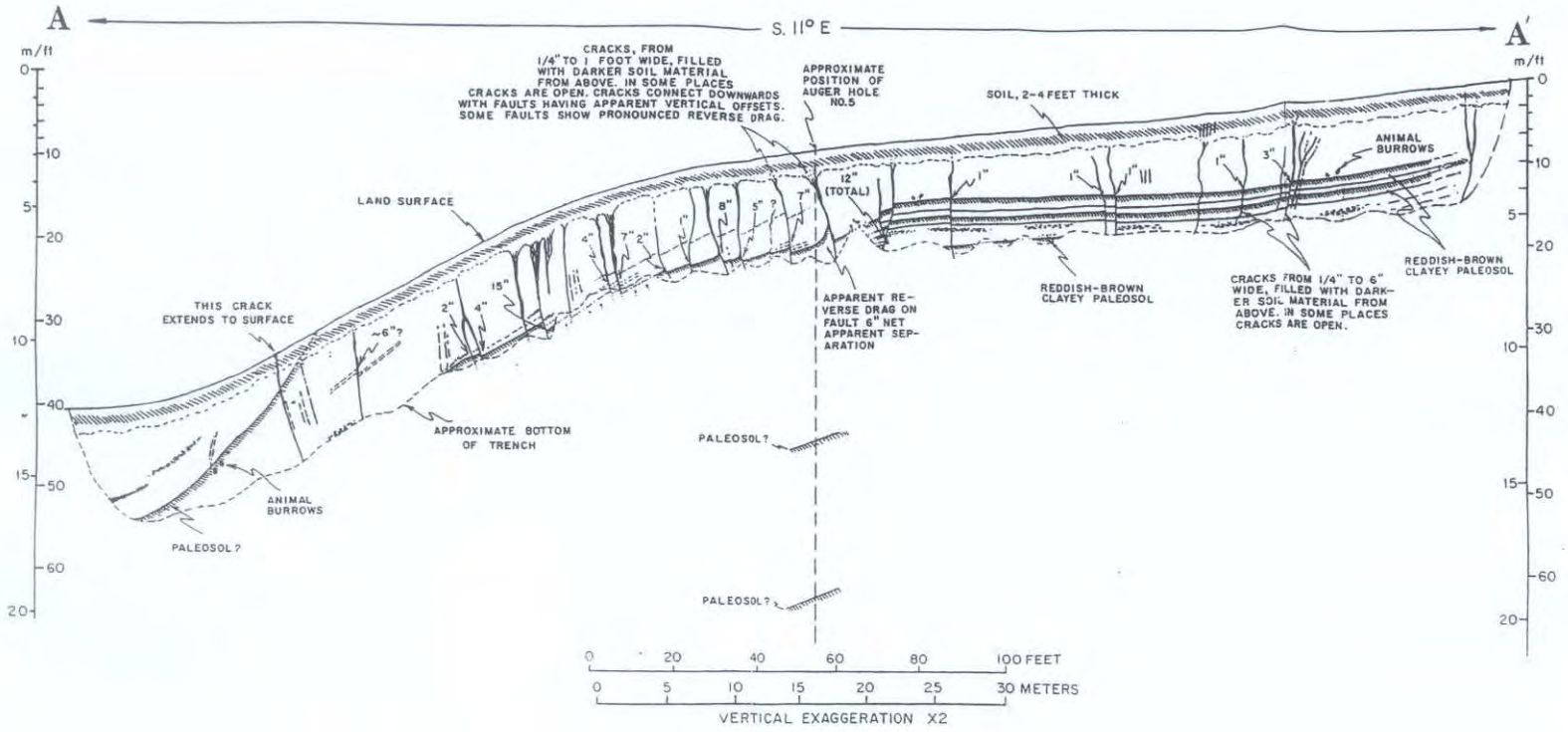

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TRENCH LOG FROM SARNA-WOJCICKI et al. (1976)

For: COUNTY OF VENTURA

V91206 January 1992 Plate 5

Staal, Gardner & Dunne, Inc.
Consulting Engineers and Geologists

APPENDIX A
SUPPORTING GEOTECHNICAL DATA

The subsurface exploration program for the Ventura County Medical Examiner's Facility fault study consisted of the excavation and logging of a total of about 233 lineal feet of backhoe trench. The trench ranged in depth from about 15 to 20 feet. The approximate location of the trench is shown on Plate 1.

The trench log is presented on Plate 4. The trench log describes the earth materials encountered and samples obtained. The trench location and elevation were determined by tape and Brunton compass measurements from various references. The location and elevation should be considered accurate only to the degree implied by the method used. The trench was logged by an engineering geologist utilizing the Unified Soil Classification System. Because the transition between different soil layers may be gradual, the boundaries between soil types shown on the logs are approximate.

The trench was excavated with a Case 125B backhoe provided by Carroll Backhoe of Ventura, California. The trench was backfilled and track-walked at the ground surface with a Case 580D bulldozer. No other attempt was made to compact the excavated soils. Because the degree of compaction is dependent upon the soil type, moisture content, and compactive effort, the backfill may settle. It is, therefore, recommended that the site owner or a representative periodically inspect the location to determine if backfill settlement has occurred and to fill any depressions or voids.

APPENDIX B
LETTER FROM DR. TOM ROCKWELL

The appended letter, prepared by Dr. Thomas Rockwell, summarizes his conclusions regarding soil development and age of the alluvial fan deposits at the Ventura County Medical Examiner's Facility site.

DEPARTMENT OF GEOLOGICAL SCIENCES
COLLEGE OF SCIENCES
SAN DIEGO STATE UNIVERSITY
SAN DIEGO CA 92182-0337

(619) 594-5586
FAX: (619) 594-4372

Jim Bianchi
Stall Gardner and Dunne
5855 Olivas Park Drive
Ventura, CA 93003-7672

8 January, 1992

Dear Mr. Bianchi:

This letter summarizes my conclusions regarding the age of the soil and underlying sediments exposed in your trench at the proposed Ventura Co. Medical Examiners Facility (MEF). This age estimate is based on a comparison between one profile description of the soil described in the north wall of the trench and several radiocarbon-dated soils described in the Ventura and Los Angeles basins (Rockwell, 1983; Rockwell and others, 1985; Rockwell, unpublished data).

All of the dated soils used in this analysis have similar parent materials (fine loamy sand to sand), climates (xeric), topographic exposures (<3° slopes), and vegetation. All are well-drained and are influenced by both coastal fog and aeolian salt and dust flux. Thus, comparing the undated soil at the proposed MEF with the dated soils should provide a reliable age estimate.

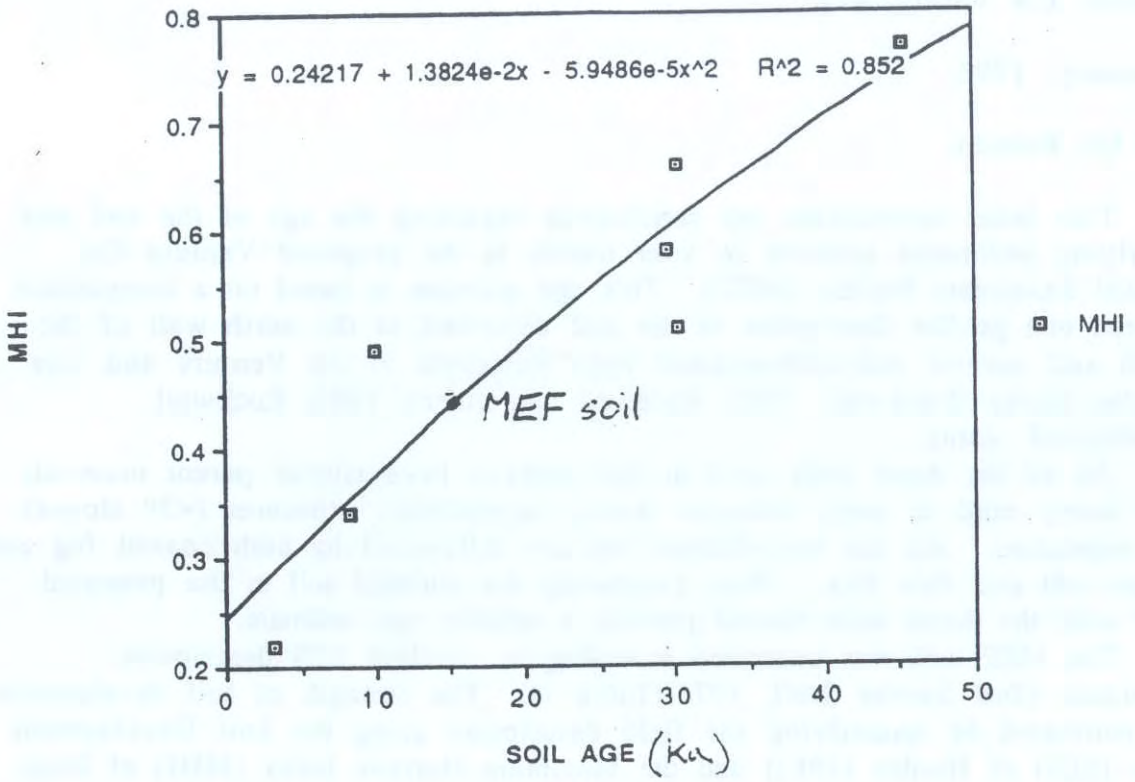
The MEF soil was described according to standard SCS description techniques (Soil Survey Staff, 1975)(Table 1). The strength of soil development was estimated by quantifying the field description using the Soil Development Index (SDI) of Harden (1982) and the Maximum Horizon Index (MHI) of Ponti (1985). These data were then compared to SDI and MHI values of the dated soils (Table 2 and Figures 1 and 2). The SDI analysis yielded a best-estimate of about 23 ka whereas the MHI yielded an age of about 16 ka. Based on this analysis, the best-estimated age of the MEF soil is about 20 ka. However, it should be noted that the variability and scatter in the dated soil data indicate that a substantial error estimate is appropriate with a minimum age of about 10 ka and a maximum of about 35 ka.

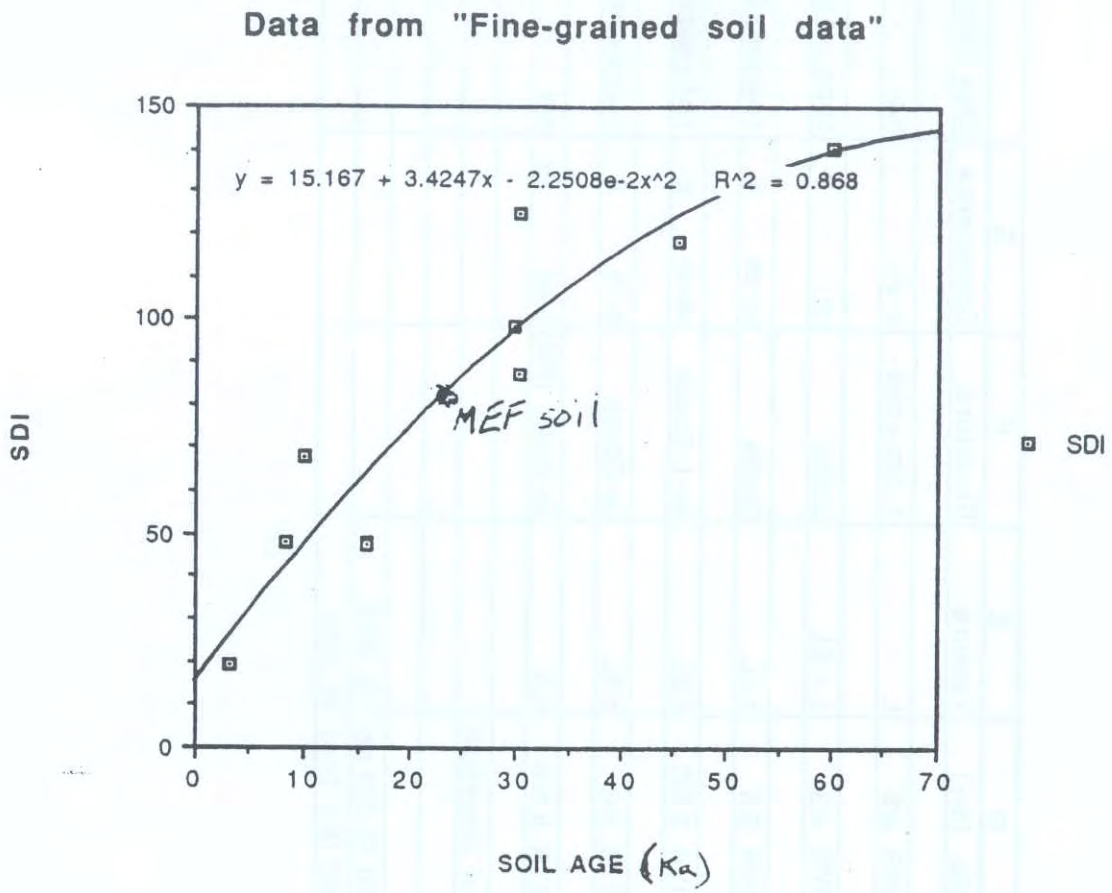
Sincerely,

Thomas Rockwell

Dr. Thomas Rockwell, Professor
San Diego State University

Data from "Fine-grained soil data"




Data from "Fine-grained soil data"
y = 15.167 + 3.4247x - 2.2508e-2x^2 R^2 = 0.868
MEF soil
SDI
SDI
SOIL AGE (Ka)
150
100
50
0
0
10
20
30
40
50
60
70

Ventura Co. Hospital Site

	A	B	C	D	E	F	G	H
1	Horizon	Depth (cm)	Color (moist)	Color (dry)	Texture	Structure	Consistence	Clay Films
2								
3	A	0-42	10YR3/2	10YR 4/3	L	1-2m-csbk	h-vh	n.o.
4								
5	A/Bt	42-88	10YR 3/3.5	10YR 4/3	L-f.SL	2csbk	sh fr	1npo,v-1npf
6								
7	Bt1	88-129	10YR 4/6	10YR 5/5	f.SL	2csbk	vh-eh fr	1n&vmkpf,3n&1mkpo
8								
9	Bt2	129-173	10YR 4.5/5	10YR 5.5/5	f.SL	m-1-2csbk	vh-eh fr	1n&vmkpf,2n&1mkpo
10								
11	Bt3/Ab	173-230	10YR 4.5/6	10YR 5/6	f.SL	m-2csbk	h-vh fr	1-2n&vmkpf,2n&1mkpo
12								
13	Cox	230-330	10YR 5/5	10YR 5.5/6	f.S	m-1csbk (PM)	s-sh vfr	n.o.
14								
15	Ab	330-350+		Not described				
16								
17								
18				SDI @ 250 cm	is 80.9			
19				MHI (Bt1 hor.)	is 0.44			

Table 2. SUMMARY OF SOIL PROPERTIES AND INFERRED AGES OF TRANSVERSE RANGES FINE-GRAINED SOILS

PROFILE	CHRONOSEQUENCE MEMBER	SDI[1]	MHI	CLAY VOLUME (g/cm^2)	B HORIZON COLOR INDEX[2]	CLAY FILM INDEX[3]	CLAY RATIO[4]	SOIL AGE C14
Alluvium	Q1	0	0	0	0	0	-	modern
FT-1	Q3	19.3	.22	0.5	4.0	2.0	0.98	3.05 ± 0.10
FT-10	Q4a	48.2	.34	24.2	5.0	5.5	1.11	8.24 ± 0.17
LV-3	Q4a	68.1	.49	30.8	4.0	5.0	1.62	9.96 ± 200
MM-3	Q4a	62.8	.62	-	4.0	5.0	1.04	-
Getty 1a	Q4b	48.0	-	-	5.0	3.5	-	15.88 ± 0.21
Getty 1b	Q4b	47.4	-	-	5.0	4.0	-	15.88 ± 0.21
Shell 1	Q5	98.4	.58	-	3.5	4.5	-	29.7 ± 1.25
SAT T-1 77W	Q5	86.8	.51	-	5.0	4.0	1.18	30.3 ± 0.75
SAT T-1 83E	Q5	124.6	.66	-	5.0	7.25	1.97	30.3 ± 0.75
MM-5	Q5	128.1	.43	-	7.0	3.8	1.57	-
BFT	Q5	118.1	.77	71.0	4.0	5.5	-	45.4 ± 1.2
Taylor 4b	Q6	140.6	-	-	5.0	3.0	-	60 ± 20
MM-1	Q6	144.6	.66	-	7.5	5.5	1.56	-
MM-4	Q6	151.9	.69	-	6.0	7.0	1.04	-
SLT-1	Q6	182.2	.66	-	5.0	5.5	-	-

APPENDIX C
RADIOCARBON DATING

Radiocarbon dating was performed by NSF-Arizona AMS Facility at the University of Arizona. As noted on the included letter, the radiocarbon date obtained by the analysis is 9,770 ±120 years before present.

The University of Arizona
College of Arts & Sciences
Faculty of Science
NSF-Arizona AMS Facility
Building #81
Tucson, Arizona 85721
(602) 621-6810

March 3rd, 1992

James A. Bianchin,
Staal, Gardner and Dunne, Inc.,
5855 Olivas Park Drive,
Ventura, CA 93003-7672.

Dear Mr. Bianchin,

We have obtained a radiocarbon date by accelerator mass spectrometry on your sample which is reported below.

Date No:	**AA - 8382**
Sample:	**charcoal, Ventura County Medical Examiner's Facility.**
Radiocarbon age:	**9,770±120 years BP.**

The ^{14}C age quoted is in conventional radiocarbon years before present (1950AD).

Please call if you have any questions,
Yours sincerely,

A. J. T. Jull

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OVERSIZED MAP -- NOT COPIED

TRENCH LOG

Medical Examiner's Facility

For: COUNTY OF VENTURA

V91206 January 1991 Plate 4

S G D Staal, Gardner & Dunne, Inc.

Consulting Engineers and Geologists

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INITIAL STUDY
For The
VENTURA COUNTY
MEDICAL CENTER EXPANSION

Prepared For:

COUNTY OF VENTURA PUBLIC WORKS AGENCY

May 1993

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INITIAL STUDY
For The
VENTURA COUNTY
MEDICAL CENTER EXPANSION

* * * * *

Prepared For:

COUNTY OF VENTURA
PUBLIC WORKS AGENCY
800 South Victoria Avenue
Ventura, California 93009

* * * * *

Prepared By:

FUGRO-McCLELLAND (WEST), INC.
2140 Eastman Avenue / Ventura, California 93003

May 1993

Job Number 9261-5007

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CONTENTS

CONTENTS (Continued)

LIST OF APPENDICES

LIST OF FIGURES

Figure

LIST OF TABLES

1.0 PROJECT DESCRIPTION

1.1 PROJECT PROPONENT

County of Ventura
Public Works Agency
800 South Victoria Avenue
Ventura, CA 93009

1.2 PROJECT LOCATION

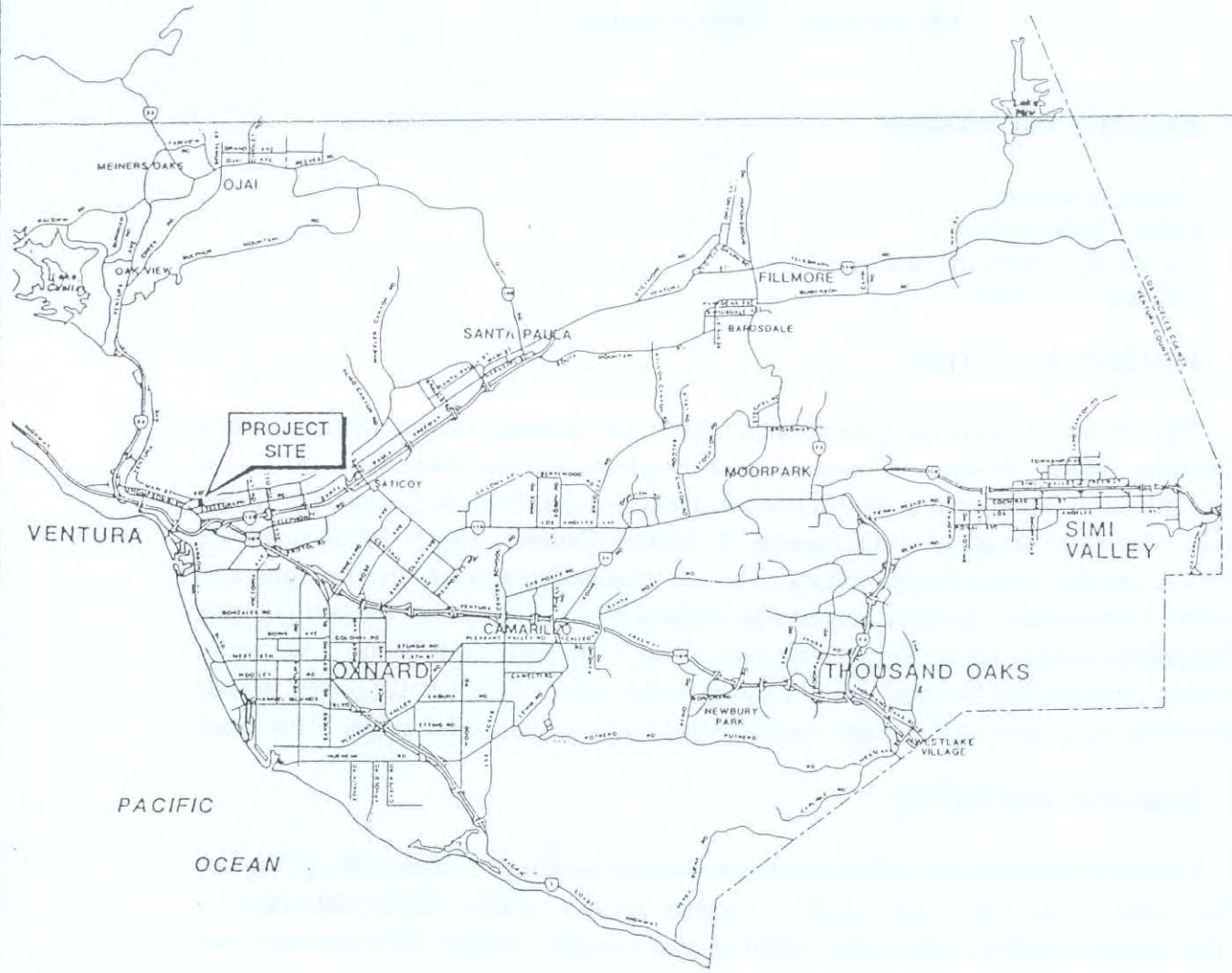
The site of the proposed project encompasses the existing campus of the Ventura County Medical Center (VCMC). The campus encompasses approximately 40 acres and is located at 3291 Loma Vista Road in the City of San Buenaventura, Ventura County, California. Figure 1.2-1 shows the location of the campus in Ventura County. Figure 1.2-2 shows the location of the campus in the City of Ventura. The site is located approximately two miles east of downtown Ventura and is roughly bounded by Foothill Road to the north, western property lines of properties fronting Agnus Drive to the east, Loma Vista Road to the south, and eastern property lines of properties fronting Estrella Street to the west. Adjacent land uses include residences to the west, north and east and medical offices to the south across Loma Vista Road.

1.3 EXISTING FACILITIES

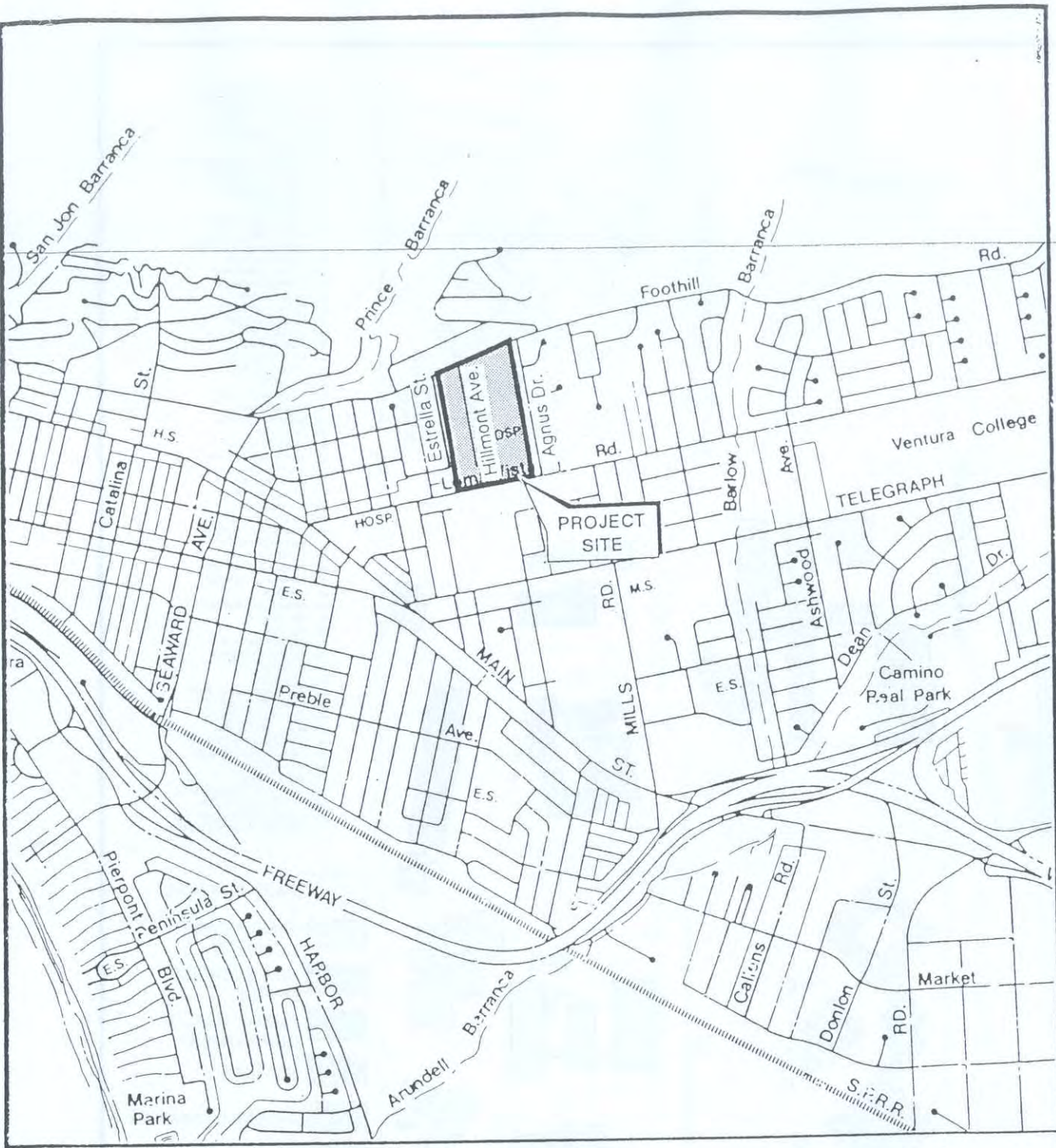
Existing facilities at the VCMC campus include 60 structures totalling 398,157 square feet of floor area. Onsite land uses include a hospital, various medical clinics and offices, a juvenile corrections complex, maintenance facilities, and a laundry facility. The structures and facilities on the proposed site can be grouped into eight complexes, based on location within the site and activity. These groupings are listed in Table 1.3-1 and are illustrated in Figure 1.3-1.

Table 1.3-1. Existing VCMC Facilities By Land Use

Facility	Land Use	Floor Area (sq ft)
Hospital	Hospital	178,995
PSSA Building (formerly HCA Business Offices)	Offices	25,140
Public Health	Medical Offices	18,312
Mental Health Complex	In-Patient Medical Care	37,655
Family Care Complex	Medical Offices	32,555
Plant Operations	Offices/Maintenance	30,581
Bard Building	Office/Medical Office	24,754
Juvenile Complex	Corrections Facility	50,165
TOTAL		398,157

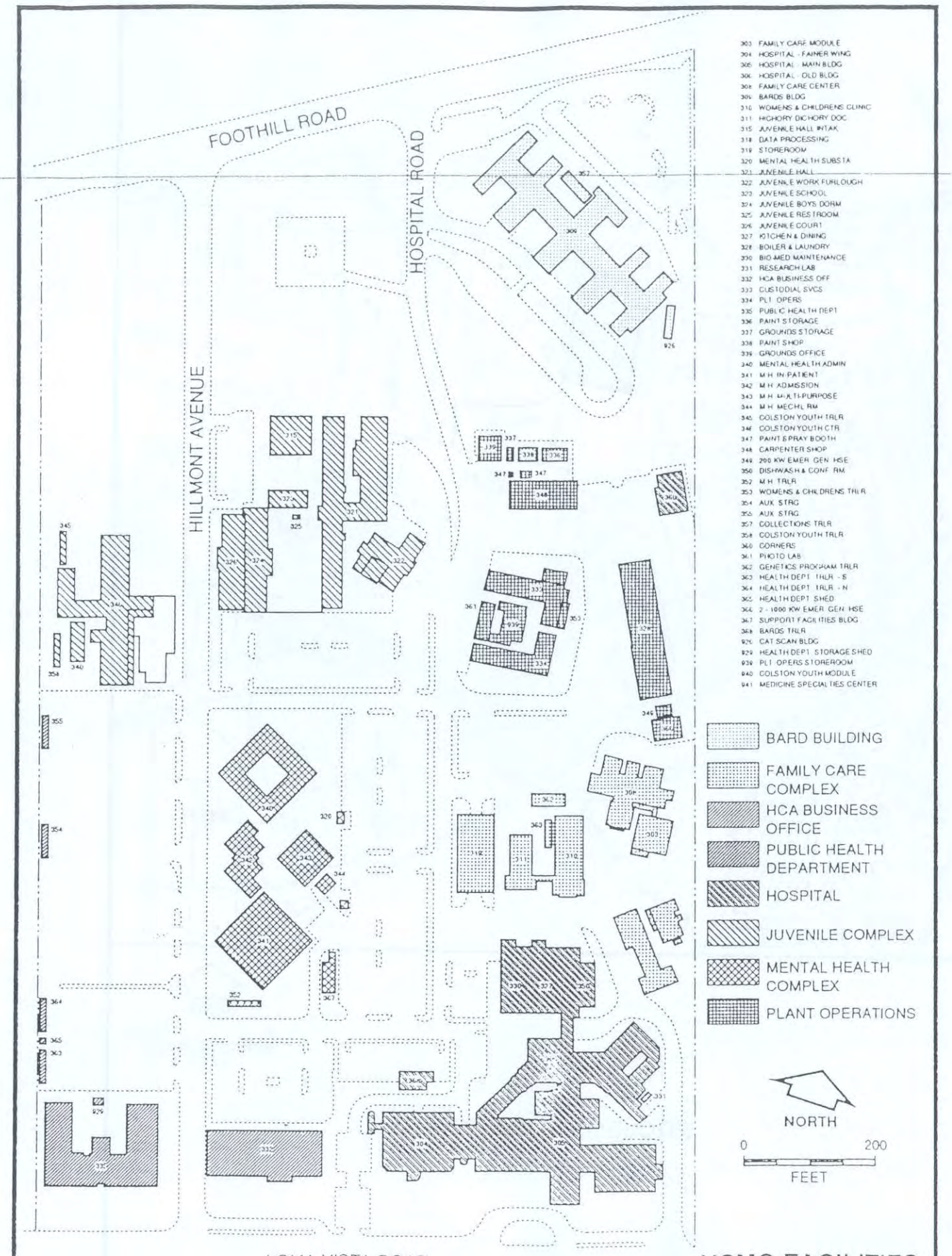


REGIONAL LOCATION



PROJECT LOCATION

FIGURE 1.2-2


FOOTHILL ROAD
HOSPITAL ROAD
HILLMONT AVENUE
LOMA VISTA ROAD
303 FAMILY CARE MODULE
304 HOSPITAL - FARNER WING
305 HOSPITAL - MAIN BLDG
306 HOSPITAL - OLD BLDG
308 FAMILY CARE CENTER
309 BARDS BLDG
310 WOMENS & CHILDRENS CLINIC
311 HIGHORY DICHORY DOC
315 JUVENILE HALL INTAK
318 DATA PROCESSING
319 STOREROOM
320 MENTAL HEALTH SUBSTA
321 JUVENILE HALL
322 JUVENILE WORK FURLOUGH
323 JUVENILE SCHOOL
324 JUVENILE BOYS DORM
325 JUVENILE RESTROOM
326 JUVENILE COURT
327 KITCHEN & DINING
328 BOILER & LAUNDRY
330 BIO-MED MAINTENANCE
331 RESEARCH LAB
332 HCA BUSINESS OFF
333 CUSTODIAL SVCS
334 PLT. OPERS
335 PUBLIC HEALTH DEPT
336 PAINT STORAGE
337 GROUNDS STORAGE
338 PAINT SHOP
339 GROUNDS OFFICE
340 MENTAL HEALTH ADMIN
341 M.H. IN-PATIENT
342 M.H. ADMISSION
343 M.H. MULTI-PURPOSE
344 M.H. MECHL RM
345 COLSTON YOUTH TRLR
346 COLSTON YOUTH CTR
347 PAINT & PRAY BOOTH
348 CARPENTER SHOP
349 200 KW EMER. GEN. HSE
350 DISHWASH & CONF. RM.
352 M.H. TRLR
353 WOMENS & CHILDRENS TRLR
354 AUX. STRG
355 AUX. STRG
357 COLLECTIONS TRLR
358 COLSTON YOUTH TRLR
360 CORNERS
361 PHOTO LAB
362 GENETICS PROGRAM TRLR
363 HEALTH DEPT. TRLR. - S
364 HEALTH DEPT. TRLR. - N
365 HEALTH DEPT. SHED
366 2 - 1000 KW EMER. GEN. HSE
367 SUPPORT FACILITIES BLDG
368 BARDS TRLR
926 CAT SCAN BLDG
929 HEALTH DEPT. STORAGE SHED
939 PLT. OPERS STOREROOM
940 COLSTON YOUTH MODULE
941 MEDICINE SPECIALTIES CENTER
BARD BUILDING
FAMILY CARE COMPLEX
HCA BUSINESS OFFICE
PUBLIC HEALTH DEPARTMENT
HOSPITAL
JUVENILE COMPLEX
MENTAL HEALTH COMPLEX
PLANT OPERATIONS
NORTH
0
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FEET
VCMC FACILITIES

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1.4 PROPOSED ACTIONS

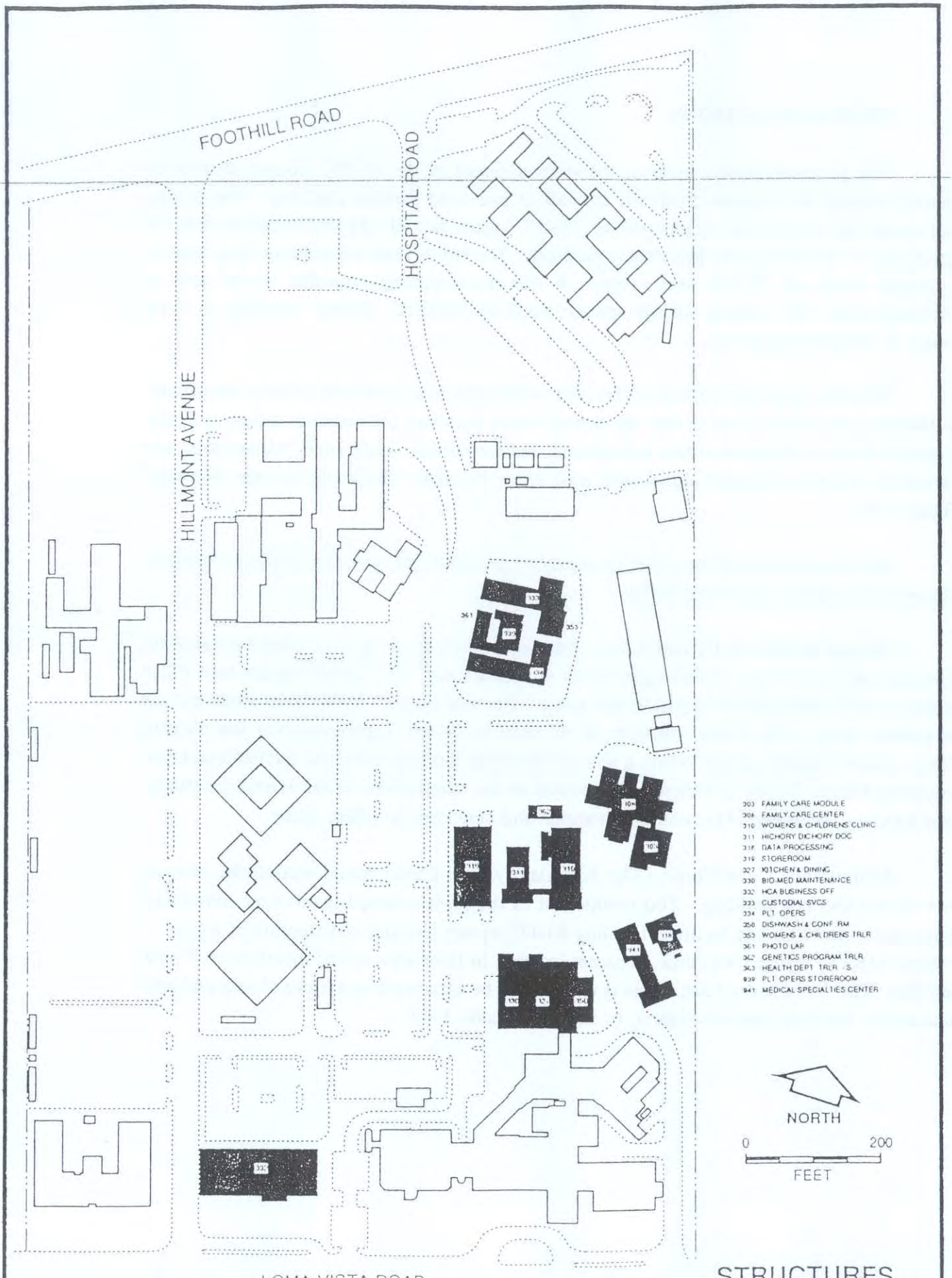
The proposed project involves the redevelopment of the VCMC campus to provide improved medical and coroner facilities, as well as increased parking capacity. The project would entail the demolition or removal of 79,425 square feet of existing facilities and the construction of 157,558 square feet of new facilities. The net increase in building floor area on the campus would be 78,133 square feet. A 564-space parking structure would also be constructed while 186 existing surface spaces would be removed, thereby resulting in a net increase of 378 parking spaces.

Facilities to be demolished or removed would include the Women's Clinic, the Family Care Module, the Family Care Center, the former PSSA building, the Genetics trailer, a Health Department trailer, a childcare center, a storeroom, and the kitchen, conference, maintenance, and dishwashing facilities contained in the north wing of the Hospital. These facilities are illustrated in Figure 1.4-1.

Facilities that would be added or expanded as part of the proposed project are shown in Figure 1.4-2, and are described below.

Mental Health In-Patient Unit. This component of the project would involve the construction of a one-story, 31,003 square-foot in-patient unit. The 25,140 square foot PSSA Building would be demolished as part of this phase. The new Mental Health Unit would include three patient wings with a total capacity of 42 beds (a 14-bed expansion over the existing facility), a nurses' station, group rooms, a new occupational therapy room, and recreational areas. The existing Mental Health In-Patient Unit, located on the second floor of the Mental Health In-Patient building (Building 341), would be vacated and converted to office space.

Ambulatory Care Clinic. The Ambulatory Care Clinic would consolidate existing on-site clinics into one building. This component of the project would involve the demolition or removal of twelve on-site facilities totalling 43,475 square feet and construction of a four- or five-story, 118,755 square foot clinic. The net increase in floor area would therefore be 75,280 square feet. The Ambulatory Care Clinic is expected to be composed of various clinics and labs, administrative facilities, and a cafeteria, as shown in Table 1.4-1.



STRUCTURES TO BE DEMOLISHED

000868

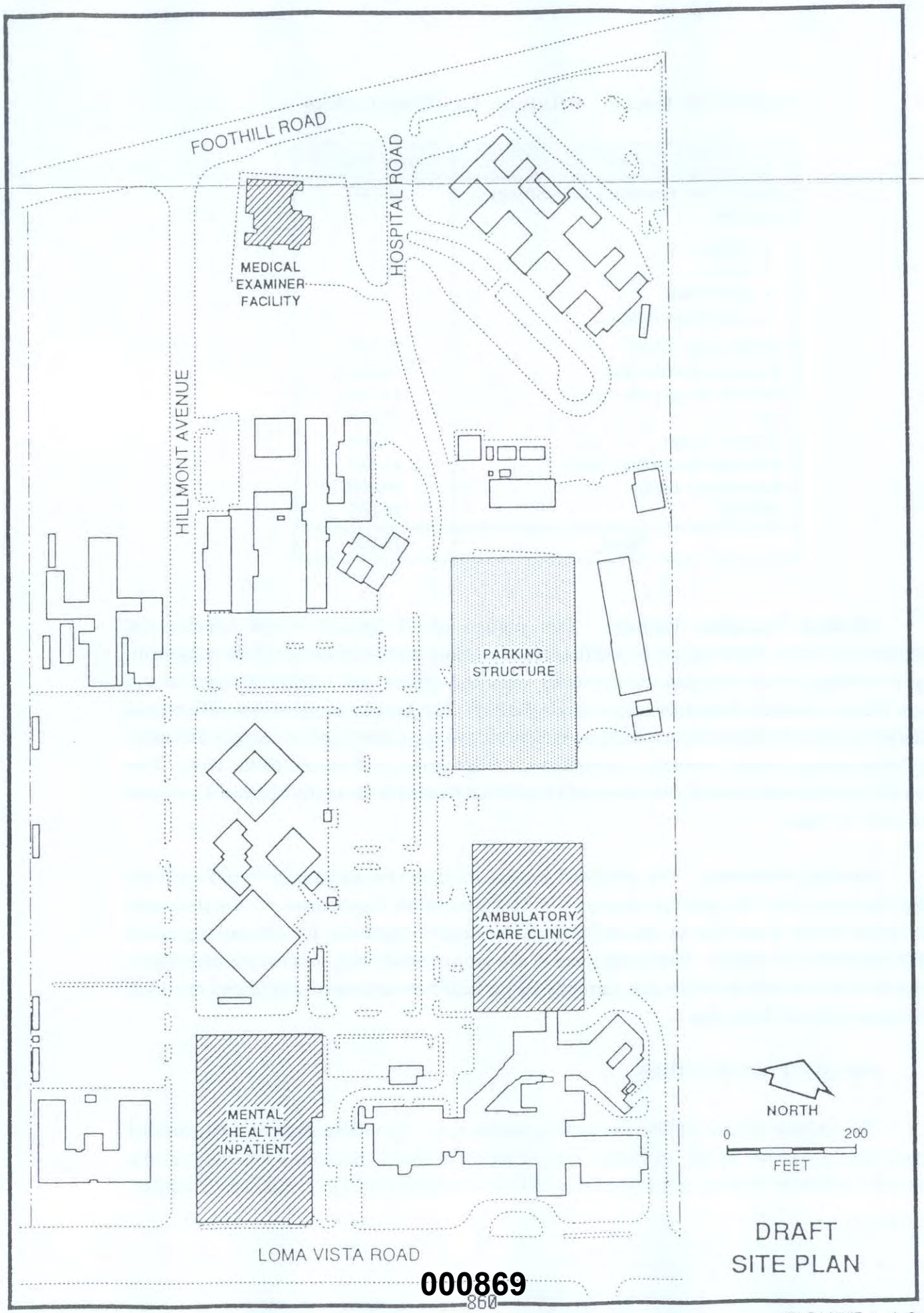

FOOTHILL ROAD
HOSPITAL ROAD
MEDICAL EXAMINER FACILITY
HILLMONT AVENUE
PARKING STRUCTURE
AMBULATORY CARE CLINIC
MENTAL HEALTH INPATIENT
LOMA VISTA ROAD
NORTH
0
200
FEET
DRAFT
SITE PLAN

Table 1.4-1. Proposed Ambulatory Care Clinic Facilities

Unit	Square Footage
Family Care Residency Administration including: • offices • library • auditorium • conference rooms	22,500
Family Care Center	22,500
Women's Health Center	11,585
Pediatric Diagnostic Center	11,585
Lab	6,000
Surgery Center	3,000
Medicine Specialties Center	11,585
Admission - Lobby	10,000
Cafeteria	20,000
Total	118,755

Medical Examiner Facility. This portion of the project would involve the construction of a new 7,800 square foot office/clinic building with associated site development. The new building would integrate the currently separated offices and support services of the Ventura County Medical Examiner into a single facility. The project would house offices and associated facilities for three doctors, eight investigators, two secretaries, and an autopsy assistant, as well as an autopsy room, a morgue, a laboratory, storage spaces, and related public areas. The new facility is expected to satisfy the space and expansion requirements of the Medical Examiner for the next 15 years.

Parking Structure. The proposed project includes the addition of one four-level parking structure with 564 parking spaces. Construction of all components of the proposed project would result in the loss of 186 existing surface spaces; therefore, the net parking space increase would be 378 spaces. This component of the project would also involve the demolition or removal of five on-site facilities that currently house facility maintenance operations and total 10,810 square feet of floor area.

1.5 PROJECT OBJECTIVES

The purpose of the VCMC facility expansion is to: (1) relieve current overcrowded conditions in the Mental Health In-Patient Unit, Coroner's Office, and other facilities on the campus; (2) to provide medical and coroner services from coordinated and centralized locations,

and (3) to provide additional parking to better accommodate the current demand for parking and to compensate for the loss of on-site parking that would result from new building construction.

1.6 PROJECT NEED

The Mental Health In-Patient Unit is currently operating at or above its design capacity of 28 beds. The facility averaged 29.5 patients daily in 1992, with a peak one day load of 40 patients.[1] Project implementation would add approximately 14 beds to the facility, increasing capacity and relieving overcrowded conditions. In addition, project implementation would consolidate the Mental Health Unit's Crisis Services team, which is currently located in a separate building.

Ambulatory Care Services at the VCMC are currently provided by a number of separate clinics located throughout the campus. Project implementation would consolidate these clinics into one facility that would provide a variety of care services to patients. This consolidation would provide upgraded facilities as well as improved service efficiency. A consolidated clinic administration would also be located within this facility, providing greater administrative efficiency.

The existing Medical Examiner facilities operated on the campus are also currently separated between two areas; the examination and storage facilities are currently operated in the VCMC hospital morgue, while the current Medical Examiner office is located in a temporary building on the eastern border of the campus (Building 360). Operational and aesthetic conflicts occur related to corpse storage, transfer, and autopsy examination due to the location of the examination and storage facilities within the hospital morgue.[2] In addition, the separation of these facilities from the Medical Examiner office creates administrative difficulties. Project implementation would consolidate the Medical Examiner facilities in a building completely separated from the hospital facility, thereby providing more efficient service and alleviating aesthetic conflicts.

A parking study prepared by Linscott, Law & Greenspan, Engineers in August 1992 determined an existing need for 205 additional onsite parking spaces based on: (1) current onsite parking usage, and; (2) movement of VCMC campus patrons from off-campus street spaces into on-campus parking areas. To relieve current overcrowded parking conditions and to accommodate future parking needs, project implementation would increase on-site parking by 378 spaces. This would provide sufficient parking areas for projected net on-campus parking demand.

1.7 PROJECT DESIGN FEATURES

Project design will incorporate the following features designed to reduce potential environmental impacts associated with the project. The features are organized according to the area of potential impact addressed.

Air Quality

- Regular ground wetting of graded areas will be conducted during construction to control fugitive dust emissions.
- Grading activities will cease during periods when winds exceed 30 miles per hour.
- Materials excavated, stockpiled, and transported during construction will be wetted regularly.
- Onsite construction vehicle speeds will be limited to 15 miles per hour.
- Construction vehicle traffic areas will be regularly wetted.

Water Resources

- Slope erosion control measures such as jute matting, silt fences along slope toes, and straw bales will be utilized to control runoff during project construction.

Visual Resources

- Landscaping materials around the Medical Examiner facility will not include trees or shrubs that will ultimately exceed the height of the building, so as not to obstruct distant views.
- The Medical Examiner building will be a single story, and building elevations will be stepped to ensure compatibility with surrounding topography and natural slope lines.
- All mechanical operational units for the Medical Examiner facility will be entirely screened from view of the Foothill Road view corridor.

Seismic Hazards

- The proposed Medical Examiner facility will be built in accordance with recommendations contained in the Staal, Gardner & Dunne geotechnical report (1992) regarding foundation construction

- A geotechnical report will be prepared for the proposed parking structure.

Geologic Hazards

- Project implementation will be in accordance with standard geotechnical practices and will comply with recommendations regarding excavation and compaction in the 1992 Staal, Gardner & Dunne geotechnical study.

Hydraulic Hazards

- Project implementation will include revegetation of all constructed slopes and graded areas. Such revegetation will minimize the potential for long-term sediment transport from the project site.

Noise and Vibration

- Construction activities will conform with standard noise reduction procedures, including limiting construction activity to between 8 a.m. and 5 p.m. and, when feasible, the use of temporary, movable construction noise barriers to shield sensitive receptors.

- To reduce noise levels at the Mental Health In-Patient Unit's sensitive uses (in-patient quarters), patient rooms and most exterior use areas will be sited to rear of the Mental Health Unit, away from Loma Vista Road. This will allow the structure to act as a noise attenuation device, shielding patient rooms and most outdoor use areas from excessive vehicle-generated noise.

- Specialty wall and glazing materials will be used for construction of the Mental Health In-Patient Unit.

- A 10-foot wall will be constructed at the front of the Mental Health In-Patient Unit along Loma Vista Road, thus attenuating noise levels at exterior use areas in the front of the facility.

- All paving within the proposed parking structure and on all external ramps will be Portland Cement Concrete with a non-squeal finish.

Light and Glare

- Lighting sources will be shielded and projected toward the ground to decrease the quantity of light radiated into the nighttime sky.

- The height of lighting for the rooftop level of the proposed parking structure will be limited to the parapet height.

- The proposed project will utilize non-reflective exterior materials in its construction.

Water Supply

- A sufficient number of toilets will be retrofitted to achieve the 3:1 water consumption offset requirements of City of Ventura Resolution No. 92-73.

- Low flow shower heads (2.5 gallons per minute or less at 40 psi) will be installed on all new construction.

- Sink and lavatory faucets which limit the flow of water to a maximum of 2.5 gallons per minute at 40 psi, will be installed on all new construction.

- New landscaping developed on the subject site in conjunction with the proposed project will be drought tolerant.

- Drip, mini-emitter or low volume sprinkler irrigation systems will be used for all new landscaping developed in conjunction with the proposed project.

Waste Treatment/Disposal

- The VCMC will mulch grass clippings rather than disposing of them. If existing VCMC equipment will not mulch the clippings, one or more mulching lawn mowers will be purchased by the VCMC. In addition, a "green bin" recycling program will be initiated to handle yard wastes other than grass clippings.

- The VCMC will develop an on-site or off-site composting program for organic compostable wastes generated on the VCMC campus.

- Adequate space for waste and recycling bins, as determined by the Ventura County Solid Waste Management Department, will be provided for all new facilities developed as part of the proposed project.

- The VCMC will purchase a baler or develop an alternative method to break down cardboard boxes and reduce the space requirements for recyclable materials bins.

- The contractor that conducts project-related construction and demolition activities will be required to develop County-approved plans for the diversion of construction/demolition wastes through source reduction or recycling.

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[1] Essex, Duane, Ventura County Mental Health Center, 1992.

[2] O'Halloran, Ronald L., Assistant Chief Medical Examiner, 1992.

2.0 INITIAL STUDY CHECKLIST

	ISSUE (Responsible Department)	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	S	U	N	LS	S	U
GENERAL:	1. General Plan Environmental Goals and Policies (Plng.)	X				X			
LAND USE:	2. Land Use (Plng.)								
	a. community character				X				X
	b. housing		X				X		
	c. growth inducement	X				X			
RESOURCES:	3. Air Quality (APCD)								
	a. regional		X				X		
	b. local				X				X
	4. Water Resources (PWA)								
	a. groundwater quantity	X				X			
	b. groundwater quality	X				X			
	c. surface water quantity		X			X			
	d. surface water quality		X			X			
	5. Mineral Resources (Plng)								
	a. aggregate		X				X		
	b. petroleum		X				X		
	6. Biological Resources								
	a. endangered, threatened, or rare species	X				X			
	b. wetland habitat	X				X			
	c. coastal habitat	X				X			
	d. migration corridors	X				X			
	e. locally important species/communities	X				X			
	7. Agricultural Resources (Ag. Dept.)								
	a. soils	X				X			
	b. water	X				X			
	c. air quality/micro-climate	X				X			
	d. pests/diseases	X				X			
	e. land use incompatibility	X				X			
	8. Visual Resources								
	a. scenic highway (Plng.)				X	X			
	b. scenic area/feature				X	X			
	9. Palentological Resources	X				X			
	10. Cultural Resources								
	a. archaeological		X			X			
	b. historical (GSA)		X			X			
	c. ethic, social or religious		X			X			
	11. Energy Resources	X				X			
	12. Coastal Beaches & Sand Dunes	X				X			

SUE (Responsible Department)		PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
		N	LS	S	U	N	LS	S	U
AZARDS:	13. Seismic Hazards (PWA)								
	a. fault rupture		X			X			
	b. ground shaking		X			X			
	c. tsunami	X				X			
	d. seiche	X				X			
	e. liquefaction	X				X			
	14. Geologic Hazards (PWA)								
	a. subsidence	X				X			
	b. expansive soils	X				X			
	c. landslides/mudslides	X				X			
	15. Hydraulic Hazards (PWA/FCD)								
	a. erosion/siltation	X				X			
	b. flooding	X				X			
	16. Aviation Hazards (Airports)	X				X			
	17. Fire Hazards (Fire)	X				X			
	18. Hazardous Materials/Waste								
	a. above-ground hazardous mtl's. (Fire)	X				X			
	b. below-ground hazardous mtl's. (EH)	X				X			
	c. hazardous waste (EH)		X			X			
	19. Noise and Vibration				X		X		
	20. Glare				X		X		
JBLIC FACILITIES/ RVICES	21. Transportation/Circulation								
	a. public roads and highways								
	(1) level of service (PWA)				X				X
	(2) safety/design (PWA)	X				X			
	(3) tactical access (Fire)	X				X			
	b. private roads and driveways (Fire)								
	(1) safety/design	X				X			
	(2) tactical access	X				X			
	c. pedestrian/bicycle								
	(1) public facilities (PWA)	X				X			
	(2) private facilities	X				X			
	d. parking (Plng.)				X				X
	e. bus transit	X				X			
	f. railroads	X				X			
	g. airports (Airports)	X				X			
	h. harbors (GSA)	X				X			
	i. pipelines	X				X			

ISSUE (Responsible Department)	PROJECT IMPACT DEGREE OF EFFECT*				CUMULATIVE IMPACT DEGREE OF EFFECT*			
	N	LS	S	U	N	LS	S	U
22. Water Supply								
a. quality (EH)	X				X			
b. quantity (PWA/EH)		X				X		
c. fire flow (Fire)	X				X			
23. Waste Treatment/Disposal								
a. Individual Sewage Disposal System (EH)	X				X			
b. sewage collection/ treatment facilities		X				X		
c. solid waste facilities (SWMD)	X				X			
24. Utilities								
a. electric		X				X		
b. gas		X				X		
c. communication	X				X			
25. Flood Control/Drainage								
a. FCD facility (FCD)	X				X			
b. other facilities (PWA)	X				X			
26. Law Enforcement/Emergency Svs. (Sheriff)								
a. personnel/equipment	X				X			
b. facilities	X				X			
27. Fire Protection (Fire)								
a. distance/response time	X				X			
b. personnel/equipment/facilities	X				X			
28. Education								
a. schools	X				X			
b. libraries (Lib. Agency)	X				X			
29. Recreation (GSA)								
a. local parks/facilities	X				X			
b. regional parks/facilities	X				X			
c. regional trails/corridors	X				X			

*Explanation: Degree of Effect

N = No Effect
LS = Less Than Significant Effect
S = Significant Effect; MND or EIR Required.
U = Unknown; EIR Required

Agencies

APCD - Air Pollution Control District
PWA - Public Works Agency
Plng. - Planning Division
GSA - General Services Agency
Ag. Dpt. - Agricultural Department
FCD - Flood Control District
Airports - Department of Airports
Fire - Fire Protection District
Sheriff - Sheriff's Department
EH - Environment Health Division
SWMD - Solid Waste Management Department
Lib. Agency - Library Services Agency

3.0 DISCUSSION OF RESPONSES TO CHECKLIST

3.1 GENERAL PLAN ENVIRONMENTAL GOALS AND POLICIES

3.1.1 Potential Impacts

The proposed project is located within the City of San Buenaventura. As such, although the County-owned VCMC site is exempt from City planning regulations, the City of San Buenaventura's Comprehensive Plan Update to the Year 2010 will be used as the primary document for determining consistency with general plan environmental goals and policies.

The most applicable goals and policies relative to the proposed project are contained in the Intent and Rationale for Land Use Designations section. The future land use map indicates that the subject site should remain in its current use as "existing urban". The designation implies that the medical and social service facilities that exist should remain. The proposed project represents a continuation and upgrading of an established use with no direct encroachment into the surrounding residential areas. As such, the proposed project is consistent with the City's Comprehensive Plan.

3.1.2 Mitigation Measures

No mitigation measures are required.

3.2 LAND USE

3.2.1 Potential Impacts

a. **Community Character.** Land uses in the vicinity of the site consist primarily of single-family residences. Construction activity associated with implementation of the proposed project would have potential temporary impacts to the community character of the surrounding residential land uses. These impacts would include a reduction in the aesthetics of the project site during construction, as well as increases in noise, dust generation, and traffic. However, due to their temporary nature, these construction-related impacts are considered less than significant.

As proposed, the facilities constructed would be contained on the existing VCMC campus and would be consistent with the current land uses onsite. The project would consolidate dispersed offices and support services, as well as satisfy future space and expansion requirements. New structures constructed as part of the proposed project would be integrated into the existing facilities onsite. The proposed Ambulatory Care Clinic and the parking structure are significantly larger buildings than the ones they would replace. The Ambulatory Care Clinic is proposed to measure approximately 118,755 square feet and rise four or five floors. The existing hospital building measures 178,995 square feet and rises four floors. The proposed parking structure will rise five levels. The scale of these two structures would intensify the urban nature of the campus. The intensified scale may result in compatibility problems with the single-family

neighborhood to the east. Therefore, project implementation may have a significant effect on the community character.

b. Housing. As the proposed project does not involve housing construction or demolition, housing stock within Ventura County would not be affected. Although the proposed project would increase building square footage on the VCMC campus, the primary purpose of this expansion is to relieve current overcrowded conditions at campus facilities. Consequently, implementation of the proposed project would not substantially increase the number of employees currently working at the VCMC campus. Construction-related jobs generated by the project would be temporary and are expected to be filled by workers already living in the area, as there have historically been more construction workers than construction jobs within the Ventura County area. In addition, the proposed project would not result in any cumulative impact to housing within Ventura County. Therefore, project implementation would have a less than significant impact on housing in Ventura County.[1]

c. Growth Inducement. Project implementation would increase on-site building square footage and at least one facility (the Mental Health In-Patient Unit) would experience a direct increase in employment as a result of the project. However, the primary purpose of the project is to relieve existing overcrowded conditions at various VCMC campus facilities and to consolidate dispersed campus clinics and support services. Consequently, the proposed project would not be inherently growth-inducing. Impacts are therefore considered less than significant.

3.2.2 Mitigation Measures

Feasible mitigation measures that address issues of land use compatibility should be explored as part of an environmental impact report preparation process.

3.3 AIR QUALITY

3.3.1 Potential Impacts

a. Regional. Air pollution control is administered at three government levels in California: federal, state and local. The federal government has established ambient air quality standards to protect the public health and welfare. The State of California has established separate standards which are generally more stringent than federal standards. Air quality within Ventura County is monitored by the Ventura County Air Pollution Control District (VCAPCD) and the California Air Resources Board (CARB). The VCAPCD is responsible for administering air pollution control programs within the County.

The site of the proposed project is located within the Oxnard Plain Airshed, which has been designated as a non-attainment area by the VCAPCD for the federal and state ozone standards of 0.12 and 0.09 parts per million (ppm), respectively. Maximum particulate (PM_{10}) levels in the County also exceed the state 24-hour concentration standard of 50 $\mu g/m^3$, although the County is in compliance with the federal PM_{10} standard.[2]

Project implementation would result in increased long-term traffic within the project area. However, this increase is not expected to be significant (for further discussion of traffic related impacts, see Section 3.21, Traffic and Circulation). Based upon projected increases from project related traffic, potential air quality impacts were analyzed using the California Air Resources Board URBEMIS3 Model (Appendix A). VCAPCD Air Quality Guidelines state that a significant impact would occur if an individual project exceeded County thresholds of 25 lbs/day of oxides of nitrogen (NO_x) and/or 25 lbs/day of reactive organic gases (ROG). Results of the URBEMIS3 Model indicate that the proposed project would result in long-term emissions of 12.4 lbs/day of NO_x and 9.5 lbs/day of total organic gases (approximately 90 percent of which are ROG). These amounts are both less than the VCAPCD Significance Thresholds. Therefore, the long-term impacts to regional air quality would be less than significant.

b. **Local.** During the construction phase of the project, demolition and construction activities would generate temporary emissions from fugitive dust and construction equipment exhaust. Construction emissions would be generated by excavation activities on the site and by transportation and disposal of excavation materials offsite.

Fugitive dust emissions generated during grading, excavation and soil removal activities are difficult to estimate accurately because of the number and variability of the factors involved. These include soil moisture, wind speed, amount of equipment operating, and silt content of soil.

Grading and demolition activities at the project site could potentially create dust nuisance, thereby producing a temporary local air quality impact. This temporary impact would be reduced by approximately 50 percent by regular watering of the site during grading activities (EPA, 1985). Standard dust control during construction is mandated by Ventura County Grading Ordinance and VCAPCD Rule 51. Both are applicable to this project and would include:

- Regular ground wetting of graded areas;
- Cessation of grading activities during periods when winds exceed 30 miles per hour (mph);
- Wetting of excavated, stockpiled and transported materials;
- On-site construction vehicle speed limits of 15 mph; and
- Wetting of construction vehicle traffic areas.

VCAPCD significance thresholds for emissions are 25 lbs/day of NO_x and ROG. However, the 1989 VCAPCD Guidelines state that construction related emissions are not counted towards these thresholds due to their short-term nature. Therefore, due to the size of the proposed project and the short-term nature of the emissions, on-site fugitive construction

equipment emissions are not expected to significantly impact air quality in the Oxnard Air Shed.[3]

Members of the public have expressed concerns over CO and other localized proposed emissions from the proposed parking structure adversely affecting residences downwind of the proposed project.

In summary, the proposed project may generate significant long-term impacts to adjacent residential areas from the proposed parking structure. Compliance with all VCAPCD control measures would reduce impacts to regional air sheds to less than significant levels.

3.3.2 Mitigation Measures

Mitigation measures should be developed to address concerns related to localized emissions as part of an EIR preparation process.

3.4 WATER RESOURCES

3.4.1 Potential Impacts

a. Groundwater Quantity. The proposed project is located within the Mound Groundwater Basin. As the proposed project is located within an urban area on a site that is largely developed, it does not involve significant new overcovering of permeable surface area. Project implementation may result in some incremental change in groundwater infiltration rates on the project site; however, because important water-bearing aquifers are overlain by one or more low permeability "clay caps", no effect on groundwater storage in the Mound Ground Water Basin would occur as a result of the proposed project. Therefore, project-specific and cumulative impacts to groundwater quantity associated with project implementation would be less than significant.

b. Groundwater Quality. The majority of urban-generated water pollutants are those associated with petroleum by-products which collect on streets and parking areas that are subsequently washed into groundwater supplies with the first rainstorm of the winter season. Pollutants carried in surface water could potentially infiltrate below the surface and contaminate shallow groundwater. However, because important water-bearing aquifers are separated from shallow groundwater of probable poor quality by one or more low permeability "clay caps", the impact of the proposed project is considered less than significant.

c. Surface Water Quantity. The nearest surface water bodies to the proposed project site are Hall Canyon Creek and Prince Barranca, located north and west of the subject site, respectively. Surface water quantity of the creek would not be altered by project implementation. Surface runoff from the proposed project site generally is collected at storm drains on Loma Vista Road and does not result in any change to surface flow conditions.

Due to the developed nature of the site, existing flow paths, storm runoff volumes, peak flows and velocities would not be significantly altered by project implementation. Any potential changes in drainage would be incorporated into the site development plan, and accomplished in accordance with the County of Ventura's Building Code and Chapter 70 of the Uniform Building Code. Therefore, project-specific and cumulative impacts to surface water quantity due to project implementation would be less than significant.

d. **Surface Water Quality.** During construction, surface water quality may be degraded due to increased turbidity resulting from soil runoff. Soil loss would occur because of sheet erosion, with the most serious erosion occurring on freshly graded slopes. The southern portion of the site, where the construction of the Mental Health In-Patient Unit, Ambulatory Care Clinic, and parking structure is proposed, is relatively flat; therefore little soil loss would be expected to occur. The VCMC campus as a whole, however, has a north to south slope differential of approximately 88 feet, with moderate slopes occurring on the northern portion of the site. As proposed, the Medical Examiner Facility would be constructed on the northerly portion of the site, where the gradient is approximately 50 percent. Due to the existing slopes in this area of the VCMC campus, the potential for soil erosion during the construction of the Medical Examiner Facility would exist. However, slope erosion control measures such as jute matting, silt fences along slope toes, and straw bales in drainage courses would be utilized during project construction. In addition, the revegetation of constructed slopes would provide long-term erosion control. Surface water quality impacts would therefore be less than significant.

As the project site is currently developed with uses similar to what is proposed, project implementation is not expected to significantly increase the amount of surface water pollutants generated on the site. Therefore, project-specific and cumulative impacts to surface water quality associated with project implementation would be less than significant.

3.4.2 Mitigation Measures

No mitigation measures are required.

3.5 MINERAL RESOURCES

3.5.1 Potential Impacts

a. **Aggregate.** The proposed project would use a finite amount of aggregate material (mainly construction grade sand and gravel), during construction. Due to the size of the project, this amount is not expected to be significant. Adequate aggregate resources are available in the county to meet local demand for the next 50 years.[4] Therefore, no significant project-specific or cumulative impacts on aggregate mineral resources would occur due to project implementation.

b. **Petroleum.** During the construction phase of the project petroleum resources (oil and gas) would be used for the operation of construction equipment. However, this project and cumulative projects would have a less than significant impact on the demand for petroleum

resources because these resources are considered a world-wide, national, and statewide resource. Such a resource is beyond the scope of local governments to effectively manage or control.

3.5.2 Mitigation Measures

No mitigation measures are required.

3.6 BIOLOGICAL RESOURCES

3.6.1 Potential Impacts

The subject site is located in an urbanized area and is currently developed with extensive medical and social service facilities. Open areas of the site are covered with non-native, disturbed grassland communities. These undeveloped portions of the site are routinely disked for weed control. As a result of these conditions, the subject site does not represent significant biological resource habitat.

a. **Endangered, Threatened, or Rare Species.** No rare or otherwise sensitive animal and/or plant species are known to occur in the immediate vicinity of the project site.[5] Due to the urban nature of the project area and the lack of biological resources onsite, project implementation would not impact endangered, threatened or rare species on the project site or in the project area.

b. **Wetland Habitat.** No wetland areas exist on or in the immediate vicinity of the project site. In addition, surface runoff is largely captured in urban storm drain systems and is conveyed to outfalls as part of the City of Ventura's storm drain runoff system. Therefore, no project-specific impacts to wetland habitat would occur as a result of project implementation.

c. **Coastal Habitat.** The project site is not located within a coastal habitat. Therefore, no impacts to coastal habitat would occur as a result of project implementation.

d. **Migration Corridor.** Potential migration corridors in the vicinity of the project site include the Hall Canyon Creek/Prince Barranca drainage system, located north and west of the subject site. This potential migration corridor would not be affected by development at the subject site, due to distance of the proposed project from the drainage. Therefore, no impacts to migration corridors would occur due to project implementation.

e. **Locally Important Species/Communities.** The majority of the proposed project site is developed, with some areas of non-native, disturbed grassland located in the northwestern corner of the site. Therefore, it is not expected that any significant wildlife activity currently occurs on the project site. The disturbed grassland area in the northwest corner may provide foraging habitat for raptors; however, loss of this foraging area would not significantly impact raptors in the vicinity because of large foraging areas in the hills north of the subject site. Therefore, the proposed project would not impact locally important species or community.

3.6.2 Mitigation Measures

No mitigation measures are required.

3.7 AGRICULTURAL RESOURCES

3.7.1 Potential Impacts

a. **Soils.** The U.S. Soil Conservation Service Important Farmlands Inventory (IFI) system is used in Ventura County to evaluate which lands have agricultural value. The proposed project site is currently developed, and is located in an urban area. The project area does not include land of any significant agricultural value. Therefore, project implementation would have no impact on agricultural resources.

b. **Water.** Based upon the water demand rates contained in City of Ventura Ordinance 92-73, project implementation would increase water consumption at the VCMC campus by approximately 4,604 gpd. This increase would be offset by fixture retrofit in accordance with Ordinance 92-73. Therefore, the proposed project would not deplete water available for agricultural uses. The proposed project would not significantly affect groundwater or surface water quality in the project area. Therefore, no project-specific or cumulative impacts to agricultural water would be associated with project implementation.

c. **Air Quality/Micro-Climate.** Project implementation would result in dust dispersal during the construction phase. However, as the project site is located in an urban area, dust generation would not have any significant affect on agricultural resources. As discussed in Section 3.3, standard dust control measures would be implemented during project construction. The proposed project would not generate dust during long-term operations. Therefore, no project-related or cumulative impacts would be associated with project implementation.

d. **Pests/Diseases.** Due to the location of the project site within an urban area, project implementation would not introduce any pests or diseases to agricultural lands. Therefore the proposed project would have no pest or disease related impacts to agricultural lands.

e. **Land Use Incompatibility.** As agricultural lands are not located on or near the proposed project site, the proposed project would not promote uses that are incompatible with agricultural lands. Therefore, project implementation would have no land use incompatibility impacts with regards to agriculture.

3.7.2 Mitigation Measures

No mitigation measures are required.

3.8 VISUAL RESOURCES

3.8.1 Potential Impacts

a and b. Scenic Highway and Scenic Area/Feature. The VCMC Campus is bordered by Foothill Road to the north, Loma Vista Road to the south, properties fronting Estrella Street to the west, and properties fronting Agnus Drive to the east. Land uses to the north, west, and east consist primarily of single family residences. Land uses to the south across Loma Vista Road are primarily commercial office. Views from areas north and northeast of the project site that are at higher elevations would stand to be affected by development of the site. Existing views from several sites along Agnus Drive and north of Foothill Road are shown in Figures 3.8-1 and 3.8-2. Existing views from north of Foothill Boulevard would not be expected to be significantly altered by project implementation. As the photographs in Figure 3.8-2 show, views from northeast of the site along Agnus Drive are already partially obscured by existing structures and trees. Views from properties along the west side of Agnus Drive closest to the proposed Ambulatory Care Clinic and parking structures would be affected by the new structures. However, viewsheds from most public viewing areas (streets and sidewalks) would not be significantly changed. Consequently, project implementation would not significantly affect views from this area.

Foothill Road has been designated as a "scenic drive" in the City of San Buenaventura Comprehensive Plan. As the VCMC campus fronts Foothill Road, the subject site lies within the viewshed of this scenic drive. Visual resources along Foothill Road in the vicinity of the project include southwesterly views of the Pacific Ocean and Channel Islands in the background, and the city in the foreground. Land uses in this vicinity include residential housing and the existing VCMC campus facilities. Present views from Foothill Road are partially disrupted by the existing four-story hospital facility located on the southeast corner of the project site.

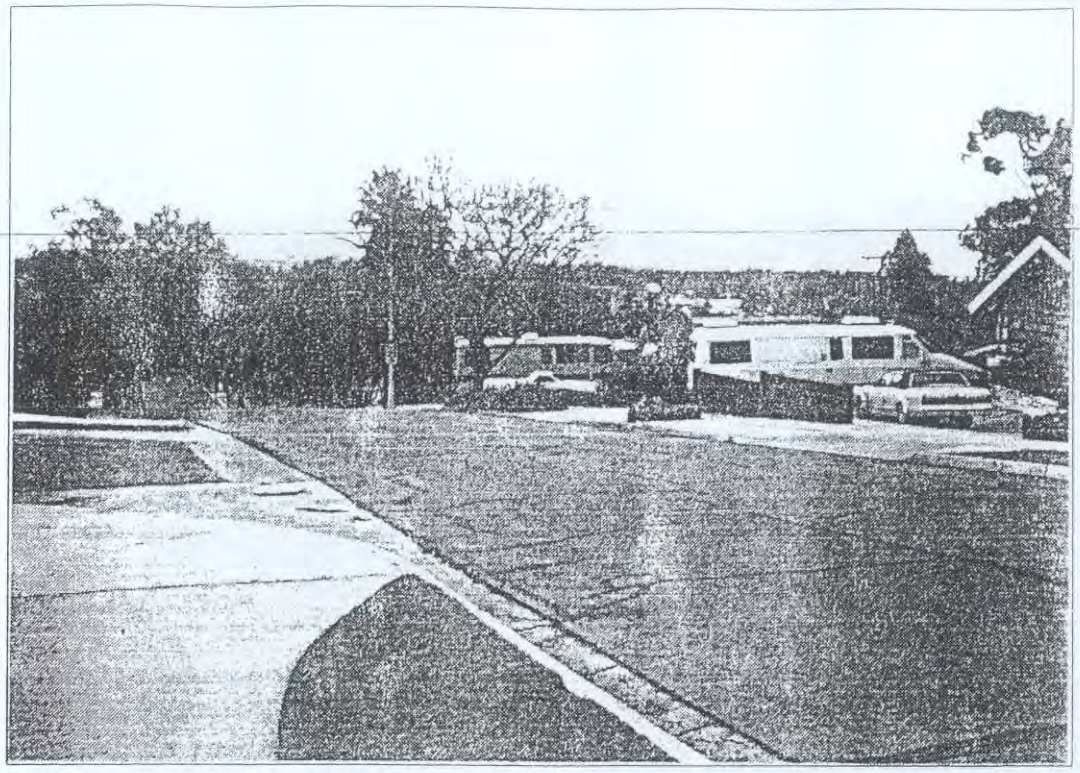
Project implementation would entail the construction of four new structures on the VCMC Campus. Due to the north to south slope of the project site, only the Medical Examiner Facility, located near the top of the slope in the northwest portion of the project site, would affect views from Foothill Road. The other three buildings, located downslope from the Medical Examiner Facility, would be constructed at heights and finished-grades that would not significantly obstruct views from Foothill Road. The effect of the Ambulatory Care Clinic and parking structure on the viewshed would be to interrupt the views of the existing hospital itself and other nearby facilities, and not to adversely affect distant ocean, island, and city views. Therefore, these proposed facilities would not impact any scenic highways or other viewshed features in the project area. Nevertheless the proposed project would likely affect views from several residences along Agnus Drive, immediately east of the campus.

The location of the proposed Medical Examiner Facility could potentially affect aesthetics of Foothill Road by blocking southerly views of the ocean and city. However, the finished grade of the facility would be lower than that of the Foothill Road grade, diminishing the effective height of the structure and its impact on the Foothill Road viewshed. Figure 3.8-3

A. Existing view of the VCMC campus and uses south of the campus from 628 Whitecap Drive.

B. Existing view looking south along Agnus Drive from the intersection of Agnus Drive and Fairmont Drive. This view would not be altered by project implementation.

EXISTING VIEWS
OF THE VCMC CAMPUS



A. Public view of the VCMC campus and uses southwest of the campus from 404 Agnus Drive. The only campus structure that can be seen from this location is the VCMC Hospital. The proposed Ambulatory Care Clinic and parking structure would be visible but would not significantly affect the viewshed.

B. View of the VCMC campus from a side yard at 365 Agnus Drive. Although it would be partially obscured by the tree in the center-left of the photograph, the proposed parking structure would be visible from this location in the left portion of the photo.

EXISTING VIEWS
OF THE VCMC CAMPUS

illustrates the potential impact of the structure by comparing the existing view from Foothill Road to that which would exist following project implementation.

The following design features, which would be incorporated into the proposed Medical Examiner facility, would serve to minimize visual impacts associated with the proposed structure:

- Landscaping materials should not include trees or shrubs that would ultimately exceed the height of the building, so as not to obstruct distant views.
- The building would be a single story, and building elevations would be stepped to effectively be compatible with surrounding topography and natural slope lines.
- All mechanical operational units would be entirely screened from view of the Foothill Road view corridor.

The proposed one-story facility would also utilize setbacks and landscaping in its design, and would represent continuity of land uses on the project site. Implementation of these design features would render potential visual impacts associated with the Medical Examiner facility to a level that is less than significant.

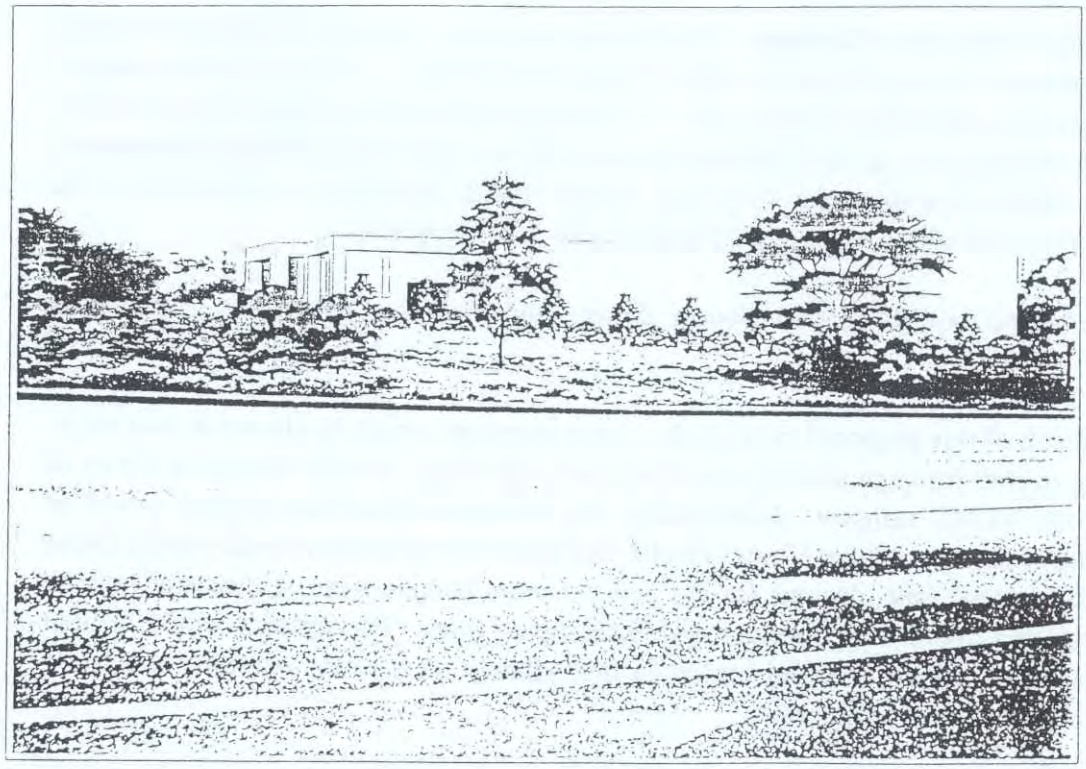
c. **Loma Vista Road frontage.** The primary and most visually prominent frontage of the VCMC campus is along the north side of Loma Vista Road. There are three campus structures that front the street from east to west: the four-story Hospital complex, the two-story the former PSSA building, and across Hillmont Avenue, the one-story Public Health Department building. The middle structure, the two-story former PSSA building, is scheduled to be demolished and replaced with a one-story Mental-Health In-Patient Unit.

There are no explicit City or County design guidelines that govern the Loma Vista Road frontage.

As a result of this proposed change, the visual character would be altered in two ways. The height at the overall frontage profile would be lower, allowing a broader backdrop views of the hills behind the VCMC campus. Additionally, the consistent front yard setback would be interrupted, owing to the fact that the Mental-Health In-Patient Unit structure would extend closer to the street.. At the same time, designs for the new structure include a curvilinear wall, which would be incorporated into the architecture and landscaping plan. The setback would remain larger than the adjacent private medical buildings immediately west of the campus, which are developed in a "zero-lot line" manner.

Because of the reduced building massing and the setback conditions in the larger context of the Loma Vista Road district, the visual impacts related to the proposed Mental-Health In-Patient Unit would not be significant. However, the potential obstruction of views from Agnus Drive that would occur as a result of implementation of the proposed Ambulatory Care Clinic and parking structure could represent a significant effect.

Existing southern view from 3133 Foothill Road.



Proposed southern view from 3133 Foothill Road following implementation of the Coroner/ Medical Examiner Facility Phase of the proposed project.

POTENTIAL VIEW IMPACTS
FROM THE PROPOSED
MEDICAL EXAMINER FACILITY

3.8.2 Mitigation Measures

Measures should be developed that could mitigate view obstruction from residences on Agnus Drive.

3.9 PALEONTOLOGICAL RESOURCES

3.9.1 Potential Impacts

The project site is located in a zone of undetermined paleontological potential.[6] As the project site is currently developed and has been extensively disturbed by previous construction and excavation, the probability of encountering significant resources is considered remote. Therefore, potential impacts to paleontological resources are considered to be less than significant.

3.9.2 Mitigation Measures

No mitigation measures are required; however, in the event that paleontological resources are uncovered during excavation and construction, the County of Ventura requires that work in the vicinity of the find be temporarily suspended and a qualified paleontologist be contacted to evaluate the find. Once the find has been examined and evaluated, and an appropriate mitigation plan has been agreed upon, construction or excavation work on the project site may continue.

3.10 CULTURAL RESOURCES

3.10.1 Potential Impacts

a, b, and c. Archaeological, Historical and Ethnic, Social or Religious. Due to the developed nature of the site, the probability of encountering significant archaeological, cultural or historic resources is considered remote. Therefore, potential impacts to cultural resources are considered less than significant.

3.10.2 Mitigation Measures

No mitigation measures are required; however, in the event that archaeological resources are uncovered during excavation and construction, the County of Ventura would require that work in the vicinity of the find be temporarily suspended and a qualified archaeologist be contacted to evaluate the find. Once a find has been examined and evaluated, and an appropriate mitigation plan has been agreed upon, construction or excavation work in the area may be continued.

3.11 ENERGY RESOURCES

3.11.1 Potential Impacts

During the construction phase of the proposed project, oil and gas reserves would be used for the operation of construction equipment. Due to the size of the proposed project, the quantity of these resources required would not significantly impact energy resources available in the project area.

Electricity for the new facilities would be produced and sold to the VCMC by Southern California Edison. Natural gas would be provided by the Southern California Gas Company.

The proposed project would increase daily consumption of electricity on the subject site by an estimated 3,832 kilowatt hours (kWh) and increase daily natural gas consumption by an estimated 12,501 cubic feet. Energy purveyors indicate that they can meet this level of demand without service interruption. In addition, the project would incorporate energy efficiency into design, in accordance with Title 24 of the California Code of Regulations. Impacts would therefore be less than significant.

3.11.2 Mitigation Measures

No mitigation measures are required.

3.12 COASTAL BEACHES AND SAND DUNES

3.12.1 Potential Impacts

The proposed project site is not located within the vicinity of any coastal area. Therefore, no impacts to coastal beaches and/or sand dunes would occur as a result of project implementation.

3.12.2 Mitigation Measures

No mitigation measures are required.

3.13 SEISMIC HAZARDS

3.13.1 Potential Impacts

The subject site is located on the northern flank of the Ventura basin, a major structural trough within the larger Transverse Ranges Geomorphic Province of California. The Ventura Basin is a structurally controlled basin bordered on the north by the Red Mountain and the San Cayetano faults, and on the south by the Oak Ridge fault. This region is characterized by east-

west trending structural features such as the Ventura Avenue Anticline, the Ventura syncline, and the Red Mountain, Oak Ridge, San Cayetano, and Ventura faults.

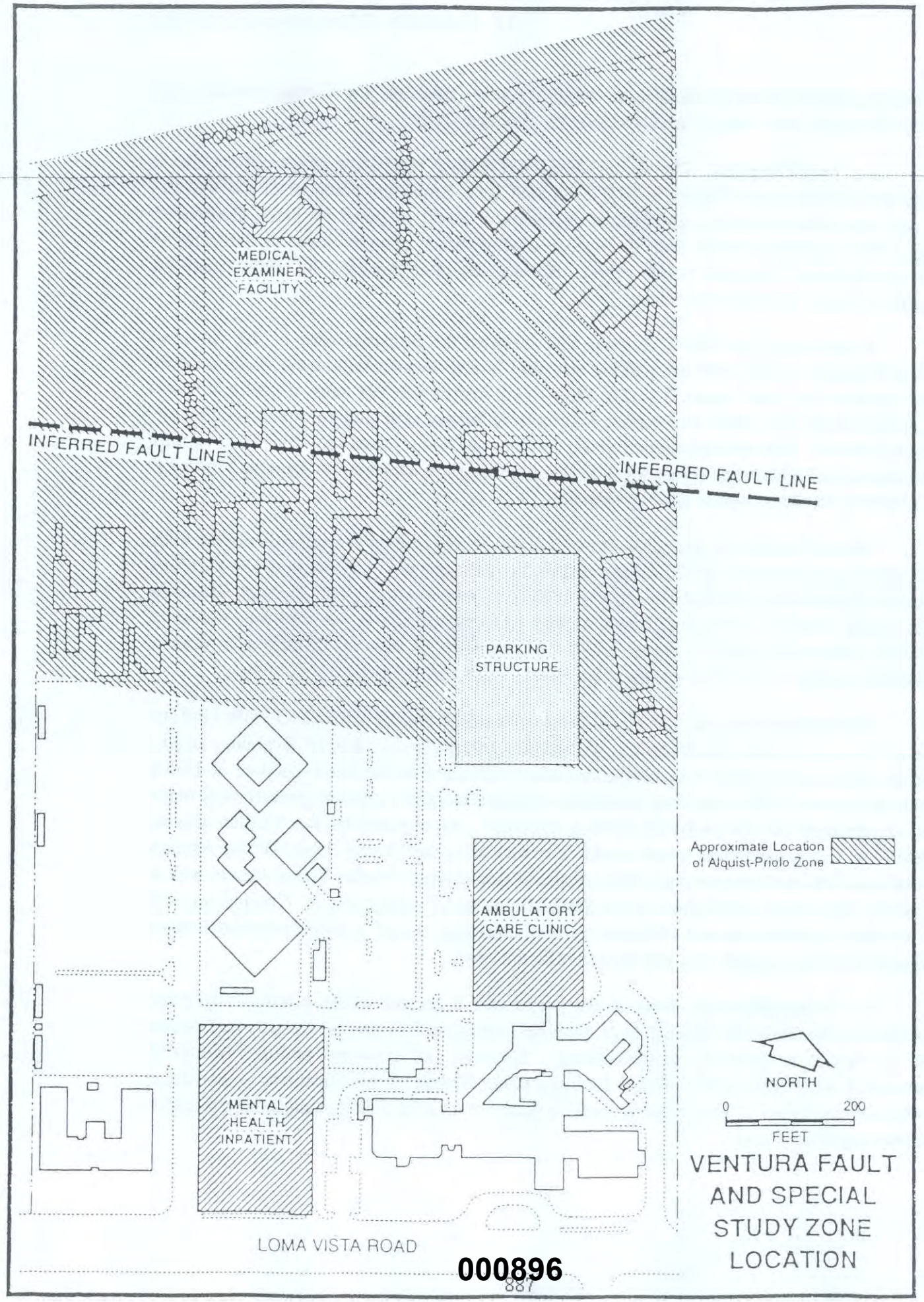
a. **Fault Rupture.** The Ventura fault runs through the middle of the project site in an east-west direction (see Figure 3.13-1). Although the seismogenic potential of the Ventura fault has been debated among geologists, a geotechnical report prepared by Staal, Gardner & Dunne (1992) indicates that the fault is considered active based upon evidence of deformation within the Holocene (the past 11,000 years). Because the fault traverses the subject site, the potential for onsite fault rupture exists.

A portion of the VCMC campus that includes the proposed sites of the Coroner/ Medical Examiner facility and the parking structure is also located within the Alquist-Priolo Special Studies Zone (see Figure 3.13-1). Prior to construction in this zone, a geologic report identifying hazards associated with surface fault rupture for any structures for human occupancy must be prepared. The aforementioned Staal, Gardner & Dunne report identifies fault rupture hazards associated with the proposed Medical Examiner facility; however, no geologic report has been prepared for the proposed parking structure.

Three of the four proposed structures (Mental Health In-patient Unit, Ambulatory Care Clinic, parking structure) would be constructed on the sites of existing structures, and therefore would not increase the potential for impacts related to fault rupture. The Medical Examiner facility would, however, be located on a currently undeveloped site in the northwest corner of the VCMC campus, as shown in Figure 3.13-1. Although the location of the facility is north of the inferred location of the Ventura fault, the exact location of the fault is unknown.

All structures built as part of the project would be built in accordance with Uniform Building Code earthquake specifications. In addition, the proposed Medical Examiner facility would be built in accordance with recommendations contained in the Staal, Gardner & Dunne geotechnical report (1992) regarding foundation construction and a separate geotechnical report would be prepared for the proposed parking structure. As required by the Ventura County General Plan, this geotechnical report would be reviewed by the County Public Works Agency, in accordance with the requirements of the Alquist-Priolo Special Studies Zones Act, as well as the policies and criteria established by the State Mining and Geology Board. Compliance with these standard requirements and additional recommendations should mitigate potential impacts associated with fault rupture to a less than significant level.

b. **Groundshaking.** Because the project site is located within a seismically active region and is crossed by the Ventura fault, facilities constructed as part of the proposed project would be subject to potential groundshaking. However, all proposed facilities would be constructed in accordance with Uniform Building Code earthquake specifications. Compliance with these requirements would reduce potential impacts associated with groundshaking would to a less than significant level.


FOOTHILL ROAD
HOSPITAL ROAD
MEDICAL EXAMINER FACILITY
INFERRED FAULT LINE
INFERRED FAULT LINE
PARKING STRUCTURE
AMBULATORY CARE CLINIC
MENTAL HEALTH INPATIENT
LOMA VISTA ROAD
Approximate Location of Alquist-Priolo Zone
NORTH
0
200
FEET
VENTURA FAULT AND SPECIAL STUDY ZONE LOCATION

c. **Tsunami.** The elevation of the project site place it outside the tsunami hazard zone established by the Ventura County General Plan Hazards Appendix (1989). Therefore, no tsunami related impacts would be associated with project implementation.

d. **Seiche.** The project site is not located near any large inland body of water that could potentially be affected by seiche conditions during a seismic event. Therefore, no seiche-related impacts would result from project implementation.

e. **Liquefaction.** The project site is located outside the liquefaction hazard zone established by the Ventura County General Plan Hazards Appendix. Groundwater levels onsite are estimated to be approximately 40 feet below the surface. Groundwater was not encountered onsite during the Staal, Gardner & Dunne geotechnical study (1992). Therefore, no liquefaction related impacts would be associated with project implementation.

3.13.1.1 Mitigation Measures

No mitigation measures are required.

3.14 GEOLOGIC HAZARDS

3.14.1 Potential Impacts

The topography of the site is characterized by a slight north to south slope on the southern portion and a medium north to south slope in the north-northwest portion. Elevations of the site range from approximately 147 feet above sea level on the southern portion of the site to 235 feet above sea level. Soils located on the majority of the site are mapped as Sorrento loam, with some areas of Soper gravelly loam.

a. **Subsidence.** The project site is located outside subsidence zones established in the Ventura County General Plan Hazards Appendix (1989). However, both Sorrento loam and Soper gravelly loam have moderate shrink-swell characteristics. Therefore, although soils onsite are not characterized as hazardous, the potential for soil subsidence does exist onsite. Project implementation would be in accordance with standard geotechnical practices and would comply with recommendations regarding excavation and compaction in the Staal, Gardner & Dunne geotechnical study. This would reduce potential impacts associated with subsidence to less than significant levels.

b. **Expansive Soils.** The project site is located within a moderate expansive soil zone, as established by the Ventura County General Plan Hazards Appendix. Both Sorrento loam and Soper gravelly loam soils have moderate shrink-swell characteristics. Therefore, the potential exists for expansive soils to be located onsite. All construction associated with the proposed project would be accordance with standard geotechnical practices and would comply with recommendations regarding excavation and compaction in the Staal, Gardner & Dunne geotechnical study. As soils onsite are not expected to have high expansive characteristics, potential impacts from soils onsite are considered to be less than significant.

c. **Landslides/Mudslides.** The project site is not located within any landslide/ mudslide zones established by the Ventura County General Plan Hazards Appendix. Therefore, project implementation would not be expected to result in any significant landslide or mudslide impacts.

3.14.2 Mitigation Measures

All construction associated with the proposed project would be in accordance with standard geotechnical requirements and the recommendations of the Staal, Gardner, and Dunne Fault Hazard Study for the Medical Examiner's Facility. No mitigation measures are required.

3.15 HYDRAULIC HAZARDS

3.15.1 Potential Impacts

a. **Erosion/Siltation.** As discussed in Section 3.14, soils on the project site consist of loamy soils of the Sorrento and Soper series. The majority of the site is covered by Sorrento loam. Surface runoff for this soil is characterized as medium, and erosion hazards are considered to be slight.

During the construction phase of the project, soils exposed by onsite grading and foundation construction could be affected by wind and water erosion. As discussed in Sections 3.3 and 3.4, standard construction techniques would be undertaken in order to reduce short-term wind and water erosion. These standard techniques would reduce construction related erosion/siltation impacts to a less than significant level.

Project implementation would include revegetation of all constructed slopes and graded areas. Such revegetation would minimize the potential for long-term sediment transport from the project site. Therefore, potential long-term impacts from soil erosion and/or siltation would be reduced to a less than significant level.

b. **Flooding.** The proposed project site is not located within any 100-year floodplain as established by the FEMA Flood Insurance Rate Map for the City of San Buenaventura (1985). Therefore, no significant flood-related impacts would occur as a result of project implementation.

3.15.2 Mitigation Measures

As discussed above, project implementation would include revegetation of all constructed slopes and graded areas. No mitigation measures are required.

3.16 AVIATION HAZARDS

3.16.1 Potential Impacts

The subject site is not located within any of the airport hazard zones established by the Ventura County General Plan Hazards Appendix (1989). However, the hospital currently receives helicopter flights on an emergency basis. These flights currently arrive at and depart from a helicopter pad located atop the VCMC hospital in the southwest corner of the site.

None of the facilities proposed as part of the project would be for emergency medical service. Therefore, project implementation would not increase the need for emergency helicopter service on the subject site and no additional impacts related to helicopter hazards would occur. On-site helicopter operations would continue to comply with Federal Aviation Administration safety requirements.

3.16.2 Mitigation Measures

No mitigation measures are required.

3.17 FIRE HAZARDS

3.17.1 Potential Impacts

The subject site is located within a low fire hazard zone. Although project implementation would result in additional structures, these structures would be built in accordance with the Uniform Fire Code regulations, including the use of flame retardant building materials where feasible. In addition, the project involves demolition of older structures which were not originally designed with fire preventative features required today. As a result, the proposed project likely represents an improvement in fire safety features over the current VCMC development.

Project implementation would not introduce new fire hazards into the project area. Therefore, no project-specific or cumulative impacts to fire hazard would be associated with project implementation.

3.17.2 Mitigation Measures

No additional mitigation measures are required.

3.18 HAZARDOUS MATERIALS/WASTE

3.18.1 Potential Impacts

a. **Above-Ground Hazardous Materials.** Above-ground hazardous materials currently stored on the project site include paint and paint thinner waste oil. Project implementation would not significantly increase the use or storage of hazardous materials onsite. Therefore, no project-specific or cumulative impacts would be associated with project implementation.

b. **Below-Ground Hazardous Materials.** A 12,000-gallon underground tank containing diesel and a 15,000-gallon tank containing #5 fuel oil currently exist on the project site. The proposed project would not affect either of these tanks or include the installation or use of any additional underground tanks for the storage of hazardous materials. Therefore, no project-specific or cumulative impacts would be associated with project implementation.

c. **Hazardous Waste.** The proposed project would not generate significant quantities of hazardous waste during construction or operational phases. However, bio-medical wastes are currently generated on-site and would continue to be generated following project implementation. Although no significant increase in the generation of infectious wastes is anticipated, the improper storage, handling, and disposal of bio-medical wastes could contaminate groundwater and surface water resources. Direct contact with these wastes could also result in adverse health effects to humans. However, compliance with applicable California Department of Health and Safety regulations enforced by the Environmental Health Division would reduce any potential adverse impacts related to bio-medical wastes to a level considered less than significant.

3.18.2 Mitigation Measures

No mitigation measures are required.

3.19 NOISE AND VIBRATION

3.19.1 Potential Impacts

Both the City and County of Ventura have established standards for noise-sensitive uses, measured in Community Noise Equivalent Levels (CNEL). County noise level criteria dictate that indoor noise levels in habitable rooms not exceed 45 dBA CNEL. Outdoor noise levels should not exceed 60 dBA CNEL. A significant impact would occur if: (1) a proposed project would subject a noise-sensitive use to noise levels in excess of these standards; or (2) a proposed project would result in an increase in ambient noise levels of 3 dB(A) to Leq 50 dB(A), whichever is greater, during any hour from 6 a.m. to 7 p.m.

Project construction would generate temporary noise impacts at potentially significant levels. Short-term noise is associated with heavy equipment involved in demolition, grading, and construction of facilities proposed as part of the project. Noise levels associated with

construction activity typically range from 73 to 96 dBA at 50 feet from individual pieces of equipment. Such noise level may adversely impact sensitive receptors at medical and educational facilities on the VCMC campus as well as adjacent single family residences. Construction activities would conform with standard operating procedures, including limiting construction activity to between 8 a.m. and 5 p.m. and the use of temporary, movable construction noise barriers, when feasible, to shield sensitive receptors such as adjacent residences and the campus hospital and clinics. Nevertheless, impacts would be adverse and unavoidable. However, because noise level increases associated with construction activity would be temporary in nature, impacts would be considered less than significant.

Long-term impacts would result primarily from traffic on adjacent roadways. Sensitive receptors for long-term noise located on the VCMC campus include the Hospital, Mental Health In-patient Facility, and Juvenile Complex. The proposed project would site the Mental Health In-patient Facility fronting Loma Vista Road east of Hillmont Drive. Other proposed facilities would be set back from roadways and would not be expected to experience significant noise impacts.

Noise levels associated with traffic along Loma Vista Road at Hillmont Drive were estimated using a modification of the updated version of the Federal Highway Noise Model (Stamina 2.0) published by the Federal Highway Administration in 1982. This model provides the user with CNEL noise levels by using average daily traffic volumes (ADTs), vehicle speeds, and distances to receptors. The 1991 Traffic volumes used in this model were provided by the City of Ventura. The maximum posted speed in the vicinity of the project site is 35 mph on both Loma Vista Road and Hillmont Avenue. The average distance to receptors is assumed to be approximately 50 feet from roadway centerline.

The model indicates that the current exterior noise level at the front of the proposed Mental Health In-patient Facility property line is approximately 68.4 dBA CNEL. This exceeds the 60 dBA CNEL County threshold by over 8 dBA. Based upon the proposed increase in net square footage at the VCMC campus, implementation of the proposed project could potentially result in increases to existing traffic levels on Loma Vista Road east of Hillmont by up to 351 trips per day. Noise levels generated by traffic increases along these roadways would also be increased. Noise modeling for project-related traffic increases indicates that ambient levels plus project-related increases would yield a receptor exterior noise level of 68.5 dBA CNEL at the front of the Mental Health In-patient Facility, a 0.1 dBA increase over existing levels. Exterior noise levels would remain above the 60 dBA CNEL threshold for habitable rooms but the noise level increase would not be perceptible to the human ear.

Based upon the results of the Stamina 2.0 model, project implementation would not significantly increase noise levels along Loma Vista Road. However, as proposed, the Mental Health In-Patient facility would abut Loma Vista Road, thereby placing a noise sensitive land use in an area with projected ambient noise levels well in excess of the County's 60 dBA CNEL standard.

To reduce noise levels at the facility's sensitive uses (patient rooms), patient rooms and most exterior use areas would be sited to rear of the Mental Health Unit, away from Loma Vista. This would allow the structure to act as a noise attenuation device, shielding patient rooms and most outdoor use areas from excessive vehicle-generated noise. Specialty wall and glazing materials would also be used for building construction. In addition, a 10-foot wall would be constructed at the front of the facility along Loma Vista Road, thus attenuating noise levels at exterior use areas in the front of the facility. As shown in Appendix B, this wall would reduce exterior sound levels at the front of the facility by approximately 12 dBA, bringing exterior noise levels at the front of the Mental Health In-patient facility to about 56.5 dBA CNEL. These design features would therefore reduce long-term traffic noise impacts to less than significant levels.

Tire squeal noise in the proposed parking facility could also create long-term noise impacts, particularly during nighttime hours when ambient noise levels are lower. While all paving within the structure and on all external ramps would be Portland Cement Concrete with a nonsqueal finish, impacts from this nuisance noise may be significant. In addition, engine start-ups, and door slams could create noise that could annoy residents immediately east of the proposed project.

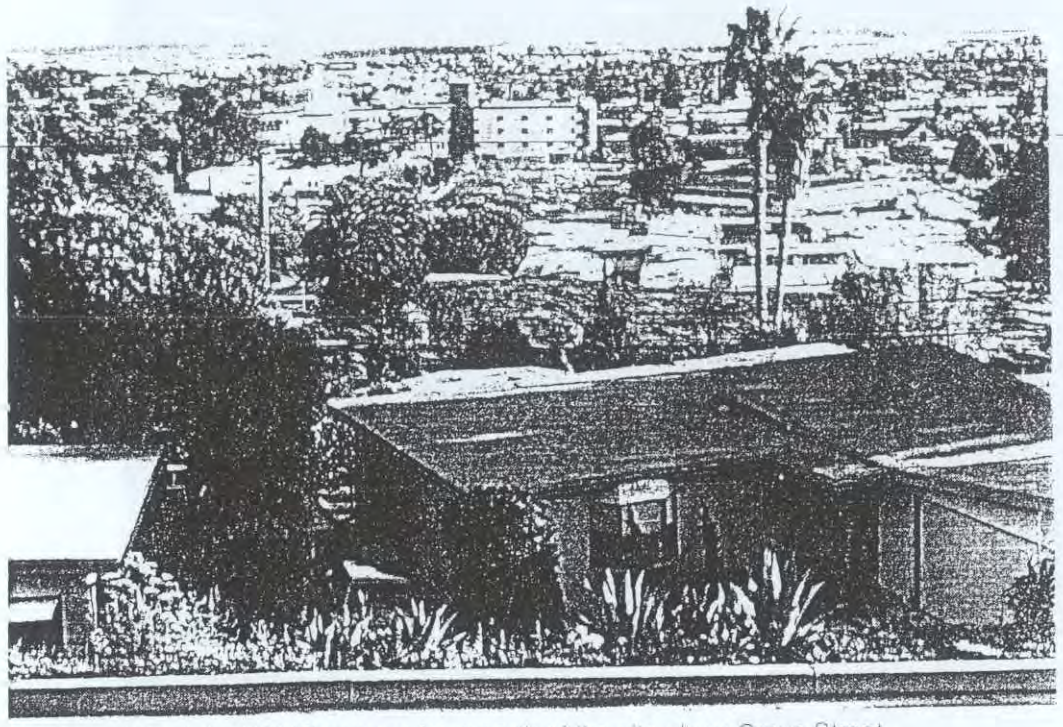
3.19.2 Mitigation Measures

Measures should be developed which will address potentially significant nuisance noise generated by activity within the parking structure as part of an EIR process.

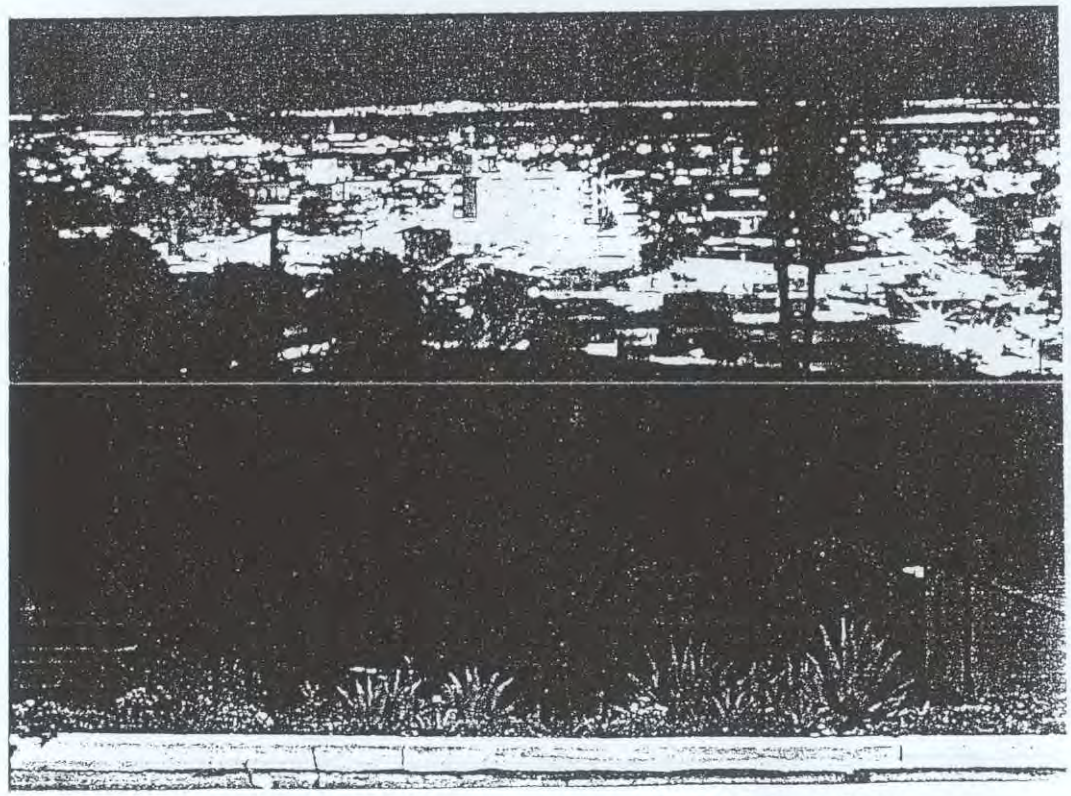
3.20 LIGHT AND GLARE

3.20.1 Potential Impacts

Receptors in the project site area that may be sensitive to increased light and glare include the residential units east and west of the VCMC campus, as well as residences north of Foothill Road. The VCMC campus is currently equipped with night lighting for safety and security reasons. Figure 3.20-1 compares daytime views of the VCMC campus to nighttime views. The new facilities constructed as part of the proposed project would also be illuminated at night, and could potentially increase the quantity of night lighting in the project area. The potential effect of the new lighting sources on the campus to residences north of Foothill Road is shown in Figure 3.20-2. As the figure illustrates, the addition of proposed structures would alter nighttime lighting conditions by adding two new large structures which would also be internally and externally illuminated. However, because the project site is already lighted with both structural and parking lot illumination, project implementation would not substantially increase lighting sources on the campus. In addition, new lighting sources would be shielded and projected toward the ground to decrease the quantity of light radiated into the nighttime sky. Also, lighting for the rooftop level of the parking structure would be limited to the parapet height, so as not to cast lighting on surrounding areas. Nevertheless, potential light impacts

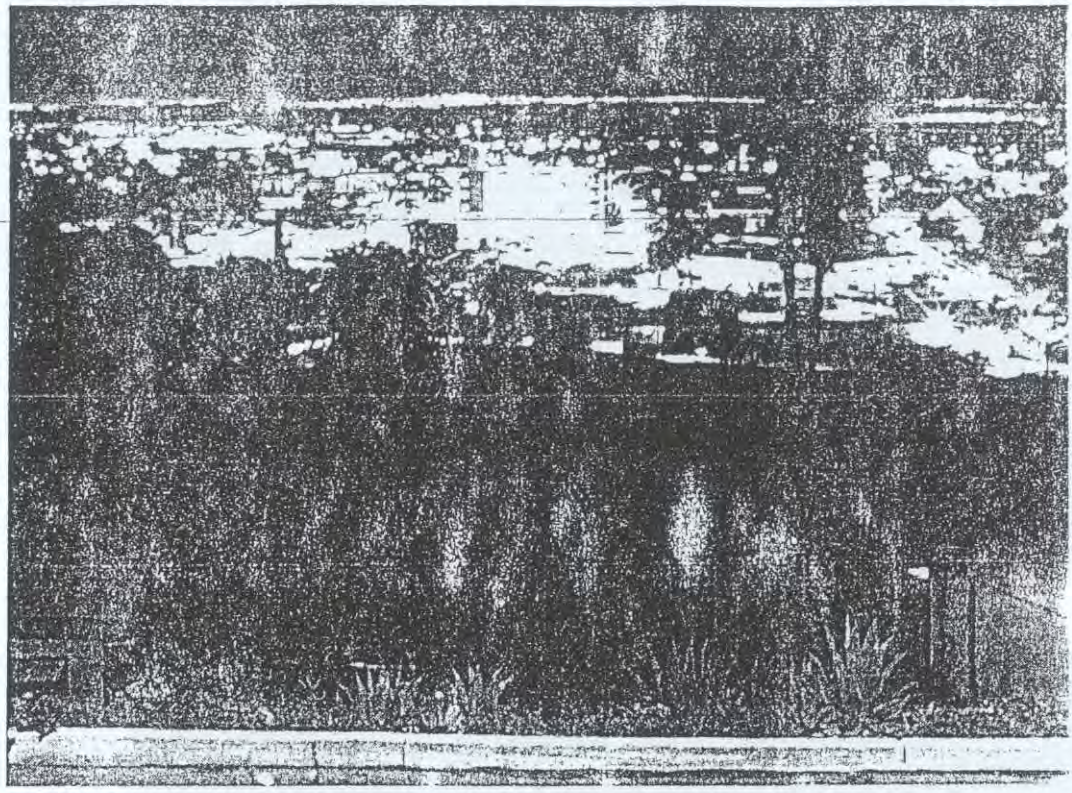


Daytime view of the VCMC campus from north of the site along Grove Street.

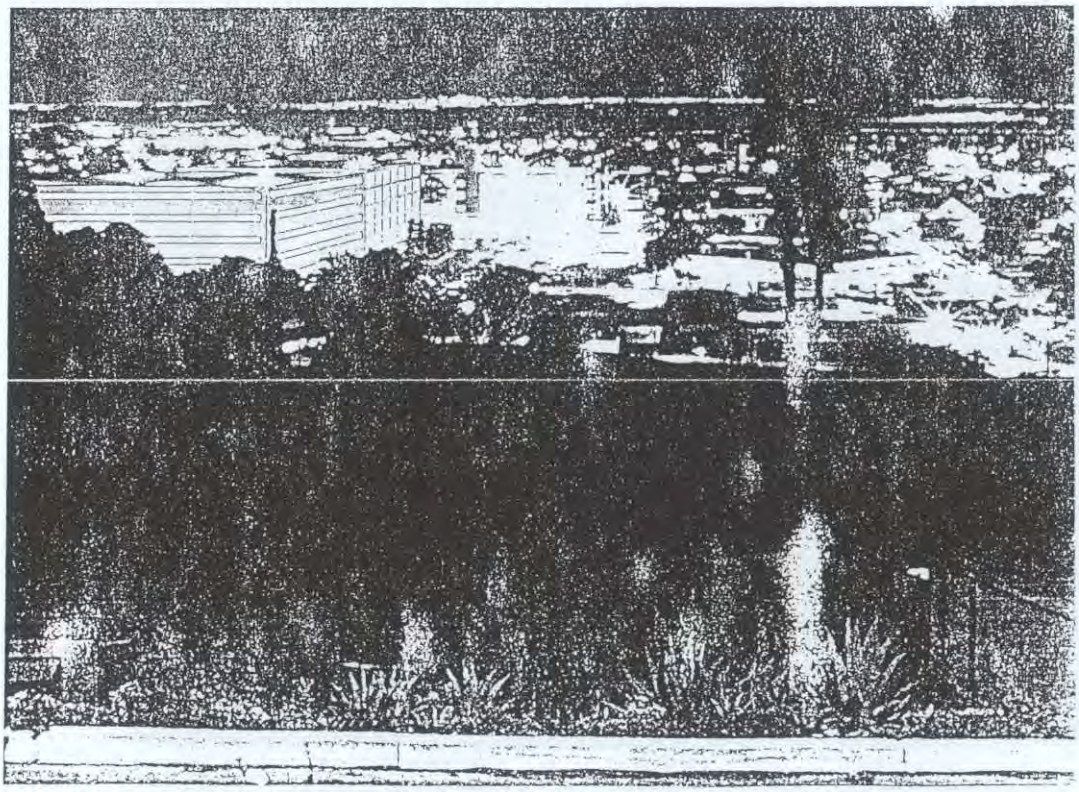


Nighttime view of the VCMC campus from north of the site along Grove Steet.

DAY vs. NIGHT VISUAL CHARACTER



Pre-project view of the VCMC campus.



Post-project view of the VCMC campus

associated with project implementation have caused concern for residents immediately east of the site and may be significant.

Glare is produced by light reflected off atmospheric particles and dispersed into the surrounding area. Reflective surfaces such as metal cars and glass buildings, and unshielded light bulbs may create glare. The proposed project would utilize non-reflective materials in its construction, and is not expected to add significant amounts of reflective surfaces to the site. Additional sources of light would be added, but would be expected to cause only minimal, if any, glare. Automobiles on the top level of the proposed parking structure may cause glare impacts. However, impacts would not be expected to be greater than currently exist on site and would not be significant. Overall glare impacts associated with project implementation would therefore be less than significant.

Potential shadowing effects may adversely affect residences along Agnus Drive.

3.20.2 Mitigation Measures

Mitigation Measures should be developed to address potentially adverse light and shadow effects as part of the EIR preparation process.

3.21 TRAFFIC AND CIRCULATION

3.21.1 Potential Impacts

Potential traffic impacts associated with the proposed project were examined for five critical intersections in the City of San Buenaventura. These five study intersections include the following:

- Main Street at Loma Vista Road
- Main Street at Telegraph Road
- Main Street at Mills Road
- Main Street at Seaward Avenue
- Mills Road at Telegraph Road

In conformance with the City of San Buenaventura requirements and the County of Ventura's Congestion Management Plan (CMP) guidelines, the PM peak hour operating conditions at the five study intersections were investigated according to the Intersection Capacity Utilization (ICU) Method. The ICU technique is intended for signalized intersection analysis and estimates the volume to capacity (V/C) relationship based on the individual V/C ratios of key conflicting movements.

The intersection capacity analysis was performed for: (1) existing traffic conditions; and (2) existing plus project traffic conditions. Traffic volume data used in the analysis was based upon modeled data obtained from the City's MINUTP model. This data was provided by

City of San Buenaventura staff. The trip generation rates used to forecast the proposed project's trip generation were based upon the existing square footage and the number of employees currently arriving/departing the hospital during peak traffic hours. This data was also provided by City of San Buenaventura staff.

The trip generation forecast for the proposed expansion is based on trip generation rates developed by City of San Buenaventura staff. The trip generation rates developed were based on the existing VCMC square footage (398,157 square feet) and the number of employees (1,016) currently arriving/departing the hospital during peak hours.

Based on calculations by City staff, the daily traffic rate for the VCMC is 10.2 trips per thousand square feet (10.2/KSF), with a PM peak hour trip generation rate of 1.02 trips per thousand square feet (1.02/KSF). The directional split for VCMC traffic during the PM peak hour is 38 percent inbound and 62 percent outbound. Using these rates, the proposed VCMC expansion would generate approximately 797 vehicle trips per day with approximately 80 of these trips occurring during the PM peak hour (30 inbound, 50 outbound).

Table 3.21-1 summarizes the PM peak hour levels of service at the five study locations. This table indicates that four of the five study area intersections currently operate at acceptable levels of service during the PM peak hour. (LOS C is the minimum acceptable level according to City of San Buenaventura standards.) Only the intersection of Main Street at Mills Road currently operates at a poor level of service during this period with a V/C ratio of 0.84 (Los D).

Table 3.21-1. PM Peak Hour LOS Summary Table
Ventura County Medical Center Expansion

Intersection	Existing Conditions		Existing Plus Project Conditions		Change in V/C Ratio	Project Peak Hour Trips added to Critical Movements
	LOS	V/C Ratio	LOS	V/C Ratio		
Main Street @ Loma Vista Road	A	0.44	A	0.44	0.00	4 trips
Telegraph Road	A	0.50	A	0.50	0.00	4 trips
Mills Road	D	0.84	D	0.85	+0.01	15 trips
Seaward Avenue	B	0.69	B	0.69	0.00	7 trips
Mills Road @ Telegraph Road	A	0.52	A	0.52	0.00	8 trips

According to City standards, a project would have a significant traffic impact when the addition of project traffic to an intersection exceeds the threshold criteria allowed for added peak hour trips to the critical movements of an intersection. For an intersection that operates at LOS D, the threshold criterion is 15 peak hour trips. The threshold criteria for intersections operating at LOS C, B, and A are 45 trips, 75 trips, and 150 trips, respectively.

As shown in Table 3.21-1, the addition of project traffic to the existing volume network would not result in any significant impact at the five study intersections. The addition of VCMC traffic to the intersection at Main Street and Mills Road would total 15 trips, which would result in a V/C ratio increase of 0.01 (from 0.84 to 0.85). The increase in trips at this key intersection approaches the threshold but is not greater than the threshold value. Therefore, the impact associated with project-generated traffic is considered insignificant. At the four remaining intersections, from four to eight trips would be added to the critical movements, resulting in V/C ratio increases of 0.00.

However, capacity analysis was conducted only at five intersections deemed by City of San Buenaventura staff to be critical. Certain signalized intersections near the hospital that have not been analyzed may be adversely affected. In addition, the County of Ventura has indicated that an analysis should include roadways in the County General Plan that could be adversely affected.

3.21.2 Mitigation Measures

Further analysis should be conducted to determine appropriate traffic mitigation if roadway segments or intersections not analyzed to date will be adversely affected. In addition, the parking demand should be analyzed in greater detail.

3.22 WATER SUPPLY

3.22.1 Potential Impacts

a. Water Quality. The project site is not located near any surface or groundwater sources of municipal water supply. Therefore, no impacts to the quality of water supply would occur as a result of project implementation.

b. Water Quantity. Water supply is currently provided to the project site by the Casitas Municipal Water District via a network of feeder lines extending from 12-inch City lines located along Loma Vista, Foothill Road and Hillmont Avenue.

The proposed project would be subject to City of Ventura Resolution No. 92-73, which states that any increase in water consumption resulting from non-residential development must be offset by a decrease in water consumption at a 3:1 ratio. Based on the water demand rates contained in Resolution No. 92-73, implementation of the proposed project would result in a water demand increase of approximately 4,604 gallons per day (gpd) (see the VCMC Water Audit). This demand rate is based upon gallons per square foot demand for the various uses on the site. Because project implementation would primarily increase building square footage without directly increasing employee or patient populations, this estimate may overstate the demand increase that would actually occur.

The additional project demand would be offset by fixture retrofitting, in accordance with Resolution No. 92-73. Based upon a demand increase of approximately 4,604 gpd, the proposed project would require a water savings of 13,812 gpd. According to Resolution No. 92-73, this required savings would correspond to the retrofit of between 96 and 207 toilets with ultra low flow fixtures to meet the 3:1 offset goal (see the VCMC Water Audit, 1993). Part or all of the required water savings could also be met by the retrofit of existing on-site landscaping and irrigation systems with drought-tolerant landscaping and drip irrigation systems.

The range in the required number of retrofit toilets is based upon the frequency of fixture use with regards to land use. These retrofits would be in addition to the use of ultra low flow toilets in the new structures. The number of fixtures required for this retrofit is currently available at various existing facilities on the VCMC campus; therefore, fixture retrofit could take place entirely onsite. However, the required retrofits could also be achieved off-site. Compliance with Resolution No. 92-73 would more than offset the increase in water consumption associated with proposed project and would reduce impacts to local water supply to a less than significant level.

In addition, the following water conservation techniques would be integrated into project design:

- Low flow shower heads (2.5 gallons per minute or less at 40 psi) would be installed on all new construction.
- Sink and lavatory faucets which limit the flow of water to a maximum of 2.5 gallons per minute at 40 psi, would be installed on all new construction.
- New landscaping developed on the subject site in conjunction with the proposed project would be drought-tolerant.
- Drip, mini-emitter or low volume sprinkler irrigation systems would be used for all new landscaping developed in conjunction with the proposed project.

c. **Fire Flow.** Project design would include adequate hydrant coverage for the new facilities, as per the Uniform Fire Code. Ventura County Fire Department staff indicate that standard sprinkler systems within the proposed facilities would reduce the fire flow required by approximately 50 percent. Fire flows in the area are adequate to accommodate the proposed facilities and would not be affected by project implementation.[7] Therefore, no project-specific or cumulative impacts to fire flow would occur due to project implementation.

3.22.2 Mitigation Measures

No mitigation measures are required.

3.23 WASTE TREATMENT/DISPOSAL

3.23.1 Potential Impacts

a. **Individual Sewage Disposal System.** The proposed project would be connected to the City's sewer treatment system and would not utilize individual sewage disposal systems onsite. Therefore, no project-specific or cumulative impacts to individual sewage disposal systems would be associated with project implementation.

b. **Sewage Collection/Treatment Facilities.** Sewage collection treatment of the proposed facility is provided by the City of Ventura's Wastewater Reclamation Plant. The plant provides tertiary treatment and has an existing design capacity of 14.0 MGD (average daily flow). The plant is currently operating at 8.1 MGD. Project-generated sewage can be estimated based on water usage of the proposed project. As discussed in Section 3.22, project implementation would result in a water demand increase of 4,604 gpd. However, this water consumption increase would be more than offset by the reduction in consumption related to toilets retrofitted in association with the requirements of City of Ventura Resolution No. 9273. Therefore, no project-specific or cumulative impacts to sewage collection or treatment facilities would occur due to project implementation.

c. **Solid Waste Facilities.** Solid waste generated within the City of Ventura, including the VCMC campus, is deposited in the Bailard Landfill. The permit to operate the landfill is scheduled to expire in December 1993.[8]

Based on the Ventura County Solid Waste Management Department's (VCSWMD) solid waste generation rates, current solid waste generation on the VCMC campus is estimated at 1,401 tons per year (tpy), as shown in Table 3.23-1. The majority of the waste (70 percent) is generated at the VCMC Hospital while the remaining 30 percent is divided among the various other campus facilities.

Such materials as office paper, newspaper, cardboard, HDPE and PET plastic, glass, and aluminum are currently recycled through the County's RAP (Recycle All Paper) program in most buildings on the VCMC campus, and limited recycling is taking place in the Hospital. Paper recycling containers are currently located in facility offices and beverage container recycling receptacles are located in kitchen and dining areas. There are two paper only recycling bins and eight mixed recyclable material bins on the campus.

According to the VCSWMD, the lack of adequate space for refuse and recyclables bins is one of the primary constraints to management of recycling and refuse disposal on the VCMC campus. This lack of space is due to both a shortage of space for receptacles as well as the lack of a baler or other system to break down bulky cardboard boxes, which constitute a large portion of the VCMC wastestream.[9]

Table 3.23-1 Current Solid Waste Generation

Facility	Square Feet	Generation Rate (tons/sf/yr)	Total Generation (tons/yr)
Hospital	178,995	.0055	984.5
PSSA Building	25,140	.0014	35.2
Public Health	18,312	.0027	49.4
Mental Health Complex	37,655	.0027	101.7
Family Care Complex	32,555	.0027	87.8
Plant Operations	30,581	.0014	42.8
Bard Building	24,754	.0014	34.6
Juvenile Complex	50,165	.0013	65.2
Total	398,157		1,401.2

The VCSWMD has developed guidelines for solid waste analysis, including solid waste generation and reduction rates. These guidelines state that a project shall be considered individually significant if the solid waste disposal rate exceeds 65 net tons per year (tpy) and the solid waste diversion rate is less than 25 percent.

Based upon the County's per employee waste generation rates for health services, the proposed project would increase long-term solid waste generation at the VCMC campus by an estimated 127.96 tpy (see Appendix C). In addition, short-term increases in solid waste generation would occur during project-related demolition and construction.

The long-term generation associated with project implementation would exceed the County' significance threshold. However, VCMC staff are currently in the process of developing a more extensive recycling program which will extend current programs to the Hospital and any new facilities constructed on the campus.

Combined, the materials that are currently recycled on the VCMC campus through the RAP program account for approximately 19.5 percent of the total 127.96 tpy increase in solid waste generation that would occur as a result of project implementation. If all such materials generated by new campus facilities are recycled, as much as a 24.98 tpy reduction in solid waste disposal could be achieved. Assuming that the materials recycled through the RAP program also account for 19.5 percent of the waste generated at the VCMC Hospital, extension of the RAP program to that facility would reduce on-site waste disposal by up to 192 tpy. Implementation of campus-wide recycling efforts would supplement project programs and mitigate the project's effects.

In addition to the extension of the currently planned recycling program to the VCMC Hospital and all new facilities that are part of the proposed project, the following features will be implemented campus-wide to further reduce solid waste generation on the VCMC campus:

- The VCMC will mulch the grass clippings from campus lawns rather than disposing of the clippings. If existing equipment will not mulch the clippings, one or more mulching lawn mowers will be purchased by the VCMC. Grass clippings on campus lawns will be used as mulch for campus landscaping rather than the current method of disposing clippings in trash receptacles. In addition, a "green bin" recycling program will be initiated for other yard wastes. Yard waste accounts for an estimated 13.8 percent of the increase in waste generation associated with the proposed project. Diversion of all yard wastes generated in association with the proposed project could therefore reduce the increase in solid waste generation associated with project implementation by up to 17.77 tpy. Implementation of campus-wide mulching could reduce the generation of such waste by an even greater amount.

- The VCMC will develop an on-site or off-site composting program for organic compostable wastes generated on the campus. One possible approach would be to compost kitchen scraps from their own facility using worm boxes or closed air compost containers. This approach would require at least one day of labor every six months to harvest finished vermipost or compost as well as regular maintenance of the worm boxes or compost bins. Organic compostables constitute an estimated 11.8 percent of the increase in solid waste generation associated with the proposed project. If all such materials are composted, a disposal reduction of up to 15.1 tpy could be achieved. A campus-wide program would result in an even greater reduction.

- Adequate space for waste and recycling bins, as determined by the Ventura County Solid Waste Management Department, will be provided for all new facilities developed as part of the proposed project.

- The VCMC will purchase a baler for the VCMC facility or develop an alternative method to break down cardboard boxes and reduce the space requirements for recyclable materials bins. An example of an alternative method might be assigning custodians to manually break down cardboard boxes.

- The contractor that conducts project-related construction and demolition activities will be required to develop County-approved plans for the diversion of construction/demolition wastes through source reduction or recycling.

Full implementation of currently planned programs and the additional programs recommended as part of the proposed project could reduce solid waste disposal associated with project implementation by as much as 57.85 tpy (45 percent). In addition, implementation of these programs campus-wide would further reduce waste generation associated with existing on-site facilities while extension of the RAP program to the VCMC Hospital would reduce on-site

disposal by up to 192 tpy. These programs would accomplish as great a reduction as is feasible on the campus and the diversion rate would exceed the County's 25 percent diversion target. Both project and cumulative impacts to County solid waste facilities are therefore considered less than significant.

3.23.2 Mitigation Measures

No mitigation measures are required.

3.24 UTILITIES

3.24.1 Potential Impacts

a. **Electric.** Electrical service to the project site is provided by Southern California Edison. Current average daily consumption of electricity on the VCMC campus is estimated at 30,273 kilowatt-hours (kWh).[10] Project implementation would increase on-site electrical power consumption and would require the extension of distribution lines to the new facilities. Based upon electricity consumption factors contained in the South Coast Air Quality Management District's (SCAQMD) Air Quality Handbook, the proposed 88,378 square foot increase would increase electrical demand by 3,832 kWh per day.[11] This would represent a 13 percent increase over estimated current on-site consumption. Because the primary purpose of the project is to relieve current overcrowded conditions rather than accommodate an expansion of services, this estimate may overstate the actual increase that would occur.

Southern California Edison staff indicate that this increase in electrical demand would not impact its service in the area and that onsite distribution improvements are expected to be routine.[12] In addition, energy efficiency would be incorporated into project design, in accordance with Title 24 of the California Code of Regulations. Therefore, no project-specific or cumulative impacts to electrical service would be associated with project implementation.

b. **Natural Gas.** Natural gas service to the subject site is provided by the Southern California Gas Company. Current average daily natural gas use on the VCMC campus is estimated at 47,931 cubic feet. Project implementation would increase natural gas use onsite and would require the extension of distribution lines to the new facilities. Based upon natural gas demand factors in the SCAQMD's Air Quality Handbook, the increase in square footage would result in an increase in demand for natural gas of approximately 12,501 cubic feet per day.[13] This would represent a 26 percent increase over current estimated consumption on the VCMC campus. Again, it should be noted that this estimate may overstate the actual consumption increase because project implementation would primarily relieve current overcrowded conditions on the campus rather than provide for expansion of services.

This increase would not be expected to impact natural gas service in the area and onsite distribution improvements would be routine. Therefore, no project-specific or cumulative impacts to natural gas service would be associated with project implementation.

c. **Communications.** Communications to the project site is provided by PacBell. Project implementation would require the extension and/or expansion of communications service to the Coroners/Medical Examiner's facility, the Ambulatory Care Clinic, and the Mental Health In-Patient facility. PacBell personnel indicate that this expansion is expected to be routine and would not impact its service in the area. Therefore, no project-specific or cumulative impacts to communication are anticipated.

3.24.2 Mitigation Measures

No mitigation measures are required.

3.25 FLOOD CONTROL/DRAINAGE

3.25.1 Potential Impacts

a. **Flood Control District Facility.** The project site is not located within the 100-year floodplain. No flood control district facilities are present on or near the project site. The project site itself does not contain any areas which are subject to flooding. Therefore, no project-specific or cumulative impacts to flood control facilities would occur due to project implementation.

b. **Other Facilities.** As previously discussed, the project site is not located within any floodplain and does not have any areas that are subject to flooding. Onsite drainage is currently routed to Loma Vista Road via Hillmont Avenue. Although project implementation may incrementally increase the amount of impervious surface area onsite, drainage patterns would not be expected to be significantly altered. Any alteration of drainage patterns would be incorporated in the site development plans in accordance with the County of Ventura's Building Code, and Chapter 70 of the Uniform Building Code. Therefore, no project-specific or cumulative impacts to private drainage facilities would occur due to project implementation.

3.25.2 Mitigation Measures

No mitigation measures are required.

3.26 LAW ENFORCEMENT

3.26.1 Potential Impacts

a and b. **Personnel/Equipment and Facilities.** Police protection for the project site is provided by the City of San Buenaventura Police Department and the Ventura County Sheriff's Department. The nearest City Police Department station to the project site is the department headquarters, located at 1425 Dowell Drive. Response time for the city police department is based upon patrol unit location and the nature of the call, but is under three minutes for emergencies. The closest sheriff's station to the proposed site is the "David" station, located in

the Ventura County Government Center at 800 South Victoria Avenue. Response time to the project site is based upon patrol unit location and nature of the call.

During the first 8 months of 1992, the City Police Department received a total of 264 calls for service from the VCMC campus. In addition, 137 calls for service were received from the 800 block of Hillmont Avenue and the 300 block of Hospital Road. The majority of these calls dealt with missing walkaways from the campus Mental Health Unit. The total number of calls related to the VCMC facilities for the 8-month period are therefore estimated by the City Police Department at 401.

Although project implementation would result in an increase in on-site building square footage, this increase is not expected to affect police service to the site. Nevertheless, project implementation would be expected to incrementally increase the number of calls for service on the VCMC campus. Project related enforcement concerns at the site would include equipment theft and trespassing during construction. During construction and operation of the new facilities, equipment and tools used at the project site would be secured to prevent theft. Long-term enforcement concerns include burglary, auto theft and vandalism during operation of the facilities and crime associated with potentially dangerous patients. The proposed Mental Health In-patient Facility incorporates more stringent security design features than does the existing facility it is replacing. In addition, mental health staff are trained for emergency situations involving patients. Therefore, project implementation is not expected to significantly increase enforcement calls to the project site.

The introduction of structured parking as an element of the proposed project represents a concern for the safety of employees, particularly those walking to their cars in late night hours. These safety issues would be addressed through programming and design features, which would be reviewed by the City Police Department.

3.26.2 Mitigation Measures

No mitigation measures are required.

3.27 FIRE PROTECTION

3.27.1 Potential Impacts

a and b. Distance/Response Time and Personnel, Equipment and Facilities. Fire protection for the site is provided by Ventura City Fire Station No. 2, located approximately 2 miles from the site. Response time to the site is less than 5 minutes and is considered adequate. Additional equipment and personnel are available from Ventura City Stations 3 and 5, located within a 5-mile radius of the project site. City of Ventura fire personnel indicate that staffing and equipment at these stations are adequate to accommodate the proposed project. Therefore, no project-specific or cumulative impacts to fire protection would be associated with project implementation.

3.27.2 Mitigation Measures

No mitigation measures are required.

3.28 EDUCATION

3.28.1 Potential Impacts

a and b. **Schools and Libraries.** The proposed project would not affect enrollment at area schools or demand for library service. Schools on the VCMC campus may experience air quality and noise impacts during project construction. However, such impacts would be of short-term duration and would be considered less than significant.

3.28.2 Mitigation Measures

No mitigation measures are required.

3.29 RECREATION

3.29.1 Potential Impacts

a, b, and c. **Local and Regional Parks, Facilities and Trails.** The project would take place entirely on the VCMC campus. Aside from small-scale recreational facilities within both the Youth Detention Complex and the Mental Health In-patient Unit, no recreational uses exist onsite. Project implementation would not affect local or regional parks, facilities, or trails. The Mental Health In-patient facility would include newly programmed recreational space to improve provision of onsite needs. Therefore, no project-specific or cumulative impacts to recreational opportunities would occur due to project implementation.

3.29.2 Mitigation Measures

No mitigation measures are required.

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1 Wood, Steve, Ventura County Planning Department, personal communication, November 1992.

2 Thomas, Chuck, Ventura County Air Pollution Control District, personal communication, November 1992.

3 Ibid

4 Resources Appendix, Ventura County General Plan, 1988.

5 California Natural Diversity Database, 1992.

6 Lander, Bruce, Paleoenvironmental Associates, 1992.

[7] Morgan, Diane, Ventura County Fire Protection District, personal communication, November 1992.

[8] County of Ventura, Draft Environmental Impact Report: Weldon Canyon Landfill, 1992.

[9] David Goldstein, Ventura County Solid Waste Management Department, January 1993.

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[10] This figure includes the 23,336 kWh/day consumed by the VCMC hospital as identified in the 1992 VCMC Water/Energy Conservation Study prepared by Black & Veatch and assumes consumption rates provided by the South Coast Air Quality Management District for the remainder of the campus.

[11] In order to provide a worst case estimate, the Hospital consumption rate of 17.9 kWh/square foot/year is used for the entire increase in square footage associated with the project.

[12] Rembolt, Donald, Southern California Edison, personal communication, 1992.

[13] The SCAQMD handbook does not include a natural gas consumption rate for medical facilities. Consequently, the Hotel/Motel rate of 4.8 cubic feet/square foot/month, which is the highest rate identified in the handbook, is used to provide a worst-case analysis.

4.0 MANDATORY FINDINGS OF SIGNIFICANCE

	Yes/Maybe	No
1. Does the project have the potential to significantly 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	___
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future).	X	___
3. Does the project have impacts which are individually limited, but cumulatively considerable? (Several projects may have relatively small individual impacts on two or more resources, but the total of those impacts on the environment is significant).	X	___
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X	___

5.0 DETERMINATION OF ENVIRONMENTAL DOCUMENT

On the basis of this initial evaluation:

☐ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION should 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 the mitigation measure(s) described in Section C of the Initial Study will be applied to the project. A MITIGATED NEGATIVE DECLARATION should be prepared.

☒ I find the proposed project, individually and/or cumulatively MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.*

Signature of Preparer

Date

Alec T. Pringle, Project Manager

*EIR Issues of Focus: Land Use (community character); Air Quality (localized emissions); visual resources; noise and vibration; light, glare, and shadow; and transportation/circulation (level of service, parking)

6.0 LIST OF PREPARERS/PERSONS CONTACTED

6.1 LIST OF PREPARERS

This environmental document was prepared by Fugro-McClelland (West), Inc. and Linscott, Law & Greenspan, Engineers, while under contract to the County of Ventura, Public Works Agency. Persons directly involved in the preparation of this report were:

Fugro-McClelland

Stephen Svete, AICP, Senior Program Manager, Planning Services
Joe Power, Environmental Planner
Jim O'Toole, Environmental Analyst
Dottie Colleran, Word Processing Coordinator
Tony Vigil, Graphics Coordinator

Linscott, Law & Greenspan

Paul Wilkinson, P.E.
Richard E. Barretto, Transportation Engineer II

6.2 PERSONS CONTACTED

Blair, Ray, Maintenance Manager, Ventura County Medical Center
Colbertson, Kathy, County of Ventura, Solid Waste Management Department
Fisher, Jim, County of Ventura, Public Works Agency
Goldstein, David, County of Ventura, Solid Waste Management Department
Kaiser, Peter, County of Ventura, Solid Waste Management Department
Lander, Bruce, Paleoenvironmental Associates
Lowry, Kathy, City of Ventura, Transportation Division
Morgan, Diane, Ventura County Fire Protection District
Prodoehl, Robert, P.E., City of Ventura, Building and Safety Division
Rembolt, Donald, Southern California Edison
Thomas, Chuck, Ventura County Air Pollution Control District
Turner, John, County of Ventura, Water Resources Division
Wood, Steve, County of Ventura, Planning Department

7.0 REFERENCES

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California Department of Fish and Game (1992), Natural Diversity Database.

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Santa Barbara, City of (1989), Water Demand Factor and Conservation Study.

South Coast Air Quality Management District (1992), CEQA Air Quality Handbook Final Draft.

Ventura, City of (1989), Comprehensive Plan Update to the Year 2010.

Ventura, City of (1992), Resolution No. 92-73.

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County of Ventura (1988), General Plan Resources Appendix.

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U.S. Department of Housing and Urban Development (1984), Noise Assessment Guidelines.

Ventura County Air Pollution Control District (1989), Guidelines for the Preparation of Air Quality Impact Analyses.

Ventura County Public Works Agency (1992), Fault Hazard Study: Medical Examiner's Facility, prepared by Staal, Gardner & Dunne, Inc..

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APPENDIX A
AIR QUALITY

Project Name : VCMC

Date : 02-20-1993

Analysis Year = 1995 Temperature = 60
EMFAC7 VERSION : EMFAC7D ...11/88

Unit Type	Trip Rate	Size	Tot Trips	Days Op.
Medical Office Building	10.2/1000 Sqf	78	797	1

	Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Work	Non-Work
Trip Length	8.4	3.7	3.9	7.4	3.6
Started Cold	88.2	40.1	58.0	77.2	27.0
Trip Speed	35	35	35	35	35
Percent Trip	27.0	17.0	56.0		

Vehicle Fleetmix

Vehicle Type	Percent Type	Leaded	Unleaded	Diesel
Light Duty Autos	72.8	1.7	95.6	2.7
Light Duty Trucks	14.3	2.2	95.0	2.8
Medium Duty Trucks	4.3	5.3	94.7	0.0
Heavy Duty Trucks	3.9	29.8	70.3	N/A
Heavy Duty Trucks	3.9	N/A	N/A	100.0
Motorcycles	0.9	100.0	N/A	N/A

Project Emissions Report in Lb/Day

Unit Type	TOG	CO	NOx
Medical Office Building	9.5	99.9	12.4

Project Emissions Report in Lb/Day

Unit Type	FUEL USE	PM10	SOx
Medical Office Building	138.4	15.1	1.3

APPENDIX B

NOISE

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EXISTING

NOISE PREDICTION MODEL - MODIFIED FHWA STAMINA 2.0

Loma Vista Road e/o Hillmont

DATA	Date:	03/01/93
Enter ADT:	21800	
Enter vehicle speed:	35	
Enter % of Medium trucks:	1.8	
Enter % of Heavy trucks:	0.7	
Enter % of Evening Traffic -		
(default=17%) Autos:	12.9	
Medium Trucks:	4.9	
Heavy Trucks:	2.7	
Enter % of Nighttime Traffic -		
(default=15%) Autos:	9.6	
Medium Trucks:	10.3	
Heavy Trucks:	10.8	
Enter % road gradient:	0	
Enter distance from site to centerline of road, feet:	50	

RESULTS

Noise Level at site -		Hard Sites
Ldn, dBA:	68.0	68.0
CNEL, dBA:	68.4	68.4

Distance To Contour From Centerline, feet (4.5 dB/2x) -	Ldn	CNEL
75 dBA:	NA	NA
70 dBA:	37	39
65 dBA:	80	84
60 dBA:	172	182
55 dBA:	371	392
50 dBA:	798	845

EXISTING + PROJECT

NOISE PREDICTION MODEL - MODIFIED FHWA STAMINA 2.0

Loma Vista Road e/o Hillmont

DATA	Date:	03/01/93
Enter ADT:	22154	
Enter vehicle speed:	35	
Enter % of Medium trucks:	1.8	
Enter % of Heavy trucks:	0.7	
Enter % of Evening Traffic -		
(default=17%) Autos:	12.9	
Medium Trucks:	4.9	
Heavy Trucks:	2.7	
Enter % of Nighttime Traffic -		
(default=15%) Autos:	9.6	
Medium Trucks:	10.3	
Heavy Trucks:	10.8	
Enter % road gradient:	0	
Enter distance from site to centerline of road, feet:	50	

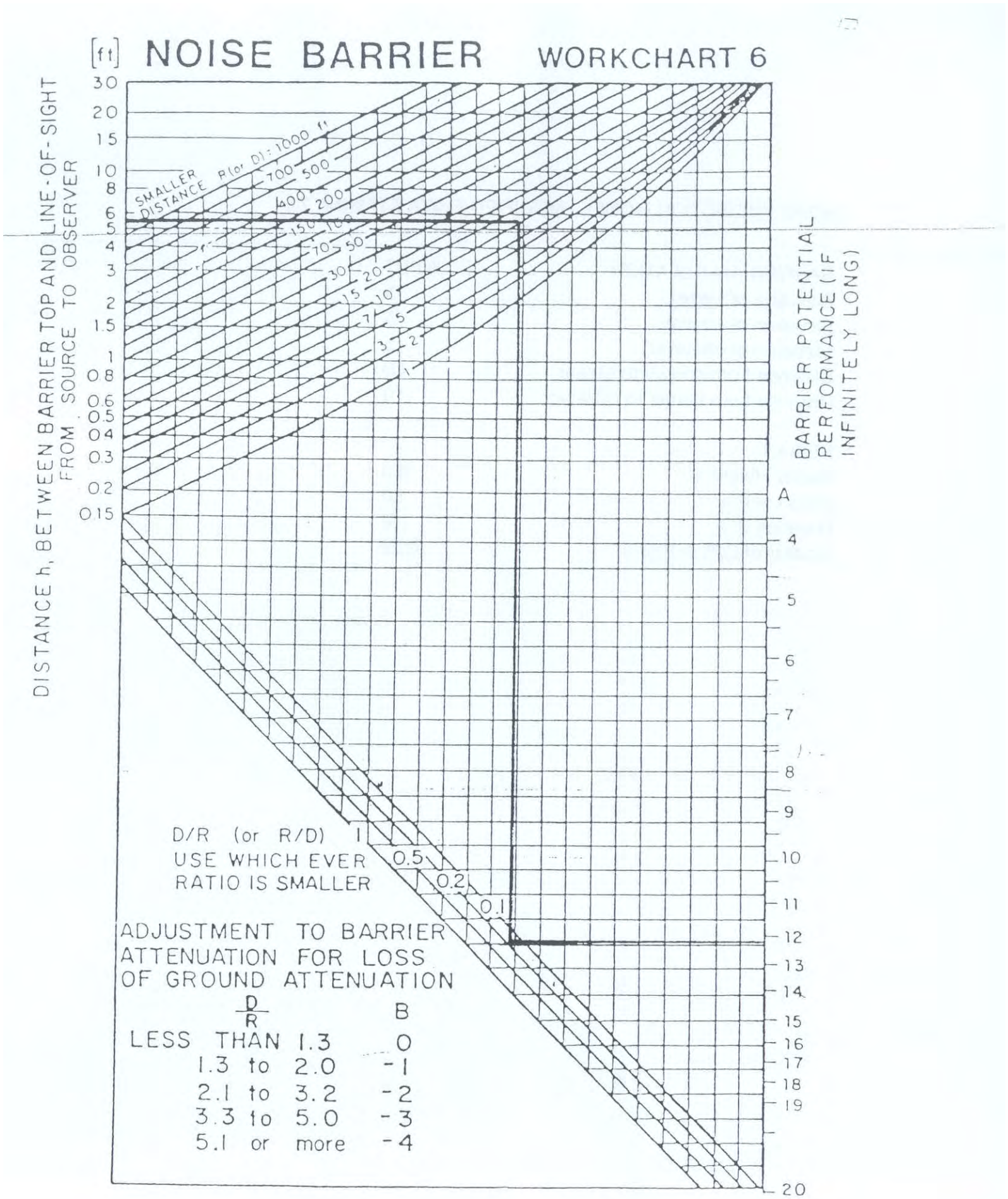
RESULTS

Noise Level at site -		Hard Sites
Ldn, dBA:	68.1	68.1
CNEL, dBA:	68.5	68.5

Distance To Contour From Centerline, feet (4.5 dB/2x) -	Ldn	CNEL
75 dBA:	NA	NA
70 dBA:	37	40
65 dBA:	81	85
60 dBA:	174	184
55 dBA:	375	396
50 dBA:	807	854

NOISE PREDICTION MODEL - MODIFIED FHWA STAMINA 2.0

BARRIER CALCULATION	INPUT
Elevation of barrier:	10
Elevation of source:	3
Elevation of observer:	5
Distance from source to barrier:	50
Distance from barrier to observer:	10
RESULT	
Barrier Height =	5.3
Distance R =	50
Distance S =	10
Smaller of D/R or R/D =	0.20


[ft] NOISE BARRIER WORKCHART 6
DISTANCE h, BETWEEN BARRIER TOP AND LINE-OF-SIGHT FROM SOURCE TO OBSERVER
30
20
15
10
8
6
5
4
3
2
1.5
1
0.8
0.6
0.5
0.4
0.3
0.2
0.15
SMALLER DISTANCE R (or D) = 1000 ft
700
500
400
200
150
100
70
50
30
20
15
10
7
5
3
2
1
BARRIER POTENTIAL PERFORMANCE (IF INFINITELY LONG)
A
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
D/R (or R/D)
USE WHICH EVER RATIO IS SMALLER
1
0.5
0.2
0.1
ADJUSTMENT TO BARRIER ATTENUATION FOR LOSS OF GROUND ATTENUATION
D/R
B
LESS THAN 1.3 0
1.3 to 2.0 -1
2.1 to 3.2 -2
3.3 to 5.0 -3
5.1 or more -4

APPENDIX C
SOLID WASTE GENERATION

VENTURA COUNTY SOLID WASTE MANAGEMENT DEPARTMENT
SOLID WASTE PROJECT IMPACT CALCULATION

PROJECT: County Hospital VCMC 01/27/93

(values in tons/year)

MATERIAL TYPE	RESIDENTIAL	COMMERICAL	INDUSTRIAL	TOTAL
CARDBOARD	0.000	16.057	0.000	16.057
MIXED PAPER	0.000	6.927	0.000	6.927
NEWSPAPER	0.000	2.886	0.000	2.886
LEDGER	0.000	4.297	0.000	4.297
NONRECYCLABLE PAPER	0.000	18.385	0.000	18.385
PAPER TOTAL	0.000	48.546	0.000	48.546
HDPE	0.000	0.127	0.000	0.127
PET	0.000	0.125	0.000	0.125
FILM PLASTIC	0.000	3.975	0.000	3.975
OTHER PLASTIC	0.000	13.140	0.000	13.140
PLASTICS TOTAL	0.000	17.367	0.000	17.367
RECYCLABLE GLASS	0.000	1.035	0.000	1.035
NONRECYCLABLE GLASS	0.000	2.373	0.000	2.373
GLASS TOTAL	0.000	3.408	0.000	3.408
ALUMINUM	0.000	0.452	0.000	0.452
FERROUS METALS	0.000	2.853	0.000	2.853
NONFERROUS METALS	0.000	0.652	0.000	0.652
WHITE GOODS	0.000	0.000	0.000	0.000
METAL TOTAL	0.000	3.964	0.000	3.964
YARD WASTE	0.000	17.767	0.000	17.767
ORGANIC COMPOSTABLES	0.000	15.096	0.000	15.096
ORG. NONCOMPOSTABLES	0.000	1.773	0.000	1.773
TIRES AND RUBBER	0.000	6.877	0.000	6.877
WOOD WASTES	0.000	1.562	0.000	1.562
ORGANIC TOTAL	0.000	25.305	0.000	25.305
INERT SOLIDS	0.000	0.391	0.000	0.391
HHW	0.000	0.123	0.000	0.123
OTHER SPEC. WASTE TOTL	0.000	0.514	0.000	0.514
SLUDGE	0.000	0.000	0.000	0.000
OTHER SPECIAL WASTE	0.000	11.084	0.000	11.084
SPECIAL WASTE TOTAL	0.000	11.084	0.000	11.084
TOTAL WASTE	0.000	127.962	0.000	127.962