STATE OF CALIFORNIA - THE RESOURCES AGENCY

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PETE WILSON, *Governor*

CALIFORNIA COASTAL COMMISSION
South Coast Area Office
00 Oceangate, Suite 1000
Long Beach, CA 90802-4302
(562) 590-5071

RECORD PACKET COPY

Filed:	1/27/98
49th Day:	3/17/98
180th Day:	7/26/98
Staff:	PE/ PC
Staff Report:	2/18/98
Hearing Date:	3/7-10/98

STAFF REPORT REGULAR CALENDAR

APPLICATION NO.: 5-97-419(Westside Homes)

APPLICANTS: Westside Homes **AGENT:** Arctecnica

PROJECT LOCATION: 865 Paseo del Mar, Pacific Palisades, Los Angeles County APN 4416-022-035

PROJECT DESCRIPTION: Construct 9,168 single family residence, swimming pool grading and retaining walls.

Lot area:	11,022 sq. ft.
Building coverage	3,439 sq. ft.
Pavement coverage	400 sq. ft.
Landscape coverage	1,962 sq. ft.
Parking spaces	3
Zoning	RE 15-1-H
Plan designation	Very low density residential
Project density	4 dua
Height above finished grade	42 feet
Height above natural grade	35.5 feet

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends approval with conditions. The project is located on the knoll at the end of a southeast trending ridge in the Santa Monica Mountains, an area of extreme fire hazard. The site is adjacent to Topanga State Park, bounded on the northeast by Temescal Ridge Fire Road, a heavily used trailhead. Staff is recommending conditions to address geologic and fire safety issues and to minimize impacts of fire clearance on State Parks property. The recommendations include 1) an assumption of risk of fire and geologic hazards, 2) a requirement to follow the recommendations of the geologist, 3) increasing of the setback of the structure from the Topanga State Park to 30 feet, more than the 15 feet now proposed, and 4) developing a fire safety and fuel modification plan approved by the Los Angeles City Fire Department and the Department of Parks and Recreation.

UNRESOLVED ISSUES:

The applicant states that moving the house 30 feet from the property line would require a redesign of the structure, because the house is already located no more than five feet from the street property line at two places, leaving little room to relocate the currently proposed house. However, State Parks policy is to refuse permission for private clearance or thinning on State Parks property. The Department has allowed the developer to enter Park property to remove some woodpiles and sheds presently located adjacent to this property's back yard. However, approving private clearance operations on State property establishes a difficult precedent for State Parks statewide and would require reallocation of staff time away from operations to regulation.

SUBSTANTIVE FILE DOCUMENTS.

1) City of Los Angeles Geologic Review Letter of Dec. 24, 1997 log 2356
2) Ray Eastman, Geology Report 1789, 12/9/97
3) MEC, Soil Report and Addendum dated 12/12/97 and 12/24/97
4) Harley Tucker, Geology Report 8/18/83
5) Ralph Stone, Soils Report 1605, 11/9/83
6) City of Los Angeles Department of Building and Safety Department letter, dated 11/22/83
7) State of California Resources Agency, 1993, *Fire Safe Guides for Residential Development in California*
8) Los Angeles County Fire Department, Radtke, Klaus, 1986 *Homeowners Guide to Fire and Watershed Safety At the Chaparral/Urban Interface.*

STAFF RECOMMENDATION

The staff recommends that the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby **grants** a permit, subject to the conditions below, for the proposed development on the grounds that the development, as conditioned, will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions.

1. Notice of Receipt and Acknowledgment. The permit is not valid and construction shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If construction has not commenced, the permit will expire two years from the date on which the Commission voted on the application, or in the case of administrative permits, the date on which the permit is reported to the Commission. Construction shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. Compliance. All construction must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.

4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director of the Commission.

5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.

6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Assumption of Risk/Indemnification

Prior to issuance of the coastal development permit, the applicant shall obtain from the landowner an executed and recorded deed restriction, in a form and content acceptable to the Executive Director, which shall provide: (a) that the applicant understands that the site may be subject to extraordinary hazards from wildfire, landslides, erosion, and slope failure and the applicant assumes the liability from such hazards; and (b) that the applicant unconditionally waives any claim of liability on the part of the Commission and agrees to indemnify and hold harmless the Commission, its officers, agents and employees relative to the Commission's approval of the project for any damage due to natural hazards. The document shall run with the land, binding all successors and assigns and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

2. Conformance with Geotechnical Recommendations:

Prior to issuance of the coastal development permit, the applicant shall submit final grading and foundation plans for the review and approval of the Executive Director. The approved foundation plans shall include plans for the retaining walls, drains, building and pool foundations and treatment of the slope next to the street. The plans shall include a signed statement by the geological consultant and project engineer certifying that these plans incorporate the recommendations contained in the conditions of the City of Los Angeles Department of Building and Safety as described in the City of Los Angeles Geologic Review Letter of Dec. 24, 1997 (log 2356,) and the recommendations of the applicant's consultants found in: MEC, Addendum dated 12/24/97, and MEC Soil Report dated 12/12/97 and also with the recommendation found in Ray Eastman, Geology Report 1789, dated 12/9/97 and oversized document dated 12/09/97.

The approved development shall be constructed in accordance with the plans approved by the Executive Director. Any deviations from said plans

shall be submitted to the Executive Director for a determination as to whether the changes are substantial. Any substantial deviations shall require an amendment to this permit or a new coastal development permit.

3. **Fuel Modification Plan approved by Fire Department: Agreement with and Indemnification of the Department of Parks and Recreation for any damage to or alteration of State Parks lands as a result of clearance required by the development.**

Prior to issuance of the permit the applicant shall provide for the review and approval of the Executive Director, a fire safety and fuel modification plan for the development. The plan must have been reviewed and approved by the Los Angeles City Fire Department as consistent with Division 25 of the Los Angeles City Fire Code addressing brush clearance. If the Fuel Modification/Fire Safety plan anticipates any clearance or fuel modification on State Park lands, the applicant shall provide a written agreement with the Department of Parks and Recreation, granting permission to enter on State Property to conduct fuel modification consistent with the approved plan. The agreement shall specify the location and methods of fuel modification (if any) on State Parks property, and shall specify the amount of any fees or indemnification required for the use of State Property for such fire buffer. If the fuel modification plans show thinning, clearance or alteration of State Park Land more than 200 feet from the proposed structure, an amendment to this permit shall be required.

4. **Revised Plans.**

Prior to issuance of the permit the applicant shall provide revised plans that show that no part of the structure is located within 30 feet of the Topanga State Park Boundary.

IV. FINDINGS AND DECLARATIONS

The Commission finds and declares as follows:

A. PROJECT DESCRIPTION AND LOCATION.

The applicant proposes to construct a three level 9,168 square foot house (including parking) on a "spur ridge" at the end of Paseo Miramar in the Pacific Palisades district of the City of Los Angeles. The living area of the house will be 8,273 square feet and the lower level garage area, which is under the main house,

will be 895 square feet. Directly north and west of the house, Paseo Miramar stops and the Temescal ridge fire road begins, following the ridge up to the main east west ridge of the Santa Monica Mountains. The site is adjacent to Topanga State Park. The public uses the Paseo Miramar and the Temescal Ridge Fire Road to gain access to the hiking trails of the park.

The four level house extends two and a half stories above grade. At its maximum height it is proposed to be 35.5 above the present natural grade. The house will be cut into the knoll, allowing access from the street into the driveway. Grading is minimal, only 350 cubic yards cut, leaving most of the lot in the present configuration. The applicant also proposes, with the written permission of the Department of Parks and Recreation, to demolish a makeshift shed and corral and remove a woodpile and other debris that is located on State Park property north and west of the building site. This "corral site" is about 30 feet wide and separated from the actual park by a vertical cliff that rises up about 14 feet from the yard level to the top of the knoll.

The lot is a long and narrow irregular oval, about 85 feet deep and 120 feet wide, lying in the curve of the road. The garage wall and the house entry steps are located as close as five feet of the property line on the street side of the house. Portions of the rear of the house are located within 15 feet of State Park property which the lot abuts along its north side. The house includes a three car garage. An apron will accommodate three more cars. The garage apron is located partially on the applicant's property and typical of this area, on the undeveloped street right-of-way.

B. Recreation and access to park lands.

Section 30223 of the Coastal Act requires the Commission to protect upland areas for public recreation. Section 30213 protects lower cost visitor and recreation facilities, and Section 30212.5 encourages alternative recreation to relieve crowding at the beaches and other heavily used areas. The Commission has consistently support the development of the Santa Mountains National Recreation Area (SMMNRA) as a natural open space in a major city as well as an airshed, habitat reserve and watershed area for Los Angeles. SMMNRA area includes units operated by the National Park Service, but there are also parks and other lands operated by State and local government recreation agencies. Topanga State Park is a heavily used park consisting of 7,830 acres that dominates the eastern end of the Santa Monica Mountains Recreation Area.

The site is located at the end of Paseo Miramar, a street that winds up a steep hill through a residential area to the Temescal Ridge Fire Road, which, in addition to its function for fire protection, is a major trail into the park. Temescal Ridge Fire Road provides access to the Backbone Trail (a trail which at completion will extend along the ridge top from Will Rogers State Historic Park to the Ventura County line). The Temescal Ridge Fire Road also gives access to many other trails in the canyons of the eastern end of the mountains

Paseo Miramar is a narrow street that is improved to about 26-30 feet wide. Parking is restricted at many places along the street to accommodate curves. Recently, the City of Los Angeles has held public meetings concerning a request by the residents of the street to restrict parking to residents and guests only because of conflict with visitors to the State Park, who park in the few parking spaces on the street in order to reach the trails. Topanga State Park is one of the most heavily used parks in the state, providing mostly day use facilities. Accurate estimates of attendance are difficult because of the Park's many entrances (Will Rogers Park, and Rustic Canyon on the east, Temescal and Santa Ynez Canyons, Temescal Ridge and Los Liones Canyon on the south and Trippett Ranch on the north and westerly park boundary.) Access to Temescal ridge is available from Temescal and Los Liones canyons and from Paseo Miramar, and from trails that begin in Trippett Ranch. (Exhibit 4)

This development will remove two on street parking spaces for curb cuts, and also will extend a garage apron onto the roadway to provide three guest parking spaces. This incursion on the dedicated road for parking will not increase the development's impact on parking, which is unavoidable, because of curb cuts needed for access to the garage.

The Commission notes that removal of on-street parking to provide access to a subdivided lot is unavoidable, but it is an impact of the development. The more serious recreation issue is the effect of the equally unavoidable fire clearance on the state park land that is an inevitable result of this project's development. While fire clearance affects habitat, it also affects the usability of state property for recreational purposes. In the section below, the effects of fire clearance are analyzed and the conditions are recommended to minimize the effects of fire clearance on public recreation. Only as conditioned can the Commission find that this development is consistent with the recreation policies of the Coastal Act.

C. Hazards to Development

Section 30253 of the Coastal Act requires the Commission to consider hazards to development and to minimize hazards to life and property. Two kinds of hazards are relevant to this project: wildland fire and slope failure.

1) Wildland Fires, Clearance And The Proposed Development

The City of Los Angeles Fire Code identifies all areas north of Sunset Boulevard in the Mountain Fire district. In this area, the Los Angeles City Fire Department enforces the City Fire Code. Recently, according to Captain Ernst of the local fire station Number 23, the City Council has amended to code to extend the distance of required fuel modification to 200 feet from the structure. According to the Fire Department's Brush Clearance Unit, the City does not require owners to clear to

mineral soil within 30 feet of the house and reduce fuel load in a second band reaching from 30-100 feet as required in the State and Los Angeles County, but instead, all areas within 100 feet of a structure must be cleared so that there are no tree limbs within six feet of the ground, there is at least 15 feet between bushes and fuel is drastically reduced. All cuttings must be removed to three inches depth. Additional less drastic fuel modification, is required between 100 and 200 feet from the structure.

In the case of this house both the 100 and 200 foot fire clearance areas will extend onto State Parks property. The last fire that burned Temescal ridge was in 1970, so in Captain Ernst's opinion there is a lot of fuel. Native shrubs however, can be preserved through selective trimming of the lower branches, and the brush clearance unit will review proposals for selective trimming. A house up on the ridge would be, in his opinion, the first house to go because of the wind conditions during wildfires. Therefore the code would be enforced.

The mechanism of enforcement is that the Brush Clearance Unit of the Los Angeles City Fire Department would order State Parks to clear all areas within 200 feet of the structure. State Parks would be required, under the State Fire Code, to comply. As noted above, clearance to bare earth is not required and compromises could be worked out with the aid of a consultant, but fuel modification would be required. (Exhibits 9 through 14 discuss wildfires in general and clearance policies recommended by State and southern California task forces.)

The house is now proposed to be located 15 feet from the property line. An increase in setback from the State Parks property line would reduce but not eliminate impacts on the park. Even though the City requires a greater area, the State Fire Code treats the first 30 feet as the most crucial area for fire clearance. A 30 foot setback from the property line will allow the future owner of the property to comply with the strictest provision of the State Fire Code that requires elimination of almost all fuel within 30 feet of the house. It is feasible to redesign the house so that all enclosed portions of the house are located more than 30 feet from the northern and eastern (State Parks) property line, although a house with a 30 foot rear yard may be smaller than the 9,168 sq. ft. envisioned by the applicant.

A greater, 50 foot setback, would be more protective of the park. However, a rear set back of 50 feet would allow the applicant a buildable area about 35 to 40 feet in width by 200 feet in length. The Commission has approved many houses on lots with 26 by 65 foot building pads. These lots are located, for example, in the small lot subdivisions of the Santa Monica Mountains or in the urbanized, high density communities of Venice, Hermosa Beach and Manhattan Beach. Typically, the Venice Silver Strand lots are 30 by 90 feet, with a 30 foot buffer from the lagoon. Even with these setbacks these lots accommodate 3-5,000 square foot houses. However, typically houses in the Santa Monica Mountains and/or in this neighborhood of the Pacific Palisades appear to be larger, and more yard area is expected. Therefore the Commission determines that it is not feasible to set the house back 50 feet from the property line to accommodate a fire clearance zone.

While eliminating the 30 foot wide clearance zone from State Parks property can reduce the conflict between the homeowner and preserving the habitat on State Park land, even relocation the house does not eliminate the conflict. It is the Department of Parks and Recreation's responsibility to preserve habitat, visual quality, landscape and watershed. The future owners of the house or State Parks would be required by the Fire Department to undertake modification of fuel load within a 170 foot wide strip of State property.

Clearance of the property radically affects the landscape, reducing the value of the land for recreation. Condition 3 requires that before permit issues, the applicant consult with State Parks and come to an agreement about the time, place and methods of brush clearance and any fees or other mitigation required by State Parks. However, to avoid excessive clearance with associated impacts on public property, all development must be set back 30 feet from State property. As conditioned, the project will reduce impacts on recreation areas, as required in Section 30223 and section 30240 as outlined below.

2) Geologic Safety

The site is on a knoll. The road cut exposes sandstone. About thirty feet north and east of the property line on state park land, the land rises in a steep cliff, as if the lot itself had move downward. When this site was first surveyed by geologists, in 1983, the geologists at the time, Robert Stone and Harley Tucker, identified bedding planes that dipped out of the hillside toward the south. Adverse bedding planes are a geologic formation that has been associated with failure in the area. If bedding planes, the layers of rock in the hill, are slanted so they will slide out of the hill, can slide down each other when saturated, resulting in slope failure and possible damage to the development.

The applicant's present geologist refutes this characterization. Instead, he attributes the apparently adverse bedding planes to a fault. His study showed no adverse bedding planes that could affect the stability of the lot. While the final geology maps still show the bedding planes dipping out of the face of the slope, the geologist believes that that the rock formations are fractured and it is therefore impossible to state their orientation is a problem. The geologist has determined that caissons or other deepened foundations are not necessary, but requires instead a solid gunite wall to support the rear of the house and the garage. This wall will be reinforced and will not be visible from the street. It will be located lower than the fault and other questionable material. (Exhibits 15-17)

The project as designed has received approval from the City of Los Angeles Department of Building and Safety which as approved the project with conditions (Exhibits 5 and 6).

Section 30253 requires the Commission to minimize risks to life and property in high hazard areas. When the Commission approves development in a high hazard

area such as this, it must rely on the applicant's consultants to determine that the site is buildable and that any special methods recommended to protect the house from slides or slope failure will in fact protect the house. The conclusions of the applicant's consultant that the house can be safely constructed are the responsibility of the applicant. To protect the Commission against future claims in case the applicant's evaluation in is incorrect or in case the improvements are improperly installed, the Commission requires that the applicant and the applicant's successors assume the risk of the development and indemnify the Commission and its agents and employees for any claims resulting from slope failure or other geologic hazard.

The Commission approval of this structure is based on particular geology reports, including the City of Los Angeles *Geologic Review Letter* of Dec. 24, 1997 log 2356; Ray Eastman, *Geology Report 1789, 12/9/97* and MEC, Soil Report and Addendum dated 12/12/97 and 12/24/97. These reports recommend a solution to any possible problems on the site, namely the excavation into the hill and reinforcement of the rear wall of the house, garage and underlying hillside with a gunite retaining wall. These reports have been reviewed and approved by the City. As proposed the design minimizes landform alterations and includes a specific design to protect the house. When the applicant prepares a fuel modification report, it will include methods necessary to reduce the danger from wildfire to the greatest extent possible, given the peculiarities of the Santa Monica mountains. Any alterations in the foundation design and changes in the geologic protection or grading will require an amendment to this permit. To communicate this condition to the applicant and future owners, the Commission has imposed condition on the permit requiring final grading and foundation plan to be reviewed by the geologist for conformity with the geology report and requiring an amendment if Executive director determines that the project has significantly changed.

Similarly the decision to construct in a high fire hazard area is also the responsibility of the applicants. The Commission can also approve the development in face of fire hazard only if the applicant assumes the risk of development in this area, which is a high fire hazard area. As noted by the Fire Department, many times the past, no house can be protected from all fires, even by careful construction and by brush clearance.

While as noted above, it is impossible to eliminate hazards, as conditioned so that the applicant assumes the risk of the development and a description of possible risks is recorded so that future owners will be informed of the issue, the project is consistent with section 30253 of the coastal act that requires the Commission to minimize hazards to development and alteration of natural landforms.

D. Environmentally Sensitive Habitat Areas.

Section 30240 requires:

Section 30240.

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

This section requires the Commission to protect environmentally sensitive habitat areas. It also specifically identifies habitat in recreation areas for protection and requires the Commission to site and design development to prevent impacts which would significantly degrade those areas. In recent years scientists have discovered more information about the value of coastal sage scrub and chaparral as habitat. The disappearance of coastal sage scrub from the slopes of the Santa Monica Mountains and from other areas in southern California has seen impacts on plants and animals found only there (obligate species). Some animals are no longer found the Santa Monica Mountains. However, Temescal Canyon, Los Liones Canyon and Topanga State Park do provide habitat for various bird and mammal species that are not found in the urbanized areas of Los Angeles, including Bell's Vireo, a small greenish bird that lives in canyons. These animals depend on the chaparral for food and cover. Various plant species that are eradicated elsewhere also persist in the Santa Monica mountains, including various subspecies of Dudleya, a succulent that grows on sandstone cliffs. Removal of plants for purposes of fire clearance cumulatively reduce the amount of coastal sage scrub and chaparral habitat resulting in significant cumulative loss of habitat.

The Commission has previously approved single family houses on existing subdivided lots in the Santa Monica Mountains even though the houses and the required fire clearance would have impacts on chaparral and coastal sage scrub habitat. However, the Commission can regulate the development to minimize impacts on the adjacent State Park and its habitat. In the past, the Commission has dealt with the clearance on public lands after the fact, as individual property owners, faced with communications from insurance companies and the Fire Department, have sought permits for clearance on State Property and in other habitat areas. In order to avoid this problem after the fact, the Commission requires as a condition of this permit that a fire clearance plan be drafted, and approved by State Parks and the Brush Clearance unit of the Los Angeles City Fire Department before the permit can issue.

The Commission has required the development to set back 30 feet from the property line, as noted above, to confine the most stringent fire clearance requirements within the applicant's own property. Even with this set back the fuel modification area will extend at least 70 feet from the applicant's property line onto

state property. The Commission finds that if such fuel modification is done with the advance consultation with State Parks, that the damage can be minimized. Condition 3 allows the Executive Director to review and approve such a plan before the permit can issue. If more than 70 feet of fuel reduction is required, or if the Fire Department requires clearance to mineral soil within State Parks property and removal of native vegetation, the plan must be brought back to the Commission for approval. At that point, the Commission may require further mitigation for the resource damage caused as a result oft the construction of the project.

As conditioned, the project is consistent with section 30240, the resource protection policy of the coastal act, because resource damage will be minimized to the extent feasible and any damage on public property can be mitigated if the land owner, State Parks requests.

E. Local Coastal Program

Section 30604(a) of the Coastal Act provides that the Commission shall issue a Coastal Development Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with the Chapter Three policies of the Coastal Act.

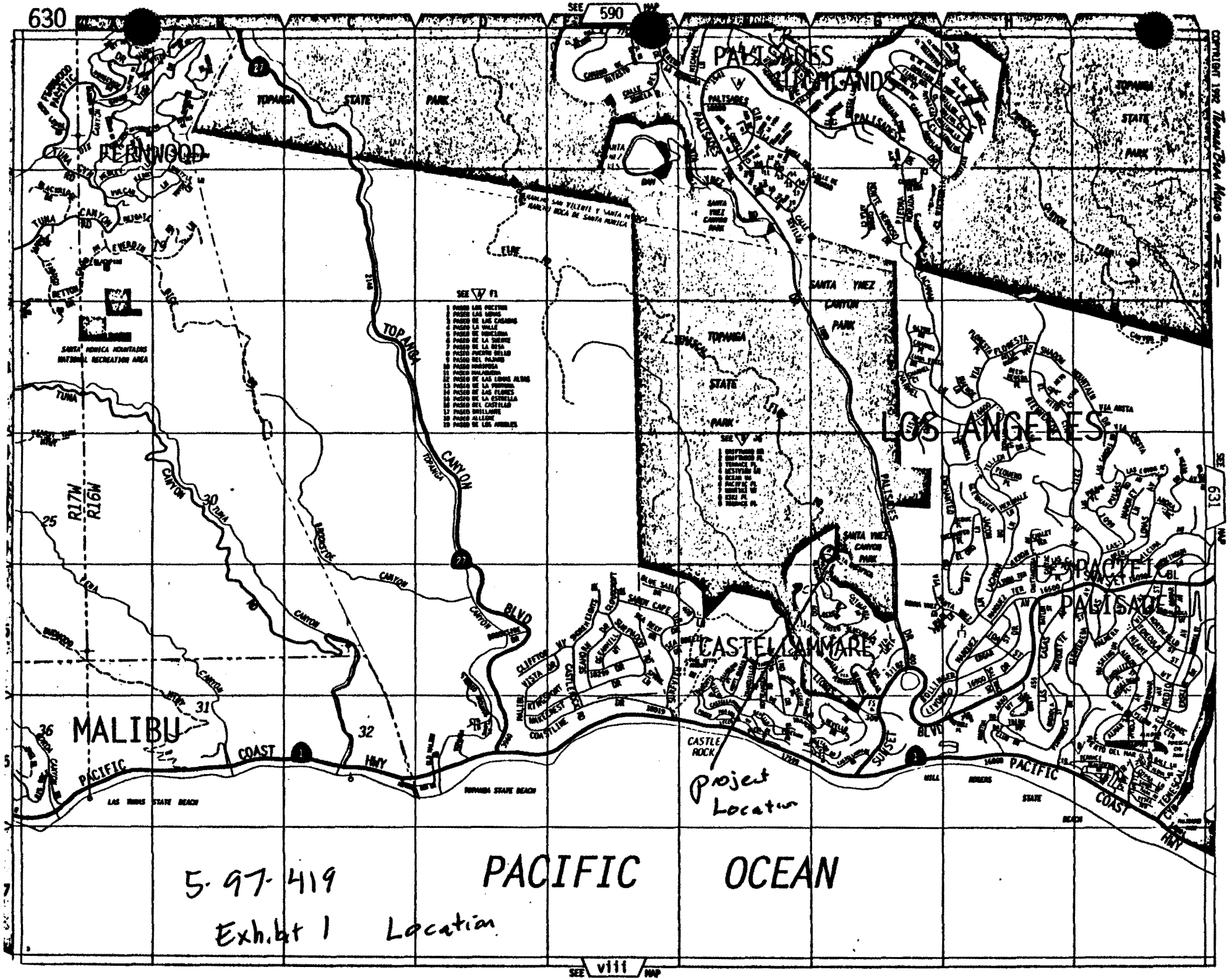
The City of Los Angeles has not prepared a land use plan for the Pacific Palisades segment of the City. Therefore the standard of review for coastal development permits in the Pacific Palisades district is the Coastal Act. In 1978, the Commission approved a work program for this area, in which the city pledged to examine issues associated with heights and views, hillside development, landslides slope failure and public access. While the City has not chosen the coastal planning process as the venue to address this issues, the City, since 1978, has adopted ordinances regulating development on steep slopes. The ordinance restricts height on the slopes to over 66% to 36 feet above natural grade and 42 feet over all. This proposed house conforms to that ordinance. By imposing conditions relating to fire and geologic safety the Commission has anticipated the LCP (Local Coastal Program) policies that may be developed to assure conformity with the Coastal Act.

The proposed development as conditioned would be consistent with the public access and recreation, community character and hazard policies of Chapter Three of the Coastal Act. the proposed development as conditioned addresses the concerns with hillside and mountain land development.. Therefore, the Commission finds that the proposed development would not prejudice the ability of the City to prepare a certified local coastal program consistent with the Chapter Three policies of the Coastal Act.

F. California Environmental Quality Act

Section 13096 of Title 14 of the California Code of Regulations requires Commission approval of Coastal Development Permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(i) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment.

The alternative to the project would be development set back 50 feet from the State Park property line. This alternative would reduce the size of the house significantly below the size of comparable houses in the community and would not be consistent with the community and character and scale of the area. A second alternative would be to deny the project. This alternative is not feasible as there is no other reasonable use of the property. In order to minimize potential landslide hazards the applicant is required to construct according to the plans prepared by the consultant. In order to reduce impacts on State Park lands, the applicant is required to prepare a plan for fuel modification that would reduce the fuel load but protect the watershed and minimize clearance. By setting back development, the 30 foot area in which fire clearance practices are strictest would be on the applicant's property. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project can be found consistent with the requirements of the Coastal Act to conform to CEQA.



5-97-419

Exhibit 1 Location

Legal Description: Lot 1 of Tract No. 10175, Map Book 144, Page 82-83.

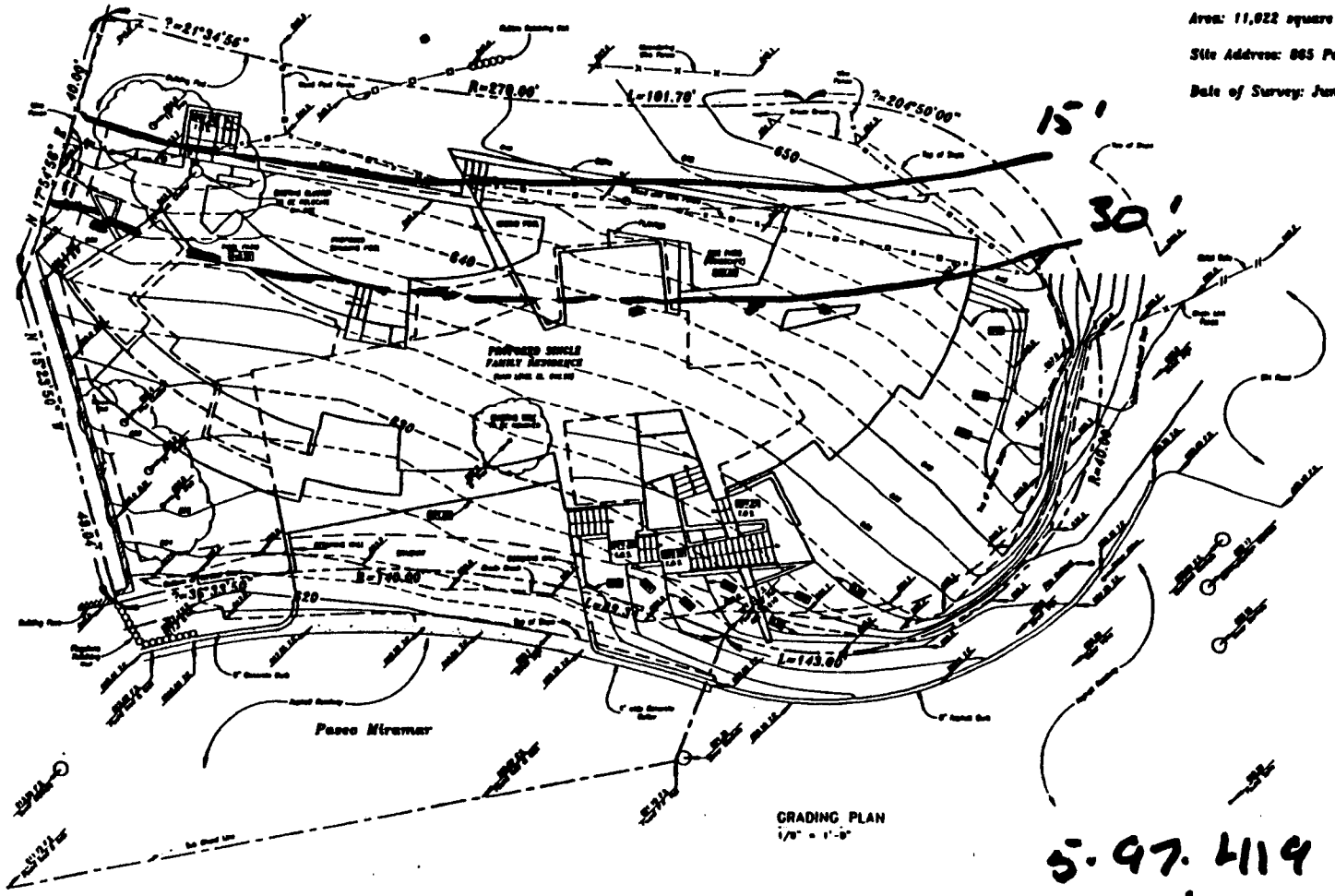
Bench Mark: The elevation of 613.5 on Sewer Man Hole Station 5+65.73 as shown on Sewer "I" Map # 129-117-2 on file in the City of Los Angeles, was used as datum for this survey.

Boundary: Record information adjusted to found city centerline monuments.

Area: 11,022 square feet, 0.25 Acres

Site Address: 865 Paseo Miramar, Pacific Palisades

Date of Survey: June 17, 1997



Legend:

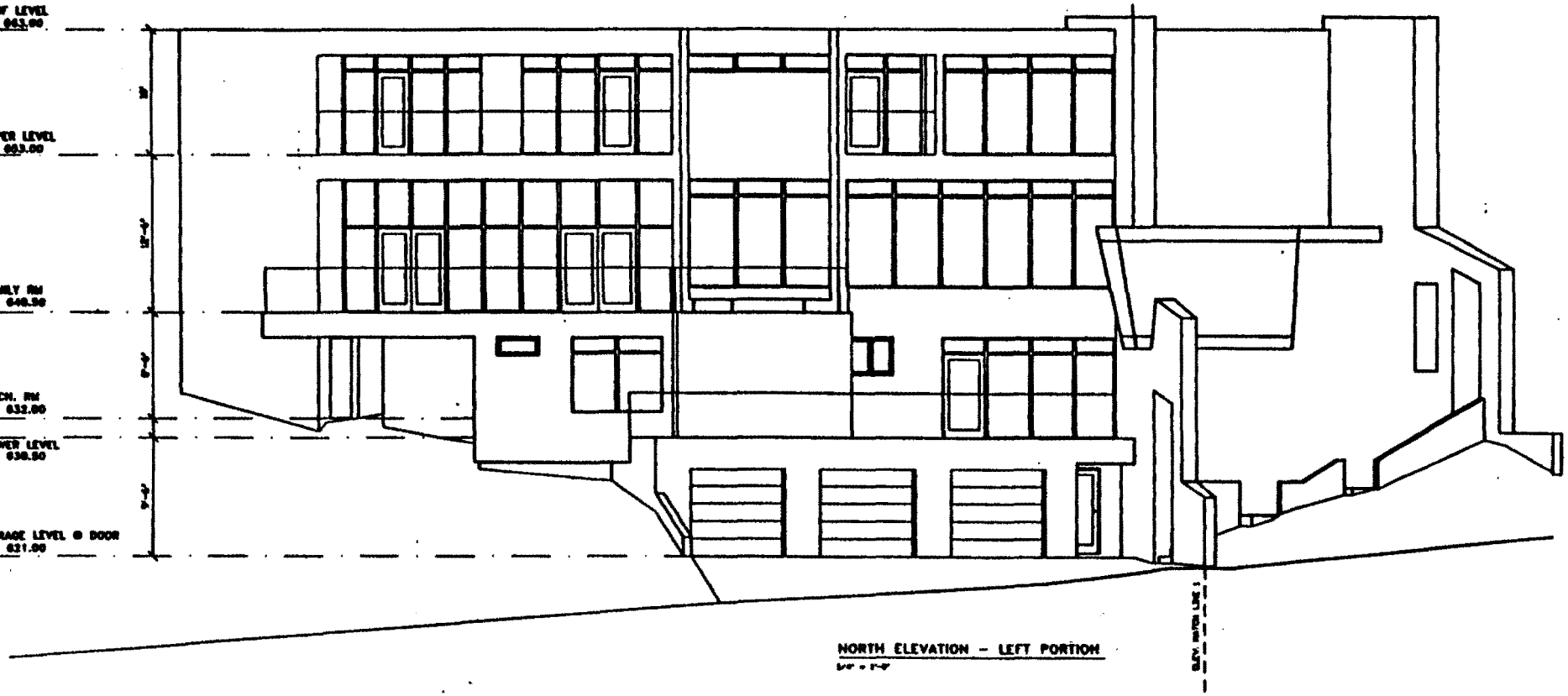
5-97-419
Exhibit 2
Plot Plan

6120 VARIEL AVENUE
WOODLAND HILLS CA 91367
TEL / 818 716 9160

865 PASEO MIRAMAR
PACIFIC PALISADES
GRADING PLAN

View of house
S. 97. H19
Exhibit 3

5.97.419
Exhibit 4
street sick elevation



6120 VARIEL AVENUE
WOODLAND HILLS CA
TEL / 818 716 9160

865 PASEO MIRAMAR
PACIFIC PALISADES
NORTH ELEVATION

A-3.0

CITY OF LOS ANGELES
CALIFORNIA

RICHARD J. RIORDAN
MAYOR

DEPARTMENT OF
BUILDING AND SAFETY
400 CITY HALL
LOS ANGELES, CA 90012-4866
TIM TAYLOR
GENERAL MANAGER
RICHARD E. HOLGUIN
EXECUTIVE OFFICER

December 24, 1997

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COASTAL COMMISSION

Log # 23256
E.D. -

SOILS/GEOLOGY FILE - 2

Frank Akef
8671 Wilshire Blvd, #509
Beverly Hills, CA 90211

TRACT: 10175
LOT: 1
LOCATION: 865 Paseo Miramar

CURRENT REFERENCE REPORT/LETTER(S)	REPORT NO.	DATE(S) OF DOCUMENT	PREPARED BY
Addendum Letter	7AKE050	12/24/97	MEC
Geology Report	1789	12/09/97	Ray A. Eastman
Soil Report	7AKE050	12/12/97	MEC
Ovrszd Doc	1789	12/09/97	Ray A. Eastman

PREVIOUS REFERENCE REPORT/LETTER(S)	REPORT NO.	DATE(S) OF DOCUMENT	PREPARED BY
Geology Report	1789	11/04/97	Ray A. Eastman
Soil Report	7AKE050	11/07/97	MEC
Geology/Soil Report	7AKE050	08/29/97	MEC
Department Letter	22315	10/16/97	Bldg&Safety
Geology Report	2110-83	08/18/83	Harley Tucker
Soil Report	1605	11/09/83	Ralph Stone & Co
Department Letter	---	11/22/83	Bldg&Safety

The current and previous referenced reports concerning a proposed single-family residence have been reviewed by the Grading Section of the Department of Building and Safety. Excavations and retaining walls up to 24 feet high are proposed. There is an oversteepened street cut slope along the east side of the site. The reports are acceptable, provided the following conditions are complied with during site development:

5-97-419 Exhibit 5

final City Geology conditions p 1

1. The geologist and soils engineer shall review and approve the detailed plans prior to issuance of any permits. This approval shall be by signature on the plans which clearly indicates that the geologist and soils engineer have reviewed the plans prepared by the design engineer and that the plans include the recommendations contained in their reports.

2. All new graded slopes shall be no steeper than 2:1.

3. All nonconforming street cut slopes shall be trim-graded back to a slope gradient no steeper than 1:1 or retained by a designed retaining wall.

4. All recommendations of the report which are in addition to or more restrictive than the conditions contained herein shall also be incorporated into the plans for the project.

5. If the grading permit involves the import or export of more than 1000 cubic yards of earth materials, and is in the grading hillside area, approval is required by the Board of Building and Safety. Application for approval of the import-export route should be filed with the Grading Section. Processing time of this application is approximately 8 weeks to hearing plus 10-day appeal period.

6. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans. Submit one copy of the above reports to the Building Department plan checker prior to issuance of the permit.

7. The geologist and soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading.

8. Any continuous faults or shale bedding planes which are exposed in the excavations shall be trimmed back under the direction of the geologist; In the event that the trimming results in retaining walls supporting more than 8 feet of backfill, a supplemental soil engineering report containing analyses for retaining wall design shall be submitted for approval.

9. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557.

10. All roof and pad drainage shall be conducted to the street in an acceptable manner.

11. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted to the street in an acceptable manner and in a non-erosive device.

12. Prior to issuance of the building permit, the design of the subdrainage system required to prevent possible hydrostatic pressure behind retaining walls shall be approved by the soils

5-97 419 Exhibit 5
final City
Geology p 2

engineer and accepted by the Department. Installation of the subdrainage system shall be inspected and approved by the soils engineer and by the City grading inspector.

13. Buildings adjacent to ascending slopes shall be set back from the toe of the slope a level distance equal to one half the vertical height of the slope, but needs not to exceed 15 feet in accordance with Code Section 91.1806.4.2.

14. Prior to the placing of compacted fill, a representative of the consulting soils engineer shall inspect and approve the bottom excavations. He shall post a notice on the job site for the City Grading inspector and the contractor stating that the soil inspected meets the conditions of the report, but that no fill shall be placed until the City grading inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be filed with the Department upon completion of the work. The fill shall be placed under the inspection and approval of the soils engineer. A compaction report shall be submitted to the Department upon completion of the compaction.

15. The dwelling shall be connected to the public sewer system.

16. Prior to the pouring of concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. He shall post a notice on the job site for the City Building Inspector and the Contractor stating that the work so inspected meets the conditions of the report, but that no concrete shall be poured until the City Building Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Department upon completion of the work.

17. Prior to the issuance of any permit which authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation.

18. Temporary excavations exceeding five feet in height shall be performed under continuous inspection and approval of soils engineer and deputy grading inspector.

19. Retaining walls shall not be surcharged by other structures.

20. Construction of gunite retaining walls is not approved by the Department.

21. The retaining walls supporting level backfill or a slope of 2:1 (horizontal to vertical) gradient shall be designed for EFP of 42 and 55 PCF, respectively, as recommended.

22. Swimming pool shall be supported entirely by bedrock or compacted fill, but not by both.

23. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed

5-97 419 Exhibit 5
final cty geology
p 3

temporary erosion control plans shall be filed in a manner satisfactory to the Department and the Department of Public Works, for any grading work in excess of 200 cu yd.

24. Prior to excavation, an initial inspection shall be called at which time sequence of shoring (if required), protection fences and dust and traffic control will be scheduled.

DANA PREVOST
Engineering Geologist I

ANDRZEJ T. SZPIKOWSKI
Geotechnical Engineer I

DP/ATS:dp:ats
23256
(213) 485-3435

cc: MEC
Ray A. Eastman
WLA District Office

Exhibit 5
5-97 419
final Cty Geolog
p 4

REQUEST FOR GRADING MODIFICATION
INSPECTORS WORKSHEET

DATE: 12-18-97

JOB ADDRESS: 865 PASEO MIRAMAR

OWNER: FRANK AKEF

REQUEST: TO ALLOW EXISTING SLOPES STEEPER THAN 1:1 TO REMAIN

SITE CONDITIONS: SUBJECT SLOPES ARE CUT SANDSTONE BEDROCK 10'-12' HI AT GRADIENTS UP TO 90° WITH 1:1 SPILL/SLOUGH APPROX 4' AT TOE — THESE APPEAR TO BE OLD ROAD CUTS — THE UPPER PORTIONS OF THE SITE SLOPES FROM 10:1 TO 2:1 SITE IS PRESENTLY VACANT & UNDEVELOPED

INSPECTOR'S RECOMMENDATION:

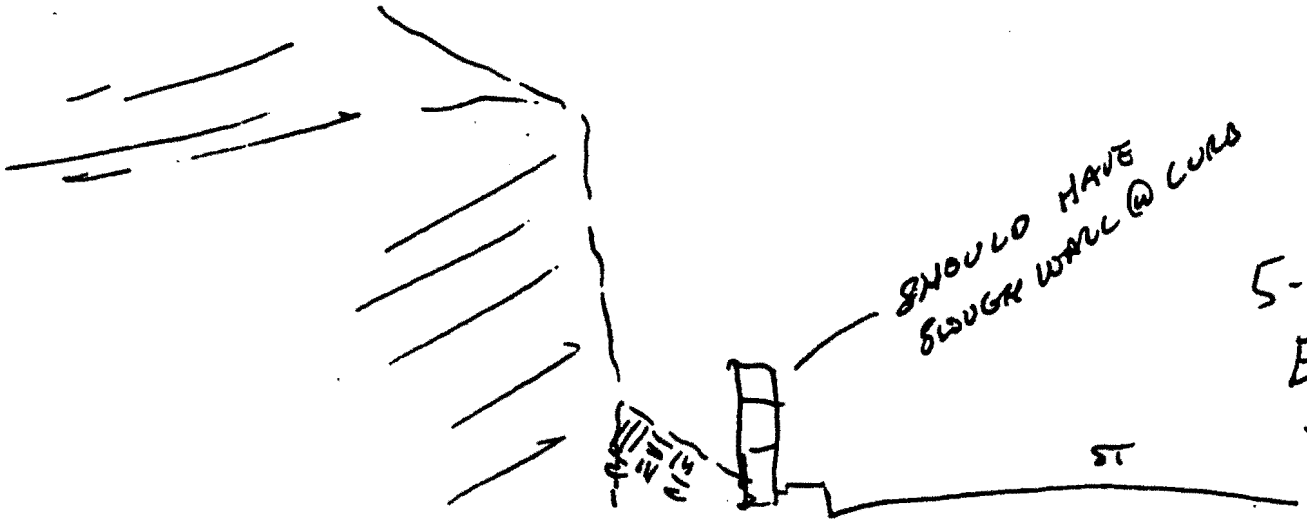
[ ] APPROVAL

[X] APPROVAL, WITH CONDITIONS (EXPLAIN)

[ ] DENIAL (EXPLAIN)

INSPECTORS COMMENTS: CUT BEDROCK APPEARS STABLE AND HAS BEDDING AWAY FROM CUT FACE — NO HAZARD SHOULD RESULT FROM ALLOWING CONDITION TO REMAIN. HOWEVER, A 2'-3' SLOUGH WALL SHOULD BE AT THE TOE TO PREVENT SLOUGH MATERIAL FROM GOING ONTO STREET

PLOT PLAN — SEE ATTACHED



5-97 C119
Exhibit 6
find road condition

INSPECTOR'S SIGNATURE: _____ DATE: 12/18/97

...geles — Department of Building and Safety

☒ REQUEST FOR MODIFICATION OF BUILDING ORDINANCES (98.0403 L.A.M.C.)

☐ REQUEST FOR ALTERNATE MATERIAL OR METHOD OF CONSTRUCTION (17951d H. & S.C.)

☐ REQUEST FOR HARDSHIP EXEMPTION OR EQUIVALENT FACILITATION (19957 H. & S.C.)

For above requests, complete sections 1, 2, & 3 in duplicate by printing in ink or typing.

READ BY

FILE NO. 4050

DISTRIBUTION

☒ Owner	☐	..... Pl
☒ Petitioner	☐	W.L. Ir
☐ Fire	☐	..... E
☐ Health	☐	.....

JOB ADDRESS 865 PASEO MIRAMAR, PACIFIC PALISADES

LOT(S) 1 BLK

TRACT 10175

Owner FRANK AKEF

Address 8671 WILSHIRE BLVD #509

BEVERLY HILLS CA Zip 90211

1 Daytime Phone (310) 652-9400

Petitioner ARTECNICA

Address 6120 VARIEL AVE

WOODLAND HILLS CA Zip 91367

Daytime Phone (818) 716-9160

District Office ..... Type .....
Plan Ck No. ..... Stories .....
Zone R1(RURAL) RE-15 Occ. .....
Permit No. ..... No. Units .....
Job Order No. ..... F.D. .....
Bureau/Division Eng/Tech D.M. .....
Use of Bldg. ..... C.D. .....
Job Status .....

☐ YARD NOTICE (COM-784) RECEIVED FROM PETITIONER
☐ POSTCARD (COM-3) NAME/ADDRESS COMPLETED BY PETITIONER
☐ SIGN NOTICE RECEIVED FROM PETITIONER

2 REQUEST: Submit plans if necessary to illustrate request. Additional sheets or data may be attached.

SUBJECT LOCATION: EAST PROPERTY LINE WHERE EXISTING GRADING SLOPE EXCEEDING 1/1 MAXIMUM SLOPE REQUIREMENT APPROACHES PRIVATE ACCESS OF STATE PARK.

REQUEST EXEMPTION OF MEETING MAXIMUM 1/1 SLOPE RESTRICTION REQUIRING THE PLACEMENT OF A NEW RETAINING WALL AND CUTTING OF EXISTING GRADE SLOPE AS SUGGESTED BY GRADING DEPARTMENT.

Dept. Comment Slope steeper than 2:1

Code Sections: L.A.M.C. – 91.7010.2

3 JUSTIFICATION/FINDINGS OF EQUIVALENCY:

Title 24 –

1. ATTEMPT IN PRESERVING NATURAL CONTOURS AND VEGETATION OF PROJECT SITE AS MUCH AS POSSIBLE
2. COASTAL COMISSION'S REQUEST OF LIMITED ALTERATION OF UNIMPROVED LAND-SCAPE AREA AND RESTRICTIONS GOVERNING SOIL REMOVAL AND EXPORT
3 ACCESS DRIVE TO STATE PARK TERMINATES AT EAST PROPERTY LINE OF PROJECT SITE THEREBY LIMITED VEHICULAR TRAFFIC.

Petitioner's Signature [signature] Position DEC 11/97 Date 12/10/97

Reviewed By ..... Date .....

DEPARTMENT ACTION: In accordance with ☐ Sect. 98.0403 L.A.M.C. ☐ Sect. 17951d H. & S.C. ☐ Sect. 19957 H. & S.C.

The Request is ☒ Granted (See attached letter). ☐ Denied (See reverse for appeal information.)

☐ Written concurrence from the (Fire) (Transportation) (Health) (.....) Dept. is required.

☒ Request (IS) ~~(IS NOT)~~ in conformity with the spirit and purpose of Code Section involved

☐ Condition (DOES) (DOES NOT) provide .....
(EQUIVALENCY) (EQUIVALENT FACILITATION)

Department Member [signature] Date 12-22-97

Conditions Of Approval: (Reasons For Appeal in Case of Denial)

1. A min of 3 feet high slough wall shall be constructed along the toe of the slope & adjacent to the curb.

12/15/97 08:10:40AM VH01 T-3934 C 2
BOARD INSP FEE
BOARD APPLIC F
TOTAL 165.00
CHECK 165.00
(Cashier Use Only)

No. of Items 1
Fee due 165.00
Fee verified [signature]

APPEAL OF DEPARTMENT ACTION TO BOARD OF BUILDING AND SAFETY COMMISSIONERS/HANDICAPPED ACCESS APPEALS COMMISSION

(Signature, statement of reasons for appeal and filing fees are required.)

Signature of Owner or Applicant submitting notarized declaration (B & S COMM-832) — Bd. Res. No. 832

5-97 419
fwd sctb

X ..... Position ..... Date .....

Print Name ..... Exhibit 6 p2

STATE OF CALIFORNIA—RESOURCES AGENCY PETE WILSON, Governor
DEPARTMENT OF PARKS AND RECREATION
Angeles District
1925 Las Virgenes Road
Calabasas, California 91302
(818)880-0350

July 29, 1997

Mr. Enrico Bressan
Artecnica
6120 Variel Avenue
Woodland Hills, California 91367

Dear Mr. Bressan:

I have reviewed your letters dated July 25, 1997 regarding your request to enter Topanga State Park to remove wood debris which has been placed on the property line at 865 Paseo Miramar which is owned by your client. Additionally, you requested permanent ingress and egress along the Santa Ynez fire road within Topanga State Park to facilitate a driveway at 865 Paseo Miramar.

I have enclosed a right of entry permit which will allow your client and/or his contractor to enter Topanga State Park to remove the wood debris which has been placed on Topanga State Park. I have added some specific conditions which you should review carefully with all parties involved. We require that the enclose certificate of insurance be completed and returned to my office with the signed permit. I will mail the completed permit back to your office as soon as the Park Superintendent has signed it. We will also need to know when the debris removal work will begin.

The Santa Ynez fire road is one of our most popular entrances into Topanga State Park. Besides the large number of visitors which utilize this entrance into the backcounty for recreation, we and other emergency response agencies rely on this access point often to provide immediate assistance to injured visitors and to control wildfires. It is not uncommon for this entrance to be blocked by vehicles unaware of the importance of this entrance. While we have carefully considered your request to have the fire gate at the end of Paseo Miramar relocated 40 feet further up the Santa Ynez fire road, we believe this proposal would increase the likelihood of having the entrance blocked. We therefore can not allow the gate to be moved.

State Parks
Letter allowing
clearance
of debris

5-97 419
Exh. b. + 7

P1

Please feel call my office should you have any question.

Sincerely,

Richard Rozzelle
Associate Land Agent

5.97 41.9
Exhibit 7
p 2

Date: September 23, 1997

STATE OF CALIFORNIA
DEPARTMENT OF PARKS AND RECREATION
PERMIT TO ENTER

Permission is hereby granted to: **Artecnica, 6120 Variel Avenue, Woodland Hills, California, 91367,** hereinafter referred to as PERMITTEE, to enter Topanga State Park from October 1, 1997 to November 1, 1998; for the purpose of removing discarded wood debris and trash.

The rights and privileges hereby granted to PERMITTEE at the option of PERMITTEE, may be exercised by any authorized agent or contractor of PERMITTEE.

By acceptance of this Permit to Enter, it is expressly understood and agreed by and between the parties that PERMITTEE agrees to indemnify and hold the undersigned and STATE harmless against any and all loss, damage and/or liability which may be suffered or incurred by STATE and against any and all claims, demands and causes of action that may be brought against STATE caused by, or arising out of, or in any way connected with the use and/or occupancy of said further agrees to assume full responsibility for any and all damages caused by PERMITTEE'S operation under this Permit and PERMITTEE shall, at its option, either repair or pay for such damages.

PERMITTEE shall adhere to the following conditions:

1. No grading, digging or any other type of soil manipulation is allowed.
2. No fences or gates are to be removed.
3. PERMITTEE shall give five days notice to project start date.

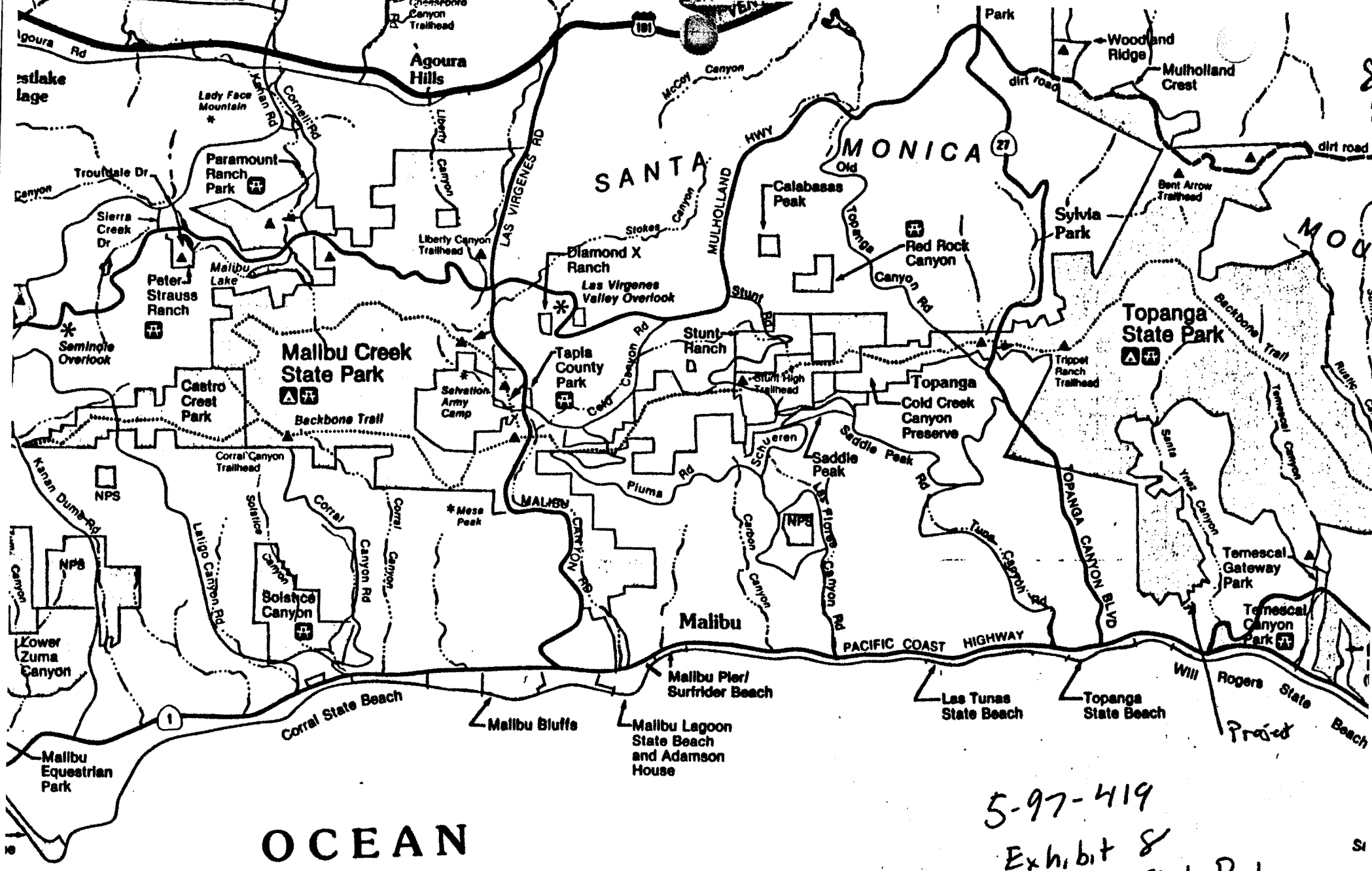
Sincerely,

Daniel C. Preece, District Superintendent
Angeles District
State of California
Department of Parks and Recreation

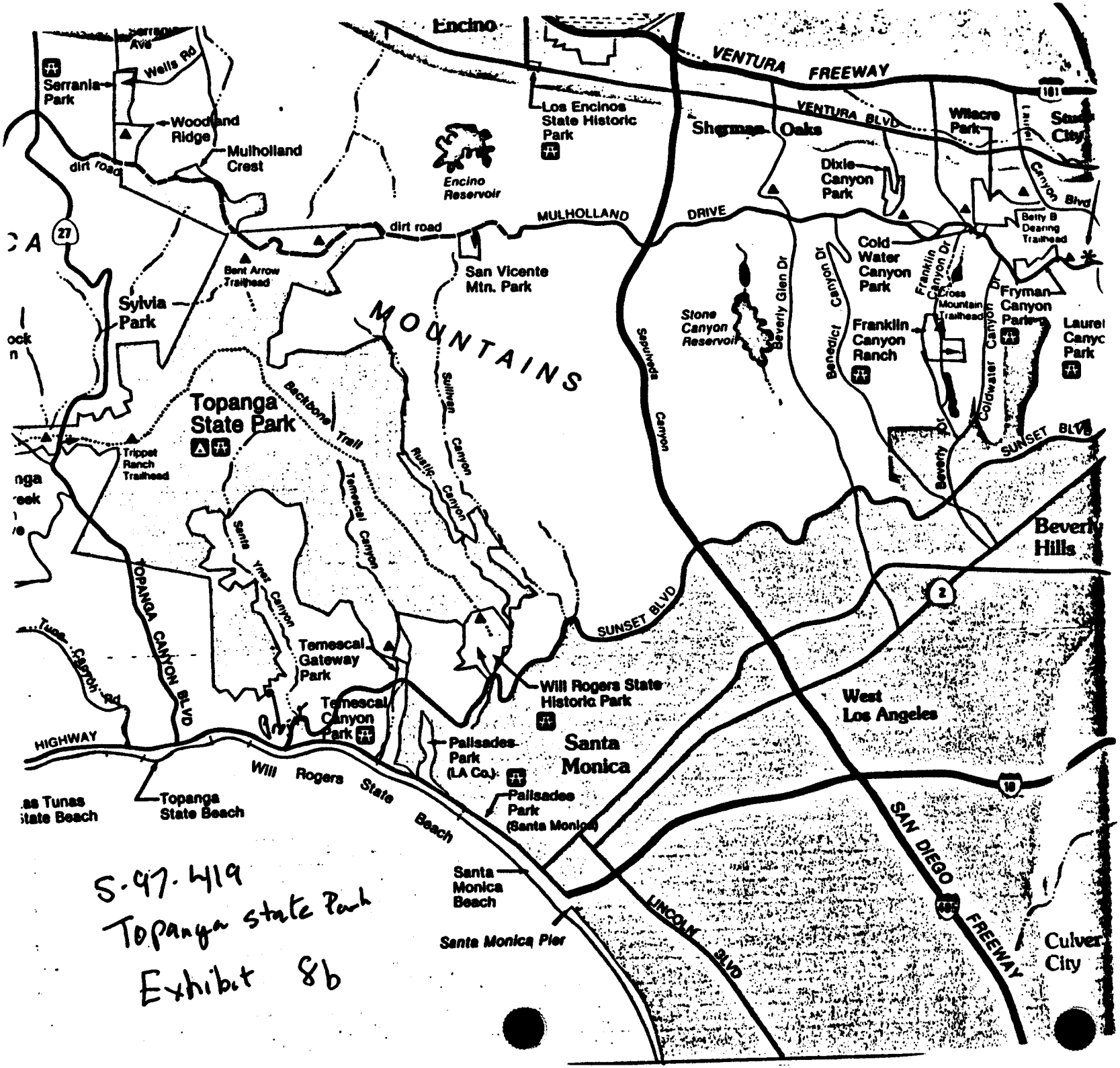
ACCEPTED:

PERMITTEE

5 97 419
Exhibit 7
p 3

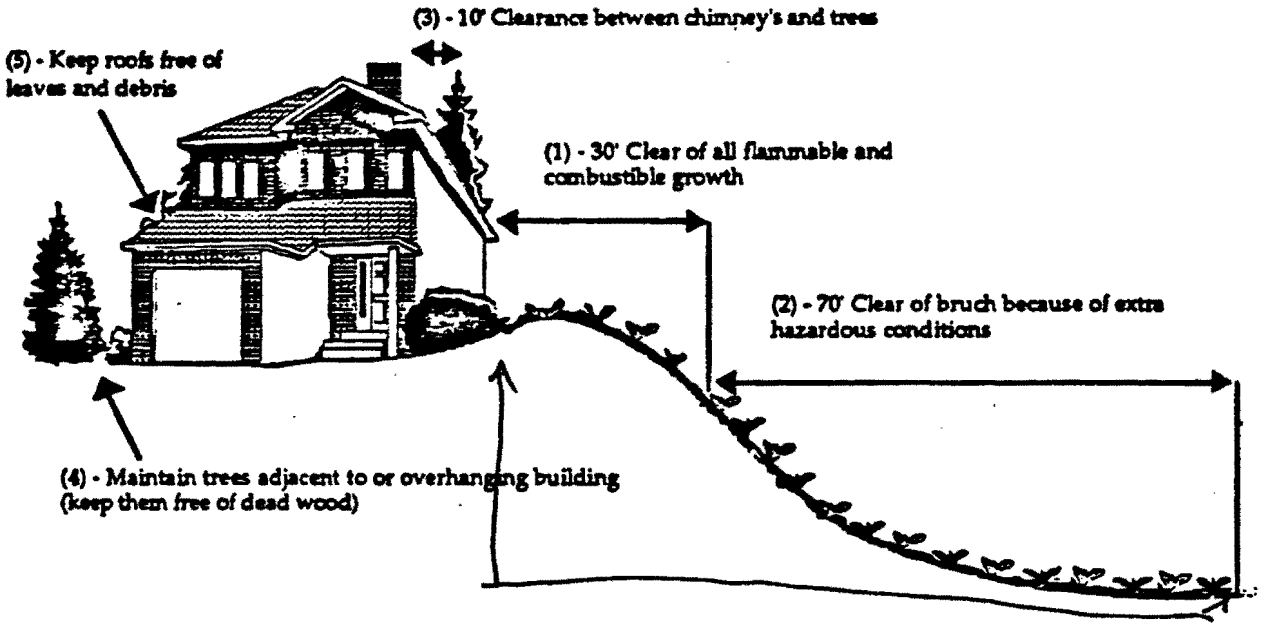


5-97-419
Exhibit 8
Topanga State Park



S-97-419
Topanga state Park
Exhibit 8b

State Fire code



APPENDIX II-A **1991 UNIFORM FIRE CODE**

CLEARANCE OF BRUSH OR VEGETATIVE GROWTH FROM STRUCTURES

(1) Maintain an effective firebreak by removing and clearing away flammable vegetation and combustible growth from areas within 30 feet of such buildings or structures.

EXCEPTION: Single specimens of trees, ornamental shrubbery or similar plants used as ground covers, provided that they do not form a means of rapidly transmitting fire from the native growth to any structure.

(2) Maintain additional fire protection or firebreak by removing brush, flammable vegetation and combustible growth located from 30 feet to 100 feet from such buildings or structures, when required by the chief because of extra-hazardous conditions causing a firebreak of only 30 feet to be insufficient to provide reasonable fire safety.

EXCEPTION: Grass and other vegetation located more than 30 feet from buildings or structures and less than 18 inches in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.

(3) Remove portions of trees which extend within 10 feet of the outlet of a chimney.

(4) Maintain trees adjacent to or overhanging a building free of deadwood.

(5) Maintain the roof of a structure free of leaves, needles or other dead vegetative growth.

5-97-419
Exhibit 9
State Fire code

Division 25 City Firecode
requires all bushes 15 feet apart
in first 100 feet
trimming in next 100 feet
for a total area of 200 feet
Brush Clearance Unit will work with
Consultant

Maintenance for Fire and Watershed Safety

Landscape maintenance is necessary to keep man-made structures separated from surrounding vegetative fuels; to keep the amount of vegetative fuels at a safe level; to create a safety zone for residents, firefighters, and fire equipment; and to assure that water flow from the property is channeled properly. Giving correct priorities to maintenance needs and carrying out maintenance and safety inspections on a regular basis is the key to minimizing the effects of natural disasters.

For fire and watershed maintenance, the area around the home should be divided into three perimeters of defense:

1. 0 to 30 feet: year-round maintenance
2. 30 to 100 feet: seasonal maintenance
3. 100 feet or more: yearly inspections, periodic maintenance

Maintenance Adjacent to the Home

The area within 30 feet of the home is most critical for fire and watershed safety. Maintenance of nonflammable landscaping such as lawns, border plantings, flower gardens and vegetable beds, and structures such as pools, concrete decks, and recreation areas helps to reduce fire hazard close to the home. This area, is generally level and all water from it should drain toward the street. Rain gutters, pipes, and drainage devices should be cleaned on a regular basis. Additionally, all leaves should be removed from the roof before the fire season begins.

Foundation shrubs and trees are a necessary part of the landscaping. However, these plants often grow into an "urban forest" fuel problem, so that landscape plants rather than surrounding native plants become the primary cause of fire loss. Year-round maintenance should consist of pruning and regular watering of individual plants. Together, these measures decrease plant volume, increase plant moisture content, and reduce or eliminate dead fuels. (Caution: Unnecessary watering of drought-tolerant landscape plants may cause root rot of a native plant nearby.)

This home, designed to be fire-safe, also has a 30-foot safety zone.

5 97 419
Exhibit 10 pg 2

for LA County
Homeowners guide

during the summer. Ground cover shrubs may also need to be thinned periodically. In thinning and pruning, care must be taken not to expose the soil surface more than can be safely covered by surrounding plants before the rainy season. Well-pruned, healthy shrubs require several years to build up an excess of flammable live and dead fuel. Therefore, a complete maintenance job can last a long time.

This native plant (center) is dying because of root rot caused by over-watering of the young coyote brush around it.

Watershed problems in this greenbelt zone are often critical. Yearly, before the winter rainy season, all drainage devices must be inspected to assure that they are functional and not clogged with debris. After major storms, all rain gutters, pipes, concrete bench and down drains, and other such devices must be reinspected. Bench drains are easily blocked by minor soil slips. This forces uncontrolled water flow over the slope and results in supersaturated soils and mud flow.

Greenbelt Extension Past 100 Feet

The intensity of fire maintenance beyond 100 feet from the home is dictated by topography and design of the structure. Minimum maintenance for a home designed with fire safety in mind should consist of reducing the amount and continuity of the vegetation as well as thinning out the most flammable species. Selective maintenance can be done in areas where topography is favorable and geology stable (gentle slopes, rock outcroppings, etc.) every 10 years or less without causing any accelerated soil erosion. Such "feathering out" of older vegetation on portions of a watershed while favoring younger plants reduces the possibility and effect of major wildfires.

Rodents such as gophers and ground squirrels can be a major cause for soil slips because they weaken root systems and build underground tunnels where water can concentrate.

Summary

- Maintenance of landscaping and structural additions around the home is essential to fire safety and watershed protection.
- Maintenance needs are most critical within 30 feet of the home, but periodic fuel reduction and maintenance of drainage devices are required at greater distances from the home.

5-97 419
Exhibit 10 p3

LA County
Homeowner Guide

5-97 419
Exhibit 10

P3

A Fire-safe Home

The fire safety of a home depends on the continuity and loading of the fuels around it, the location of the home with respect to topography, and the design of the structure itself.

Legal Brush Clearance Requirements

California Public Resources Code, Section 4291 requires clearance of flammable vegetation for a minimum distance of 30 to 100 feet around any structure located in a fire hazardous area. The clearance distance is subject to local enforcement, and in extremely hazardous areas, local fire authorities may require clearance beyond 100 feet. However, the intent of the code is readily defeated if basic fire safety principles are not carried into home design and homesite selection.

Information adapted from a brush clearance leaflet which has been distributed for many years by fire agencies in Los Angeles County is given on the inside back cover.

Fire Topography

The relationship between topography and fire behavior is a factor over which the homeowner has little control. He should, however, be aware of the relationship as it relates specifically to his property. *Figure 3* points out that homes located in natural chimneys, such as narrow canyons and saddles, are especially fire-prone because winds are funneled into these canyons and eddies are created. Studies on homes burned along ridges have shown that homes located where a canyon meets a ridge are more likely to burn than other ridge-top

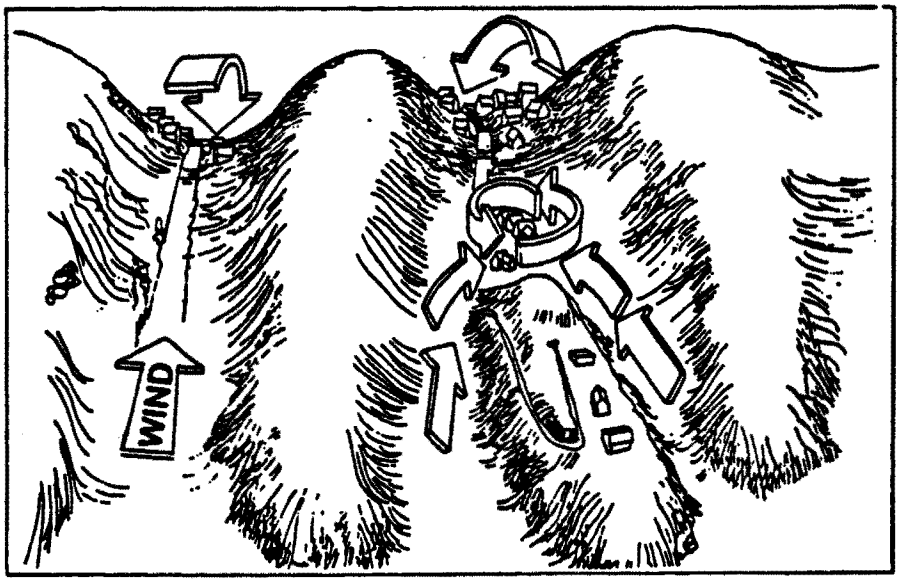


Figure 3. Winds tend to channel through natural chimneys, making narrow canyons and saddles particularly fire-prone.

homes. In very ste[illegible]nd factor in fire spread and h

Figure 4 illustrates how are often lost because flan located on the slope, esp vulnerable in this respect

Building Design

Building density and d burning home can ignite

The roof is the most vu borne sparks. The wood ment in home losses duri firebrands capable of ign ing wildfire in Southern C ance, a home with a wo than a home with a nor approximately 25% high does not compensate fo

Exterior materials use rating of 1 to 2 hours, m stucco, metal-siding, bri for parts of a home expo tioned at the top of a slo ples of topography [illegible]ege

Figure 4. On narrow ridge: left, are particularly vulner

ant (center) is dying because used by over-watering of the e brush around it.

ıch and down drains, and rains are easily blocked by v the slope and results

t from the home is dictated m maintenance for a home f reducing the amount and ıt the most flammable spe- vhere topography is favor- ppings, etc.) every 10 years n. Such "feathering out" of le favoring younger plants s.

ın be a major cause for soil ınderground tunnels where

litions around the home is

et of the home, but periodic ices are required at greater

5-97 419 Exh. Let 10 p4

What To Do When Caught in a Wildfire

If your home is threatened by wildfire, you may be contacted by a fire or law enforcement official and advised to evacuate. If you are not contacted in time to evacuate, or if you decide to stay with your home, the following suggestions will increase your chances of safely and successfully defending your property.

Before the fire approaches—notify the Fire Department:

1. If you plan to stay, evacuate your pets and all family members who are not essential to protecting the home, but do not jeopardize your life.
2. Be properly dressed to survive the fire. Cotton and wool fabrics are preferable to synthetics. Wear long pants and boots and carry with you for protection a long-sleeved shirt or jacket, gloves, a handkerchief to shield the face, water to wet it, and goggles.
3. Remove combustible items from around the house. This includes lawn and poolside furniture, umbrellas, and tarp coverings. If they catch fire, the added heat could ignite your house.
4. Close outside attic, eave, and basement vents. This will eliminate the possibility of sparks blowing into hidden areas within the house. Close window shutters.
5. Place large plastic trash cans or buckets around the perimeter of the house and fill them with water. Soak burlap sacks, small rugs, large rags. They can be helpful in beating out burning embers or small fires. Inside the house, fill bathtubs, sinks and other containers with water. Toilet tanks and water heaters are an important water reservoir.
6. Locate garden hoses so they will reach any place on the house. Use the spray-gun type nozzle, adjusted to a spray.
7. If you have portable gasoline-powered pumps to take water from a swimming pool or tank, make sure they are operating and in place.
8. Place a ladder against the roof of the house opposite the side of the approaching fire. If you have a combustible roof, wet it down. Do not waste water. Waste can drain the entire water system quickly.
9. Back your car into the garage and roll up the car windows. Disconnect the automatic garage door opener (in case of power failure you could not remove the car). Close all garage doors.
10. Place valuable papers and mementos inside the car in the garage for quick departure, if necessary. Any pets still with you should also be put in the car.
11. Close windows and doors to the house to prevent sparks from blowing inside. Close all doors inside the house to prevent draft. Open the damper on your fireplace to help stabilize outside-inside pressure, but close the fireplace screen so sparks will not ignite the room. Turn on a light in each room to make the house more visible in heavy smoke.
12. Turn off pilot lights.
13. If you have time, take down your drapes and curtains. Close all venetian blinds or fire resistive window coverings to reduce the amount of he radiating into your home. This gives added safety in case the windows give way because of heat or wind.

P>

FIRE Hazard Reduction Requirements

Hundreds of Los Angeles County homes are in serious danger of destruction by fire because of their proximity to brush-covered areas. Any home that has brush near it is in danger. Homes with wooden roofs particularly are vulnerable to spread of fire.

Your Los Angeles County Fire Department will inspect your property and upon request make suggestions to help protect your home. Despite efforts of your firemen, wildland fires, fanned by strong winds, can destroy homes. It is YOUR legal responsibility to take action necessary to reduce this possibility.

For your Safety and Protection

The law requires that you:

1. **CLEAR** all hazardous flammable vegetation to mineral soil for a distance of 30 feet from any structure. Cut flammable vegetation to a height of 18 inches for another 70 feet.

2. **REMOVE** limbs within 10 feet of the chimney. Cut away dead branches and limbs that overhang the roof.

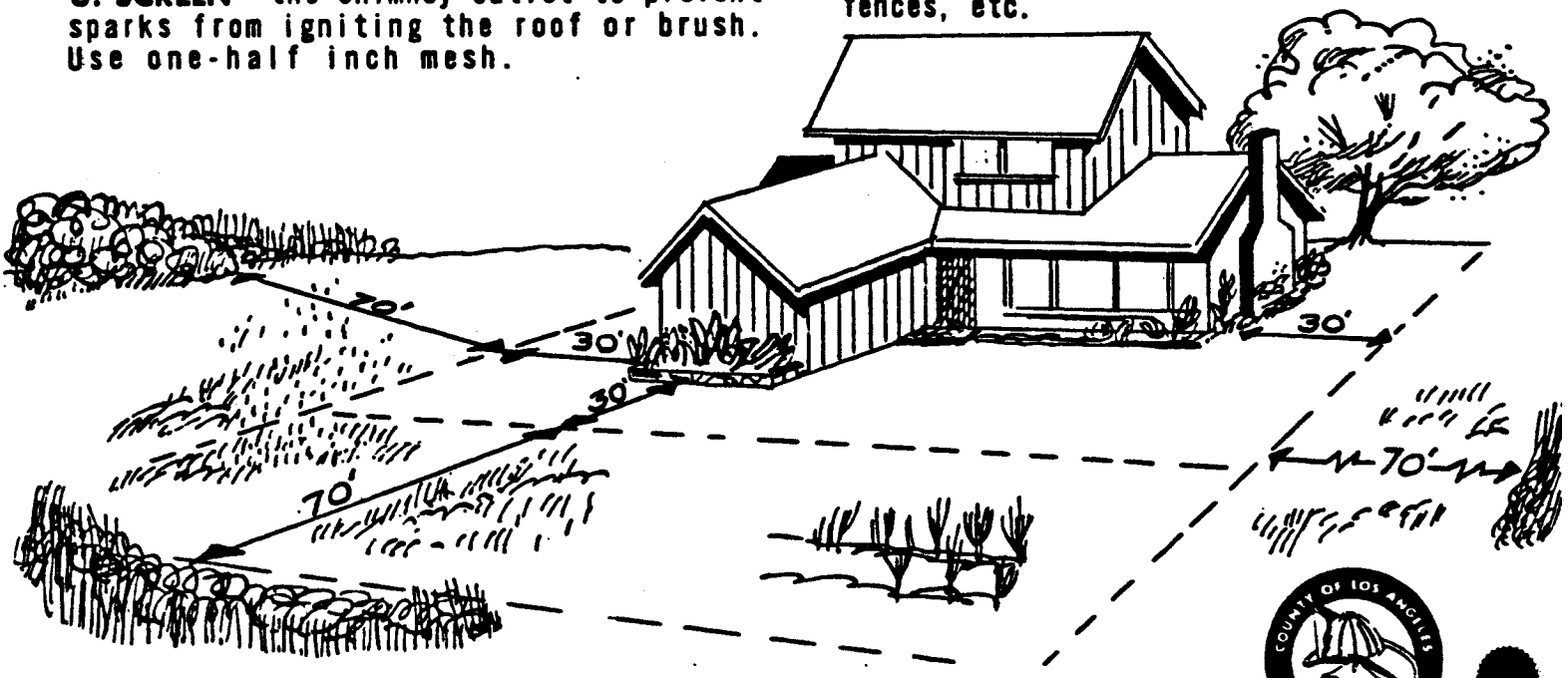
3. **SCREEN** the chimney outlet to prevent sparks from igniting the roof or brush. Use one-half inch mesh.

4. **CLEAN** leaves, needles and twigs from roof gutters and eaves.

5. **POST** house numbers clearly so they may be seen from the street.

6. **CLEAR** flammable vegetation within [redacted] feet of liquified petroleum gas sto[redacted]e tanks.

7. **STACK** wood piles away from buildings, fences, etc.



COUNTY OF LOS ANGELES FIRE DEPARTMENT

MAY, 1982

5.97.419
Ex 10

FIRE PROTECTION AND PREVENTION FOR HIGH-HAZARD AREAS

CONTINUOUS DWELLING MAINTENANCE

1. Clear your surrounding property of brush, grass and weeds.
2. Make roads and driveways accessible to fire equipment.
3. Plant fire retardant vegetation.
4. Trim trees away from structures and remove leaves from roofs.
5. Make sure your address is clearly visible from street.
6. If you have a pool, you might consider obtaining a gas-powered pump and a fire hose.
7. Wood piles should be located away from any buildings.
8. Screen chimney with wire mesh no larger than ½".

ONE HOUR AHEAD OF FIRE

1. Back car into garage, heading out; close car windows.
2. Close all windows and doors in house; don't forget to close the garage door and disconnect the electric garage door opener.
3. Place a ladder (preferably a non-combustible one) against the house for access to the roof.
4. Attach a 100' garden hose to a spigot. **Do not use water needlessly.**
5. Seal all attic and basement vents.
6. Remove combustible window curtains, but pull down venetian blinds and non-combustible shades, such as fiberglass.
7. Remove and put into the garage all combustible materials from around your house: bamboo shades, garden furniture, fences, etc.
8. Fill large trash cans with water and place around house in case your water pressure diminishes. Keep small rugs or potato sacks handy to dip in the water and extinguish spot fires.
9. Turn off propane tanks on the outside if you have them.
10. Leave lights on in the house.
11. Place valuable documents in your car, along with photo albums, pets and other items that you would want to take with you in case of evacuation.
12. Wear proper clothing: long-sleeved shirts, long pants, full shoes, gloves, a bandana (wettened), goggles if available.
13. Wet down your roof with a garden hose **only when the fire is within 600'**, then get down from the roof.

WHEN THE FIRE IS AT YOUR HOUSE

1. Enter your home with your family, closing but not locking the doors. Keep the entire family together and remain calm. **Remember**: If it gets hot in the house, it is 4 or 5 times hotter outside.

AFTER THE FIRE PASSES

1. Go outside and extinguish small spot fires on the roof and around the house with a garden hose or barrels of water and your small rugs. Still keep the doors and windows closed in the house. Maintain a 4-hour vigil around your house. Be sure to check that no embers have gotten into your attic or basement. **Plan now to survive a fire !**

5-97 419 Exhibit

SUBMITTAL CRITERIA: PRELIMINARY FUEL MODIFICATION PLANS

Preliminary fuel modification plans must be submitted to and approved by the fire chief and the agency having jurisdiction concurrent with review and approval of any tentative map. This is usually in conjunction with the approval of an urban edge treatment plan by the jurisdictional building/planning department.

Preliminary fuel modification plans will show conceptually the areas of fuel modification necessary to achieve an acceptable level of risk regarding exposure of structures to combustible vegetation.

Submit three (3) sets of prints, prepared by a licensed landscape architect—one to the fire department and two to the local agency having jurisdiction. (The local agency may require additional sets.)

The following shall be included on the preliminary fuel modification plan:

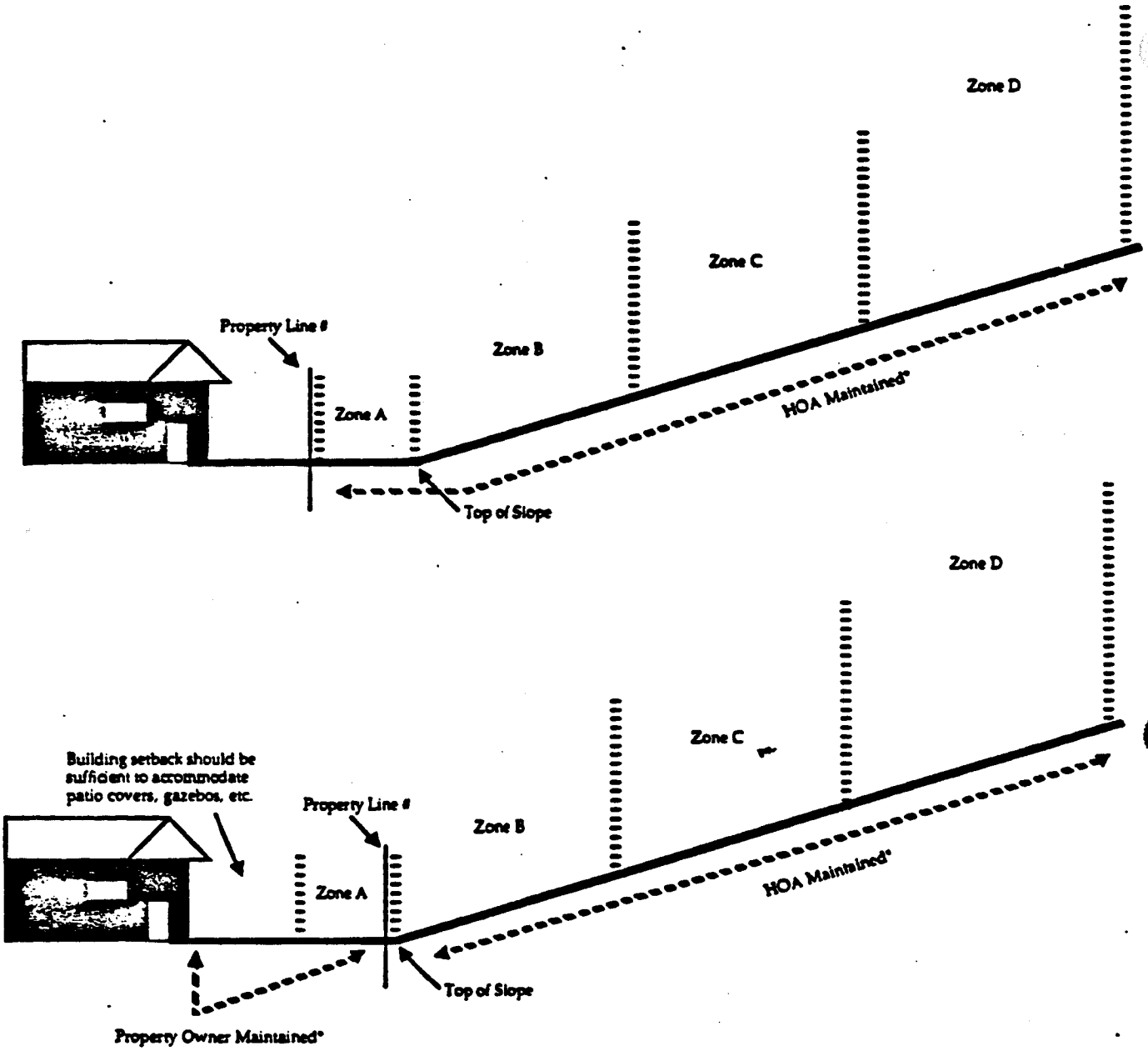
1. Delineation of each zone (setback, irrigated, and thinning) with a general description of each zone's dimensions and character, i.e., 50' - 70' Zone B, with existing vegetation removed, irrigated, and planted with drought-tolerant and fire-resistant plant material. (See Figures 1 - 3 on pages 6 - 8.)
2. Indicate on the plans existing vegetation impacted by the required fuel modification and, if available, proposed vegetation to be planted in the fuel modification area. The preliminary plans should be sensitive to rare and endangered species and you must be prepared to address their disposition in the final plans.
3. Indicate on the plans the design of the proposed development, showing all property lines, contour lines, and the proposed location of the building line closest to the fuel modification area, if available.
4. Include photographs of the area which show the type of vegetation that currently exists, including height and density, and the topography of the site.
5. Describe on the fuel modification plans the methods to be used for vegetation removal, if appropriate, i.e., mechanical or manual.
6. Indicate emergency and maintenance access easements on the plans.
7. Describe on the fuel modification plans exactly what exists one hundred (100) feet beyond the development property line in all directions, i.e., construction, natural vegetation, roads, parks, etc.
8. State, on the plans, who has ultimate maintenance responsibility.

Note: Approval of a fuel modification plan by the fire department does not eliminate the requirement to obtain appropriate environmental, grading, and zoning clearance/permits from the agency having jurisdiction.

5 97414

Exhibit 11
Orange county task force
fuel modification
guide
p.1

FUEL MODIFICATION CONFIGURATION OPTIONS (upslope)



Zone A (Setback Zone) - 20 feet wide minimum.
No combustible construction.

Zone B (Irrigated Zone) - 50 feet wide minimum. Cleared irrigated and planted with fire resistant and drought tolerant plant material. Some existing vegetation may be permitted to remain per fire department approval.

Zone C (Thinning Zone) - 50 feet wide minimum. Per fire department, a percentage of existing vegetation is removed. All dead/dying vegetation is removed.

Zone D (Thinning Zone) - 50 feet wide minimum. Per fire department, a percentage of existing vegetation is removed. All dead/dying vegetation is removed.

The location of property lines will vary; however, if property lines must be located within fuel modification areas, appropriate documentation (e.g., maintenance easements and/or deed restrictions) shall be established to 1) restrict certain activities and uses on those portions of any private property within the fuel modification area, and 2) identify those responsible for the establishment and continued maintenance of the fuel modification area located on private property (see pages 9 and 12).

* Regardless of the entity responsible for fuel modification maintenance, the continued maintenance shall be in accordance with the Maintenance and Enforcement Section of this guideline (see page 12).

597414 Exhibit 11 Orange county fuel mod

FIGURE 2

p. 2

5.97-419 Exhibit 11 p3 Orange county task force

Natural Resource Significance

Chaparral and Coastal Sage Scrub represent fire-type vegetation. Chaparral is a "fire-type" vegetation which retains its identity as a plant association and holds its ground despite burning. Many component species in chaparral require fire for their reproduction and survival. Exclusion of fire from chaparral for more than 50 years results in an over-mature stand which reduces mobility and forage for browse animals resulting in an undesirable wildlife habitat. A fire-exclusion policy in chaparral does not prevent fire, it only forestalls fire. The shrubs of coastal sage scrub are generally shorter-lived (approximately 25 years) than chaparral species and will replace themselves without the necessity of fire.

The dominant species of Coastal Sage Scrub are summer drought-deciduous. The plants are facultatively summer drought-deciduous, with soft green mesomorphic leaves which wither and die as the summer drought progresses. Stems become bare and die back to some extent under severe drought conditions. In this manner, coastal sage shrubs have a drought-evading or escaping deciduous habit. (6) During this time of year, coastal sage scrub represents a fire hazard.

Coastal Chaparral occurs on steeper slopes and canyon walls facing the ocean. Plants of this community are deep-rooted and provide a natural and vital stabilizing influence on the marine scarps and terraces along the coast. The vegetation is often 3 to 6 or 10 to 15 feet high and dense, often nearly impenetrable. Very subject to fire, many species have fire-resistant seeds of long viability, many sprout quickly from root crowns after fires. The shrubs are adapted to protracted summer drought. This characteristic combined with the density of the plant cover make chaparral one of the most fire-susceptible vegetation types in the world.

Coastal Chaparral provides protection to watersheds. Soils in chaparral lands generally occur on slopes steeper than 55% and are generally shallower than 2 feet. In many cases, slopes are over 70% and where these slopes exceed the angle of repose for unconsolidated soil materials, they are extremely unstable. Soil erosion from these steep slopes is a surface movement rather than a deep-seated movement of the soil mass. The greatest protection to the watershed in such areas is provided by the chaparral vegetation. Its removal (whether by fire or fuel modification) in such areas can aggrevate drainage problems and greatly increase the danger of floods and landslides.

The Coastal Chaparral Plant Community in the South Laguna Hills is unique. This community has members which are found nowhere else in Orange County. Species such as Ceanothus verrucosus, Ceanothus spinosus, Adenostoma fasciculatum var. obtusifolium, Cercocarpus minutiflorus, and Cneoridium dumosum have been favored by the maritime influences and by the protection of the Laguna Hills. The overgrazing by cattle that eliminated many plant species since the mission era apparently did not make a heavy impact on these steep hills and canyons. (7)

Chaparral and Coastal Sage Scrub are important habitat for wildlife. Extensive continuous areas are necessary for maintenance (several sq. miles at least) of large mammals such as deer and carnivores which are best maintained in this habitat. 750 acres would sustain most of the avian species found in this type.

5-97 419
Exhibit 11
p 41

Orange county fault

Some avian species characteristic of this habitat in California (Wrentit and California thrasher) are not migratory in habitats. This is to say that an extensive area of this habitat must be safely preserved in part, to allow for natural reintroduction of these species. These two species probably never cross more than 1-2 miles of inappropriate habitat such as housing or barren areas. (8)

Wildlife species are directly dependent upon the condition and extent of their habitat. The key to the preservation, maintenance, or enhancement of a wildlife species is related to its habitat. Besides the loss of habitat for urban development, modification of the habitat type on a cumulative hasis can result in a reduction of continuity and/or extent of the habitat type such that at some point in time the resultant modified habitat cannot support the wildlife population dependent upon its existence.

Chaparral and brush-covered hills are aesthetically attractive. Many cities and communities in southern California are located along the coast where hills and canyons of the coastal mountains form a backdrop and are mantled with a vegetation which is uniquely adapted to the environment. Urban development in many cases is located directly in or adjacent to these chaparral and brush-covered hills resulting in an increase in the risk of fire and threat to life and property.

Two programs are presently underway on a statewide basis which can help to determine the significance of plant species and natural areas. The California Natural Areas Coordinating Council is presently mapping those areas of the St[illegible] which are considered prime natural areas. The South Laguna Hills has been propose as one such area. In addition, the California Native Plant Society has conducted an inventory of rare and endangered vascular plants of California (9). The purpose of this undertaking is to develop sufficient information so that action may be taken to protect those rare plants that are endangered, and so that the status of other rare plants can be monitored.

In summary, the significance of Coastal Sage Scrub and Chaparral as a natural resource can be stated as follows:

1. These two communities represent fire-type vegetation.
2. The two communities provide valuable watershed cover.
3. Wildlife habitat is offered by the vegetation.
4. Rare and endangered plant species occur in this vegetation.
5. The community represents a unique and diminishing resource in some areas.
6. The vegetation is aesthetically attractive.

Present threats to Coastal Sage Scrub and Chaparral as a natural resource include:

1. Fire exclusion. (Many times to protect adjacent structures)
2. Urban development
3. Fuel modification programs which remove unique species and result in visual impact.
4. Type conversion of the natural vegetation to grassland or irriga[illegible] greenbelts which require long-term commitments for maintenance.

FIRE SAFE GUIDES

FOR RESIDENTIAL DEVELOPMENT IN CALIFORNIA

5-97-419

Exhibit 12
State guidelines
p1

State of California
Pete Wilson, Governor

The Resources Agency
Douglas P. Wheeler, Secretary for Resources

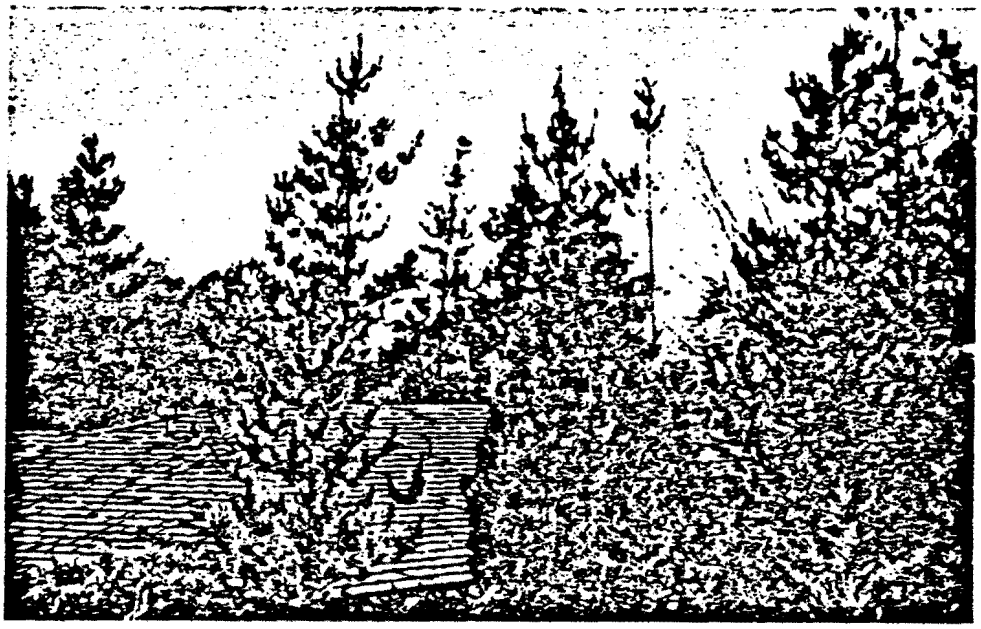
California Department of Forestry and Fire Protection
Richard A. Wilson, Director

1993

BUILDING CONSTRUCTION STANDARDS

Structure Vulnerability

Professional experience and research have documented the two most vulnerable elements of a structure: the flammability of the roof and the clearance of flammable vegetation around the structure. CDF has several research projects in progress that will add to the wealth of professional knowledge that currently guides wildland fire protection. While not available at the time this guide was printed, interested individuals should contact the local CDF office for current information.



Structure That is Vulnerable
Due to Building Area

Roofing

One common issue surfaces among the numerous reports, papers and task forces that have studied and reported on the problem of homes and developments constructed in areas with potential for major wildfire conflagrations: flammable, non-rated, wooden shakes and shingles have made buildings especially vulnerable to ignition from flaming material carried by the winds and convection columns in advance of a fire front. Once wooden shakes and shingles have ignited one building, they are torn away by the wind and rapidly carried by the convection column to ignite additional vegetation and roofs of other buildings. The roof is the most vulnerable part of a building during a wildland conflagration. A roof that is horizontal is especially vulnerable because it can catch and hold firebrands carried by strong winds and convection columns characteristic of these fires. Unlike ground fire, a conflagration produces firebrands that travel over and beyond any natural or artificial fire break and are a distinct hazard to structures as far as a mile away from the wildfire.

5-97 419

Exhibit 12 p2

FUELS AND VEGETATION

Major wildland fires do not occur just in large acreages of heavy fuels. Major fires and major losses can occur in any fuel type when all of the "right" conditions are present. All vegetation is flammable to some extent. However, the intensity and speed of spreading fire depends upon the time of year, the moisture content of the fuels, the weather, the topography and the size and arrangement of the fuels. Fine fuels such as grass can ignite easily and will burn very fast while generating little heat. Grass fires are generally easy to extinguish. Heavier and larger fuels are hard to ignite and generally burn very hot and slow, are more difficult to distinguish and generate a lot of heat. Fatalities and damage to resources and property can occur under a wide range of conditions and fuels.

Treatment of wildland fuels includes modification of the size, arrangement and type of fuel to reduce the probability that a fire will start and reduce the subsequent damage.

FIRE RESISTIVE LANDSCAPING

If enough heat is present, almost any plant will burn. The objective of fire resistive landscaping is to reduce the heat available and reduce the chance of ignition. Fire resistive landscaping combines native or ornamental plants with proper placement and proper maintenance. The key is separating plants vertically and horizontally to prevent fire spread and extension. If proper clearance of flammable vegetation has not occurred or where a fire resistive landscaping has not been planted, some insurance companies add a surcharge to the home insurance policy.

Climate and Environment

Obviously, some species are better than others. More importantly, some plant species just won't grow in certain climate zones. Consult your local nursery, fire department or CDF for proper selections in your area. Consideration of soil protection and visual impact during fuel modification planning is essential to a successful project. However, inappropriate modification of the native landscape can create serious problems such as slope failures, soil erosion, damaged wildlife habitat and reduced visual quality. Proper planning and consultation with experts can prevent this from happening. Before modifying your landscape, contact your local nurseryman, extension specialist, fire department or CDF.

Placement

The placement of landscaping plants is a key element of a fire resistive landscape. Large trees should be located away from the house, and large shrubs should not be planted under the eaves, right next to the house. Vary the height of the landscape plants and space them so fire can't travel from one plant to another. Eliminate ladders of fuel from low-growing plants to shrubs to trees that can allow fire to spread into the crowns of nearby trees. Trees over 12 feet tall should have the branches on the lower one-third of the trunk pruned and removed. Trees over 18 feet tall should have all limbs within six feet of the ground removed. As landscaping progresses farther from the house, taller plants can be retained or planted.

Landscaping Zones (May protect the surrounding vegetation of damage from a home fire, but does not protect a home from wildfire).

Many experts recommend a zone approach to firesafe landscaping. Where the property is large enough, landscaping close to the house, out to 30 feet, requires irrigated, low-growing plants. The next zone, from 30-70 feet, allows medium-height shrubs and individual trees. The final zone, beyond 70 feet, allows selectively thinned brush and

5.9.94 19
Exhibit 12
p3

trees, preserving the native, natural landscape look. The distances stated here are only a general guide. Each zone landscaping approach recommends different distances. Contact your local fire department or CDF for site specific information.

Brush and Timber Stands

Dense stands of brush or timber must be thinned to reduce the volume of fuel and reduce the opportunity for fire to spread from tree crown to tree crown. Separate all trees and individual brush specimens by at least 15 feet horizontally and six feet vertically.

Maintenance

Once a fire resistive landscape is established, it must be maintained. Regularly remove dead branches, litter, needles and leaves and weeds. Keep shrubs and trees neatly pruned. In many locations, burning of debris is not allowed and hauling cut vegetation to the dump is not recommended. Consider chipping material for use as a compost to improve watering efficiency. Remember to maintain an appropriate irrigation schedule that is beneficial to the plants selected. Consider drip irrigation to conserve water and reduce growth of weeds. If the yard looks good, it is probably a firesafe landscape.

FUEL MODIFICATION CONSIDERATIONS

Fire Resistive Vegetation

Fire resistive plants are generally low-growing, have a low sap or resin content, grow without accumulating quantities of dead branches, needles or leaves, are easily maintained and pruned and are preferably drought tolerant (low water users). The species may be native or ornamental.

Protecting & Enhancing Native Vegetation During Construction

Many homebuilders elect to retain native vegetation as the predominant landscape plants in their yards. Native vegetation is adapted to the climate and soils and has already established itself. There is no need to wait for plants to grow into their ultimate size to see if they suit the homeowner's vision.

However, it should be recognized that human involvement or interruption of natural processes to build roads and homes can be very threatening to the health of native vegetation. Much of the damage is caused by surface compaction and mechanical injury of the trunk or stem. The negative effects may become evident immediately or may begin to show over time. In addition to direct damage and injury, many construction and development activities create conditions that weaken native vegetation or create conditions that favor insects, pests and diseases. The result is additional fuels available to wildfire. An excellent reference for the builder or contractor, Protecting Trees When Building on Forested Land (leaflet 21348), is available through the University of California, Cooperative Extension.

General considerations include:

- Reducing the density of trees so that those remaining will have sufficient light, moisture and nutrients.
- Removing trees that are close to or that will interfere with proposed roads, foundations, septic systems, driveways and utility corridors.

5-97 419
Exhibit 12
p. 4

- Selecting remaining trees for health and vigor, aesthetics and the ability to provide appropriate shade and visual and wind screening.

- Avoiding trees that will require roof modifications or decks to be built around them, that are most likely to be damaged during construction and that will have their health compromised due to site changes such as moisture and soil level.

- Maintaining a mixture of ages; allowing older trees to be replaced by younger, healthier trees.

- A tree that is the right size now may be too big in a few years – plan ahead.

- Select native vegetation that has good vigor. A local nursery and forester can assist in identifying the correct trees and shrubs to keep.

- Fence around trees and shrubs at the dripline to avoid damage by construction activity and equipment.

- Minimize grading and soil movement.

- Utility trenches should be kept away from "keeper" trees. Tunnel if activities must encroach in their root zone.

- Do not backfill or change the grade immediately around trees. Build a stone or concrete well to protect the original grade around the tree.

- Asphalt and other hard surfaces can prevent or significantly reduce the amount of water reaching the roots of a "keeper" tree.

- DON'T attach utility wires or lines to trees.

- Frequent watering of lawns and flowerbeds can damage the sensitive root systems of native species.

Urban Forestry

It may seem strange to see the term urban combined with the practice of forestry. Yet, the urban exodus and rural community growth in California have brought with them many urban environment problems and created many new ones. Many communities in rural California are now landscaped with urban forests. Urban and formal landscape vegetation are mixed with rural and native plants, and all are intermixed with homes and businesses. Failure to deal with the problems associated with rural growth may create a landscape that is unhealthy, dying, lacks vigor and is aesthetically unpleasing. In addition, conditions may foster and promote an increased fire hazard. Several excellent publications dealing with oaks and the urbanizing landscape are available:

- Compatible Plants Under and Around Oaks, California Oak Foundation

- An Introductory Guide to Community and Urban Forestry in Washington, Oregon and California, World Forestry Center

- A Technical Guide to Community and Urban Forestry in Washington, Oregon and California, World Forestry Center

- Guidelines for Developing and Evaluating Tree Ordinances, CDF

5-97 419 92
Exhibit 12
p 5

WEED ABATEMENT ORDINANCES

The maintenance of defensible space around the home only follows a fire resistive roof in importance in protecting a home from wildfire. The state law for clearance of flammable vegetation was discussed in an earlier chapter. Many local jurisdictions also require clearance of flammable vegetation. In a community setting, this may take the form of clearance of vacant lots within a subdivision. In a more rural setting, this may be similar to the state clearance law, though most local jurisdictions require clearance well beyond the 30 feet required by state law. In either case, if a landowner fails to provide the required clearance, the jurisdiction has a contractor clear the lot or property and bills the property owner. Failure to pay the bill enables the placement of a lien on the title of the property. You should contact your local fire department for further information.

STRATEGIC FUEL MODIFICATION

Strategic fuel modification requires two elements, identification and implementation. It is not enough to just identify those areas of extra-hazardous fuels, to delineate areas that need modification or determine where fuel breaks should be constructed to concur with development. Implementation before development occurs is the key. Once development has occurred, land ownership patterns preclude bringing hundreds of owners into a cooperative agreement. Before development begins, the only owner is the developer. Establish the agreements and begin to modify the fuels before development occurs. Locate strategic fuel breaks and secure the rights-of-way authority, establish land conservation zones and open space available for defensible space. Don't forget to ensure that maintenance of these fuel modification zones is applied on a regular basis and that funding is secured. The planning element has already been described in the Strategic Fire Planning section. The identification of a strategic plan should be included in the city or county general plan.

Objective

The purposes of strategic fuel modification are to separate communities or groups of structures from the native vegetation and break up large expanses of flammable fuel into smaller blocks, all with the purpose of reducing fire loss and damage.

Fuel Breaks

A fuel break is a strip or block of land on which the native vegetation has been permanently reduced and/or modified so that fires burning around it can be more readily and safely controlled. Fuel breaks are generally constructed to separate communities and clusters of communities from the native vegetation, in order to protect both the developing area and the adjacent wildlands. They are most commonly found along ridgelines where fire control efforts are focused. The most advantageous location and design must be individually determined after considering fuels, topography, weather, exposures and other constructed or planned improvements.

Fuels within fuel breaks are reduced in volume through thinning or pruning, or are changed to vegetative types which burn with a lower intensity and offer less resistance to fire control efforts. Fuel breaks are not intended to stop a rapidly moving fire, but to correct two conditions that have limited the effectiveness of fire control: the difficulty of quick, safe staffing of critical line locations when needed and the need for widening many fire breaks before they can be used effectively. Fuel breaks are not expected to control a fire in themselves, but provide points of access to facilitate control of the flanks and provide possible backfire action in the face of an advancing fire head. A fuel break system may utilize existing federal, state, county or local road systems. Most fuel breaks

5-97 419
Exhibit 12
pg

Hazard Mitigation Survey Team Report

SOUTHERN CALIFORNIA FIRESTORMS

October 25 - November 10, 1993

FEMA-1005-DR-CA

August 1994

Counties of

Los Angeles

Orange

Riverside

San Bernardino

San Diego

Ventura

S.97 419

Exhibit 13

FEDERAL EMERGENCY MANAGEMENT AGENCY

OES CALIFORNIA

Governor's Office of Emergency Services

Monica Mountains from 1919 to 1982 indicates that the greater portion of wildland areas have burned at least once in the last 60 years; some have burned more than four times (*fig. 3*).

In the interior mountain ranges of Los Angeles County, fire frequency and number of acres burned are high in the summer months because of high summer temperatures and occasional lightning strikes. In the coastal ranges, fire frequency is lower in the summer, and lightning strikes are almost unknown as causes of fire. The number of acres burned is lower than in the interior ranges because the Catalina eddy, a marine breeze characterized by cool, moist air, penetrates the coastal mountains, primarily during June and July. This cool air is also responsible for the abnormal air circulation pattern of upslope instead of downslope winds during the evenings and into the night. In both the inland and coastal regions, the great toll of acreage burned from late September through December is the result of the Santa Ana wind, which has its highest frequency from September to February and is almost absent in July and August.

The pressure for urbanization of wildlands and open space is significant in the Santa Monica Mountain range. Before intensive settlement began, the north-facing slopes (those facing the San Fernando Valley) were relatively free from fire, but in the last 35 years large fires have greatly increased here. Presently the estimated fire-start probability in coastal sage scrub is about once in 14 years and in chamise chaparral once in 16 years (McBride and Jacobs 1980). This large increase in fire starts is the result of the population influx: almost every fire is started accidentally or deliberately by man.

The areas of highest fire frequency are at the fire perimeters, where fires burn together. In such a high-fire-frequency area, only the first fire burns hot because the quantity of fuel remaining for subsequent fires is reduced. The fire boundaries are determined by fire suppression activities, fuel types and their age classes, topography, fuel modification attempts (firebreaks, roads, and subdivisions), and wind conditions. Once a fire perimeter is established, it normally defines a portion of the boundaries for fires that burn as much as 20 to 30 years later (*fig. 3*). This becomes clear when we realize that chaparral fire intensity depends on the mixture and age of the individual chaparral species. The ratio of dead to live fuel is much greater in old than in young chaparral and varies from species to species. Past fire frequencies suggest that under natural conditions chaparral does not become highly fire-prone for about 15 to 20 years, or until some of the shorter-lived chaparral components die and increase the dead fuel (Philpot 1977). Coastal sage scrub, because of its shorter lived species and greater mixture of herbaceous species, can become highly fire-prone after 5 to 8 years.

The major flammable vegetation types found in the Santa Monica Mountains, namely chaparral, coastal sage scrub, and grassland, also have a direct bearing on fire

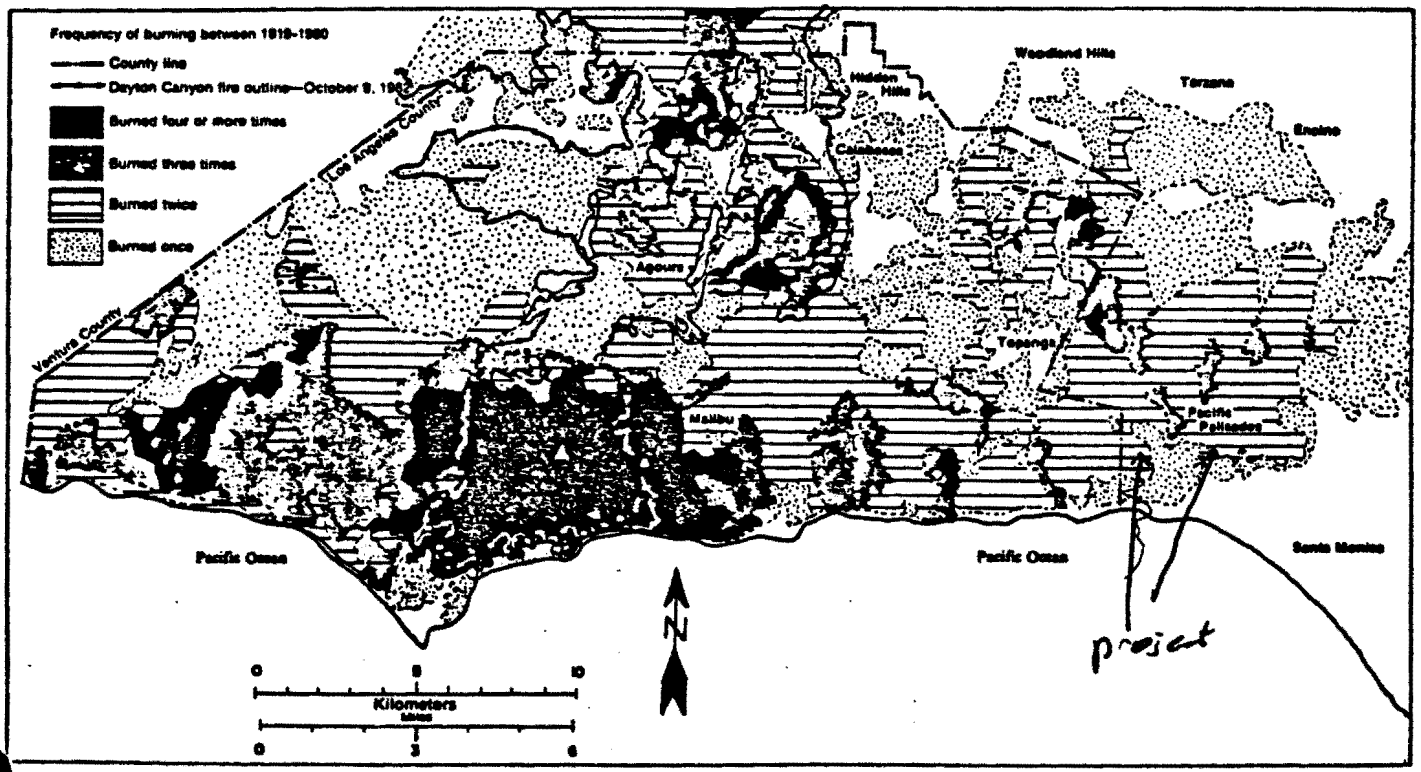


Figure 3—Frequency of fires exceeding 100 acres (40 hectares), in the Santa Monica Mountains (Ventura County line to the San Diego Freeway), southern California, 1919 to 1982. The outline on the left shows the extent of the Dayton Canyon Fire, October 1982.

5-97-419
Exhibit 13 p 2

frequency and fire intensity because of their different fuel loads and ease of ignition. For example, the flashy annual grassland fuel seldom exceeds 5 tons per acre (11.2 t/ha) whereas mature chaparral can exceed 30 tons per acre (67 t/ha). Grassland fires may be more frequent but are also more easily extinguished; however, they often carry the fire into the coastal sage scrub and chaparral. In any event, the fuels dictate the ease of fire starts and spread rates and this has a direct bearing on fire frequency. When the grasslands were grazed, reducing fuel loads, the highest fire frequency was found in coastal sage. With reduction in sheep grazing, fires in annual grassland, especially along roads and rights of way, have become the major source of fire starts. Nevertheless, fire starts have been historically concentrated in the coastal sage areas, where development has been greatest.

The predictable direction of fire spread in the Santa Monica Mountains during Santa Ana winds is south to southwest. This spread pattern is primarily influenced by fire winds and secondarily by topography. Because canyons in the eastern part of the Santa Monica Mountain range run in a south to south-westerly direction or parallel with the fire winds, fire is channeled up the canyons, spreads out as it reaches the ridges, contracts again as it is funneled downhill through the canyons, and may fan out in either direction as it reaches the beaches. The western portion of the Santa Monica Mountains does not have this pronounced linearity of canyons and fire winds, however. Fires therefore are more influenced by the direction of the winds and are more irregular in shape (Weide 1968).

PROBLEMS IN WATERSHED MANAGEMENT

A watershed is generally understood to be all the land and water within the confines of a drainage area. Vertically, it extends from the top of the vegetation to the underlying rock layers that confine water movement. A homeowner's watershed is the area of land whose drainage directly affects the safety of that person's property. Frequently this area includes adjacent properties over which the homeowner has little control. The drainage conditions may vary widely. Some homeowners have a well-manicured property adjacent to a street where all runoff is channeled into rain gutters. Others are in a watershed that includes steep slopes where most runoff finds its way eventually into intermittent stream beds. Sometimes the steep slopes are undercut by either natural stream channel erosion or development activities. To know how to safeguard their properties, homeowners should understand the erosional processes affecting a watershed, and the changes brought about by wildfire and their own actions.

Dry-Creep, Wet-Erosion Cycle

In chaparral, preserving the stability of the slopes is a major problem. Most chaparral in southern California grows on geologically young mountains where the steep slopes range from 25° to more than 70°. About 25 percent of the chaparral watershed exceeds the angle of repose, that is, the angle between the horizontal and the maximum slope that a particular soil or other material assumes through natural processes. On slopes that exceed the angle of repose, gravitational forces are likely to cause soil and rocks to slide or fall downhill unless anchored by plants. The angle of repose increases with the compaction of the material, with the average size of fragments, with the surface roughness and cohesion of soil particles, and, in sand, with an increase in moisture content up to the saturation point. For loosely heaped soil particles the standard angle of repose is approximately 9° for wet clay, 11° to 20° for dry sand and mixed earth, 21° to 25° for gravel, and 23° for moist clay (Van Burkalow 1945). Under natural conditions and where soil is anchored by deep-rooted plants, the angles of repose are much steeper than those given. Occurrence of landslides in chaparral is strongly related to the angle of repose for different soils, once cover, root depth, and root strength are taken into consideration.

On steep, harsh southern exposures, plant cover is sparse, and dry creep and dry ravel (downhill soil and debris movement during the dry season) become major erosional forces, especially where slopes beyond the angle of repose have been undercut. During low rainfall years, this dry creep and dry ravel often exceed wet erosion rates during the winter months. The debris settles at the foot of the slopes, where it is flushed out by the rainstorms of higher-than-usual intensity, which occur about every 5 years. Dry creep and dry ravel can also be greatly accelerated by animals, such as deer, rodents, and birds.

The dry-wet cycle on these slopes begins when summer drought encourages dry creep and dry ravel. The onset of the first light winter rains gives the soil cohesion and greatly reduces dry erosion. If further rains do not follow before the soil dries out, dry creep and dry ravel again accelerate. With heavier rains, dry erosion finally stops completely, so that erosion is at a minimum during the first part of the rainy season. As the rainy season continues, however, the soil mantle becomes saturated and rill and gully (overland) erosion accelerates. Toward the end of the rainy season and until the soil surface dries out and loses its cohesiveness, erosion is again low (Anderson and others 1959).

The erosion cycle is influenced by topography and vegetation. A north-facing slope is less exposed to the sun than a south-facing slope, and is therefore more moist for the greater part of the year. On north exposures, deeper soils and more dense plant cover of different species have developed over time, and these greatly reduce dry creep and overland erosion. Dry ravel occurs sporadically but may

5-97 419 Exhibit 13 p 3

closely at practical ways to mitigate wildfire hazards during the planning and development process. Such guidance could be included in updates of the State's *General Plan Guidelines* and *California Environmental Quality Act Guidelines*, produced by the Governor's Office of Planning and Research (OPR).

The *State Fire Hazard Mitigation Plan* Measures 23, 24, and 25 suggest three changes to State codes regarding general plans and subdivisions to provide specific attention to wildfire hazards. These recommendations have not yet been implemented. Further suggestions for changes in CEQA and General Plan Guidance regarding fuel management near public lands are presented in Recommendation 3.

Lead Agencies: OPR, CDF, Resources Agency.

Potential Funding Sources: Existing budgets, partial funding might be available from the Hazard Mitigation Grant Program.

B. Fuel Management

General Background: The intensity and rate of spread of wildfires depends on weather and atmospheric conditions and the amount and type of vegetation available to fuel the fire. Fuel management encompasses a spectrum of techniques to reduce the amount of fuel in intermix areas so that any fires that do occur are easier to control.

Common fuel management techniques include:

- Prescribed burns: burning selected areas of wildland under carefully controlled conditions.
- Clearing or thinning vegetation with any combination of machinery, hand crews, and herds of goats.

The choice as to whether to use any one or combination of these methods is very site-specific, depending on topography, local ecology, and other factors.

Many Team participants felt a dramatic expansion of the use of prescribed burns and other fuel management measures is needed to reduce wildfire losses. There are many factors that reduce or delay fuel management activities, including lack of funding, liability fears, public objections on aesthetic grounds, and difficulties working out permit conditions with environmental agencies. This section includes recommendations aimed at making it easier for communities to carry out effective fuel management programs.

Recommendation 3. Anticipate and reduce conflicts regarding fuel management on private properties next to public lands, through the following measures:

a. ***In line with Recommendation 2, modify California Environmental Quality Act Guidelines to specifically require consideration of wildfire safety management practices during reviews of proposed developments and acquisitions of intermix land by public agencies, including the potential environmental impacts of recommended vegetation management zones.***

b. ***Modify real estate disclosure requirements to include clear notification of buyers when properties***

5-97-419

Stat task force 14
Exhibit 14 p1

are in very high fire hazard severity zones, and whether recommended vegetation management for fire safety is possible within the property boundaries.

Background: New developments have been approved with houses abutting the boundary of public lands, such as state parks and national wilderness areas. Adequate fire-safety around the houses would require modifying vegetation in the public lands in ways that are often inconsistent with the mandate of the land managers.

Team members strongly suggested that local officials should insist that new developments abutting public open space include setbacks around structures to allow adequate space for fire-safe vegetation management entirely on the private property. In cases where a piece of private property is converted to public open space, the public agency receiving title should have an obligation to work with neighboring property owners to develop plans for vegetation management for wildfire protection.

Lead Agency: Governor's Office of Planning and Research for (a), the California Department of Real Estate, for (b), both in consultation with the CDF and the Resources Agency.

Potential Funding Sources: Existing agency budgets. Partial funding for staff time might be available from the Hazard Mitigation Grant Program.

Recommendation 4. Clarify, standardize and streamline environmental permitting procedures for prescribed burns and other fuel management programs. Specific measures recommended are:

a. ***The State, in cooperation with federal and local governmental agencies, should review existing fuel management practices with the goal of developing a State policy to facilitate efforts to reduce wildfire losses.***

b. ***The California Air Resources Board should convene working groups of fire agencies and air quality management districts to work on a general state policy and guidance for permitting of prescribed burns.***

c. ***The California Department of Fish & Game, the United States Fish & Wildlife Service the California Coastal Commission, and other environmental permitting agencies should work together to clarify policy and guidelines for the permits they require for fuel modification measures. The agencies should consider establishing a procedure for regional, multi-project fuel modification permits that consider habitat impacts from a regional perspective, rather than on a project-by-project basis.***

Background: The California Department of Forestry and Fire Protection (CDF) is reviewing its Vegetation Management Program policy. Team members emphasized the need for strong state support for expanded vegetation management efforts, including a much greater use of prescribed burns.

Before conducting prescribed burns to reduce fire-prone vegetation densities, fire agencies normally must obtain permits from or consult with Air Quality Management Districts, the California Department of Fish & Game (DFG) the U.S Fish & Wildlife Service (USFWS),

Exhibit 14 pc

"The Geologic Outfit"

Geology
follows

RAY A. EASTMAN
ENGINEERING GEOLOGIST
2461 East Orangethorpe Avenue, Suite 214
Fullerton, California 92831
(714) 879-2378

December 9, 1997

MEC/Geotechnical Engineers Inc.
111 N. Jackson Street, Su. 205
Glendale, Calif. 91206

Re: Supplemental Geologic Information
Proposed Residence Site
865 Paseo Miramar
Pacific Palisades, Calif.
Project No. 1789

Gentlemen:

Per your request, we have reviewed a letter prepared by the City Department of Building and Safety dated December 4th wherein they request additional information. A copy of the letter is appended and our comments as required are as set forth below.

Item 1 - Please note also per the Tucker report of 8/18/83 on page 4 under geologic structure - " Bedding planes within the sandstone are poorly developed to absent, discontinuous and widely spaced ".

We concur with the aforementioned and consider the sandstone to be crudely bedded with color bands and pebble layers. Moreover, the latest proposed plan indicates that the foundations will be established at depths such as to negate the critical plane factor as previously indicated.

Item 4 - Adverse bedding conditions are not considered to be encountered as per our earlier discussion. However, a minor fault line is present that may impact the site construction and the related conditions are shown on the appended plot plan and sections lines.

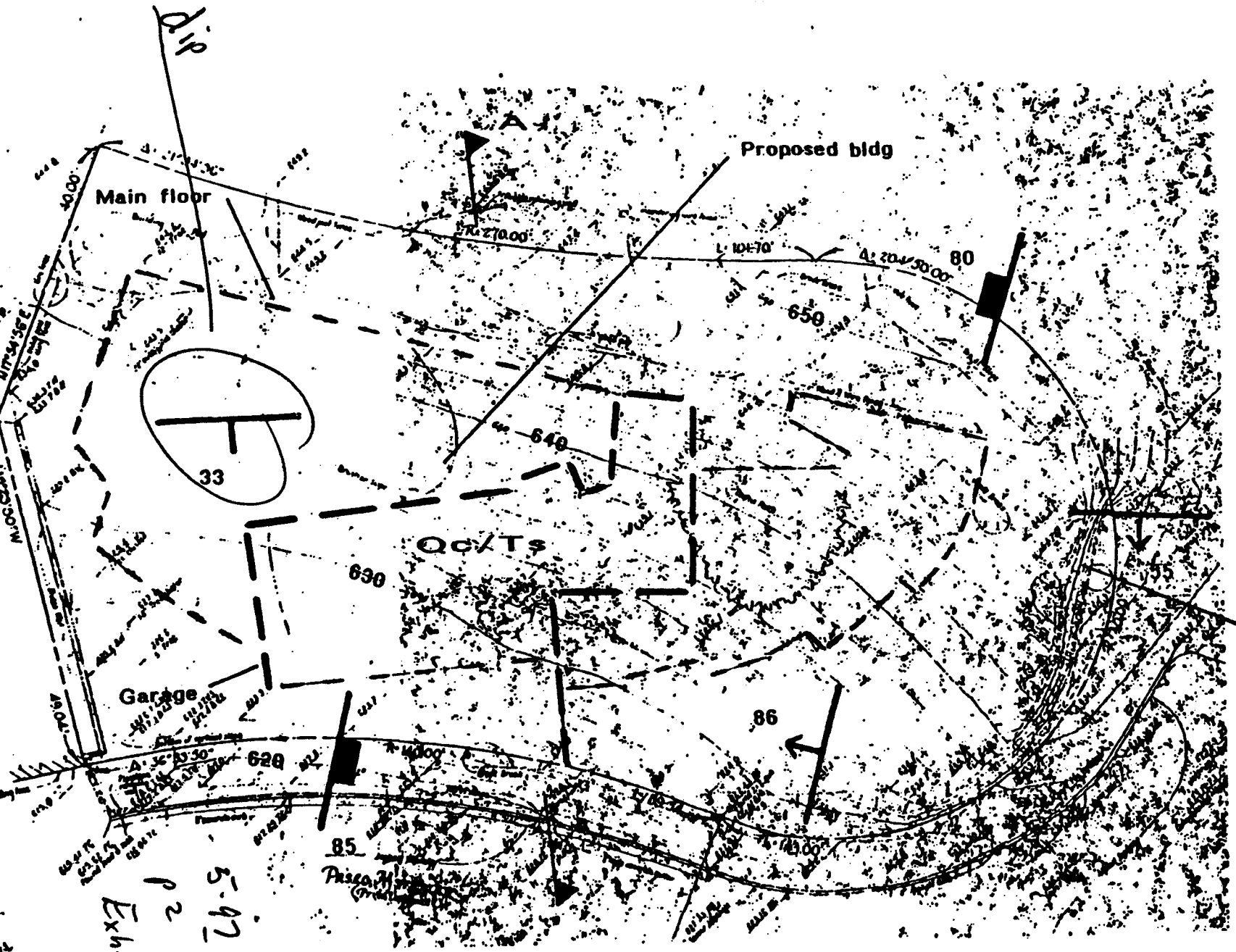
We trust that this supplemental information will meet with your needs at this time.

Sincerely,

Ray A. Eastman
CEG423

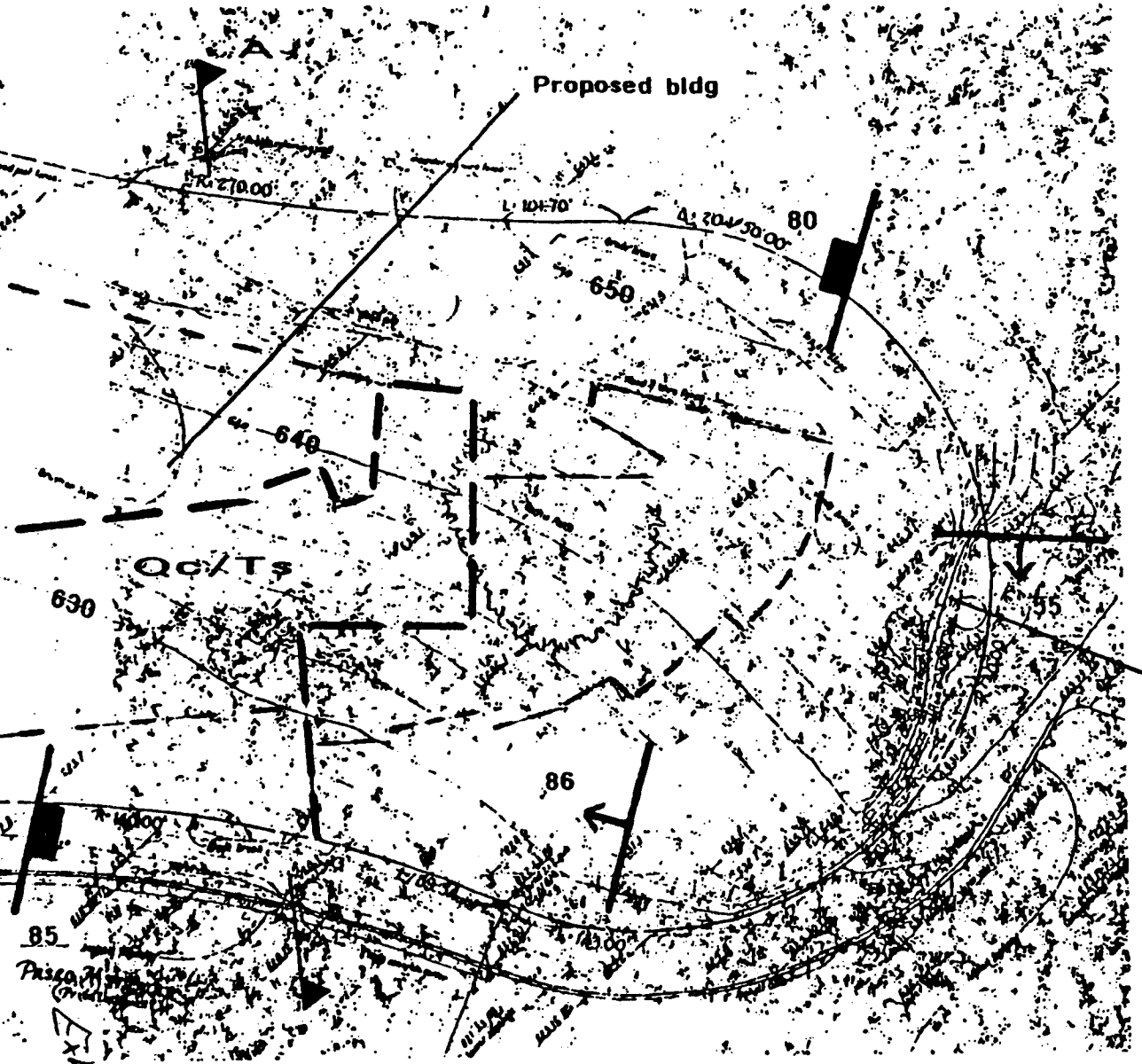
RAE/se

5-97 419
Geology Exhibit 15
letter on bedding
pl



Base map by Michael J. Amoroso 6/97

Plot plan per Artecnila undated



LEGEND

Qc	Colluvium
Ts	Sandstone w/ minor siltstone and basalt

Strike/dip of crude strata as projected

Strike/dip of joint set

" fault line

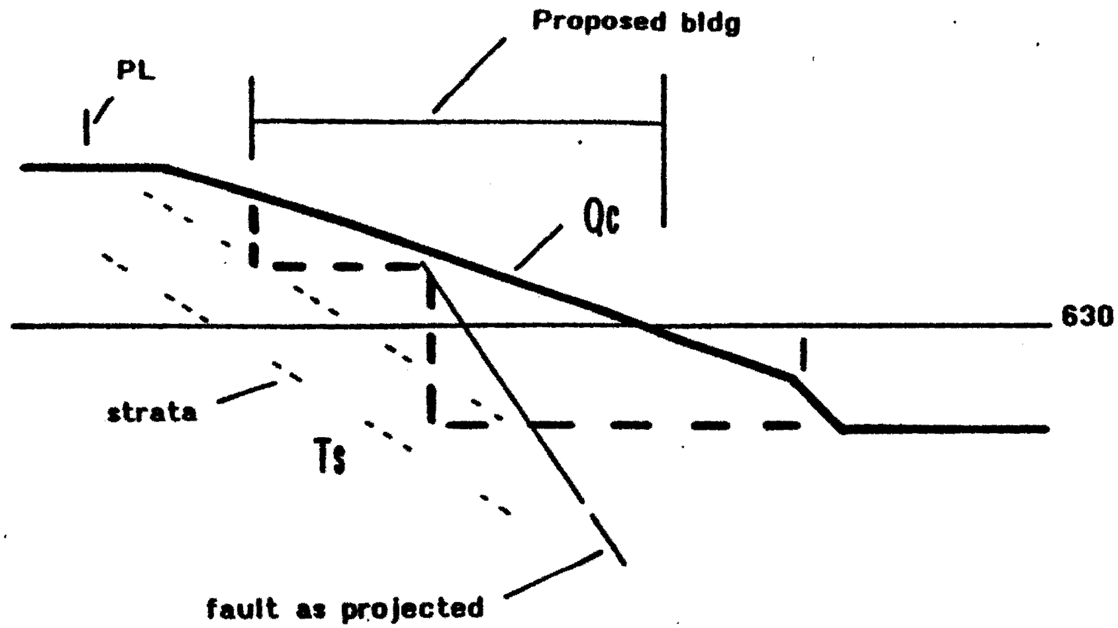
1"- 20'

GEOLOGIC MAP

J. Amoroso 6/97

undated

A



1"- 20'

Exhibit 15
5-97 419
cross section
p 4

CITY OF LOS ANGELES
CALIFORNIA

DEPARTMENT OF
BUILDING AND SAFETY
400 CITY HALL
LOS ANGELES, CA 90012-4999
TIM TAYLOR
GENERAL MANAGER
RICHARD E. HOLGUIN
EXECUTIVE OFFICER

December 4, 1997

Log # 22906
C.D. --

SOILS/GEOLOGY FILE - 2

Frank Akef
8671 Wilshire Blvd, #509
Beverly Hills, CA 90211

TRACT: 10175
LOT: 1
LOCATION: 865 Paseo Miramar

CURRENT REFERENCE REPORT/LETTER(S)	REPORT NO.	DATE(S) OF DOCUMENT	PREPARED BY
Geology Report	1789	11/04/97	Ray A. Eastman
Soil Report	7AKE050	11/07/97	MEC

PREVIOUS REFERENCE REPORT/LETTER(S)	REPORT NO.	DATE(S) OF DOCUMENT	PREPARED BY
Geology/Soil Report	7AKE050	08/29/97	MEC
Department Letter	22315	10/16/97	Bldg&Safety
Geology Report	2110-83	08/18/83	Harley Tucker
Soil Report	1605	11/09/83	Ralph Stone & Co
Department Letter	---	11/22/83	Bldg&Safety

The current and previous referenced reports concerning a proposed single-family residence have been reviewed by the Grading Section of the Department of Building and Safety. The geologic report dated 08/18/83 defined "critical lines" for footing setback because of the bedding plane orientation on the site. The current consultants indicate that they agree with the conclusions on the 08/18/83 report, however they have reported that the original cross-sections, which show those critical lines can not be located. Therefore, in the previous Department letter a new geologic map and cross-sections was requested. In the recent report only one cross-section was provided and none of the critical lines were defined. The reports cannot be approved as they lack sufficient information to determine the stability or safety of the proposed development. An addendum to the reports shall be submitted which contains the following information:

Interim city review

5-97 419
Exh. b. 16 p 1.

1. The project geologist shall please review the section on Geologic Stability, pages 6 and 7 of the report dated 08/18/83, and provide cross-sections which define the critical footing setback lines.

2. Show the location of the proposed caisson supported retaining wall on the geologic map and sections. It appears that the deadman is deriving support from passive resistance of the new fill, as well as bedrock; provide passive resistance calculations and subsequent recommendations.

3. Provide design recommendations and calculations for retaining walls over 15 feet.

4. Provide design calculations and recommendations for proposed retaining walls that are surcharged by adverse bedding conditions. Calculations shall be based on residual shear strength parameters.

Dana Prevost
DANA PREVOST
Engineering Geologist I

ANDRZEJ T. SZPIKOWSKI
Geotechnical Engineer I

DP/ATS:dp:ats
22906
(213) 485-3435

cc: MEC
Ray A. Eastman
WLA District Office

5.97 419
Exhibit 16 p 2
In lieu of review

GEOLOGY REPORT 12/9/97
SOIL REPORT 12/12/97

MR. FRANK AKEF
WESTSIDE HOMES LLC
8671 WILSHIRE BOULEVARD , SUITE 509
BEVERLY HILLS, CALIFORNIA 90211

ADDENDUM NO. 1
TO
GEOTECHNICAL ENGINEERING REPORT

865 PASEO MIRAMAR
LOS ANGELES

Prepared By

MEC/Geotechnical Engineers, Inc.
111 North Jackson Street, Suite 205
Glendale, California 91206

December 12, 1997

Exhibit 17
5.97 419
updated geolog
p 1

MEC MEC/Geotechnical Engineers, Inc.

December 12, 1997

Mr. Frank Akef
WESTSIDE HOMES LLC
8671 Wilshire Blvd., Suite 509
Beverly Hills, CA 90211

Subject: Addendum No. 1 to Geotechnical Engineering Report
865 Paseo Miramar, Los Angeles
MEC File Number: 7AKE050

Dear Mr. Akef:

Current Reference Report/Letter	Report/ Log No.	Document Date	Prepared by
Geological Report	2110-83	08-18-83	Harley Tucker
Geotechnical Report	1605	09-26-83	Ralph Stone and Company
Geotechnical Report	1605	11-09-83	Ralph Stone and Company
B & S Department Letter		11-22-83	City of Los Angeles
B & S Department Letter	22315	10-16-97	City of Los Angeles
Lmtd Geological Info.	7AKE050	11-07-97	MEC/Geotechnical Engineers, Inc.
B & S Department Letter	22906	12-04-97	City of Los Angeles

This report is prepared to address the questions and comments raised by the Department in their December 4, 1997 review letter referenced above and in our meeting with the city geologist, city engineer, consulting architect, consulting geologist and the undersigned on December 8, 1997. This report addresses the comments in the order raised. A copy of the geologic map and cross sections are presented in the Enclosure. The Department letter dated December 4, 1997 is presented in Attachment No. 3.

5-97 419
Exh. 6.1 17
pg

111 North Jackson Street . Suite 205 . Glendale . CA 91206 . (818) 243-4280 . Fax (818) 243-4543 . Bay Area - San Diego (800) 735-4521

Q1 - The project geologist ...
A1 - A copy of the supplemental geologic information is presented in Attachment No. 1 which addresses this issue.

Q2 Show the location of ...
A2 - The latest proposed improvements do not include placement of caissons, deadman or structural fill.

Q3 - Provide design recommendations ...
A3 - Excavation for the proposed improvements will be entirely into competent bedrock. Construction of the retaining walls will be conducted via the gunite method. The proper thickness of gunite will be placed against competent bedrock. All calculations for allowable active pressure yield very low values. A conservative value of 42 pcf for all gunite walls and all walls with level backfill is recommended. A conservative value of 55 pcf for all walls with 2:1 backfill is recommended.

Q4 - Provide design calculations ...
A4 - The geologic report presented in Attachment No. 1 suggests that there are no adverse bedding conditions.

Additional Discussion

During construction of the residence, we anticipate up to a maximum of twenty-four (24)-foot-high vertical excavation in order to construct the proposed retaining walls. Taking into consideration the nature of the bedrock, the vertical segment of the excavations may exceed the five (5)-foot limit by twenty (20) feet for a temporary period of time. That time period must not exceed four (4) weeks. Back-up calculations are presented in Attachment No. 2.

5-97 419
Exhibit 17
P 3

A Registered Grading Deputy Inspector, approved by and responsible to this office, will be required to provide continuous inspection during the construction of the garage while the vertical excavations are not shored.

The contractor is advised to limit access in the close vicinity of said excavation. Further, contractor is advised to make a concerted effort to complete the construction of the proposed retaining wall in said area while minimizing the activities in immediate proximity thereto.

The geologic plan and associated sections presented as Enclosures, indicate presence of a minor fault. This fault affects construction of retaining walls that are situated on the western portion of the property. The entire mass of earth materials above said fault plane must be removed during construction of retaining walls that are proposed on the western portion of subject property. Exact location of the fault must be verified by the consulting geologist during the excavation process.

Footings of the proposed retaining walls must be founded a minimum of twenty-four (24) inches into the competent bedrock.

A bearing capacity of 3,000 psf must be used for footings. The allowable bearing value is for dead-plus-live loads, and may be increased by 30 percent for momentary wind and seismic loads. The following minimums apply to the garage footings:

1. Footings must be founded at a depth of 24 inches into the competent bedrock.

2. Footings must be reinforced with a minimum of four (4) #4 bars, two at the top and two at the bottom. The final design of the footings must be provided by a structural engineer in conjunction with this office.

3. A coefficient of friction of 0.4 must be utilized for resisting lateral loads at the contact surface of concrete and foundation soils.

4. Passive earth pressure increasing at the rate of 1,000 psf per foot of depth, to a maximum of 6,000 psf, must be used in calculations.

5-97 4c9
Exhibit 17 p4

5. Active earth pressure increasing at the rate of 42 psf per foot of depth must be used in calculations.

Retaining walls must be provided with weep holes, or perforated pipe and gravel sub-drain to prevent entrapment of water in the backfill. Perforated pipe must consist of 4-inch minimum diameter PVC Schedule 40, or ABS SDR-35, with a minimum of 16 perforations per foot on the bottom one-third of the pipe. Every foot of the pipe must be embedded in 3 cubic feet of 3/4-inch gravel wrapped in filter fabric (Mirafi 140N, or equal).

All other design parameters are presented in the original "Soils Engineering Investigation and Report" prepared by Ralph Stone and Company, Inc., dated 09/26/83, referenced earlier in this report.

We appreciate the opportunity to be of service to you. If you have any questions, please call our office.

Sincerely,

MEC/GEOTECHNICAL ENGINEERS, INC.

Sassan A. Salehipour, P.E.
President

SAS:ad/7ake050b.doc
Attachments
Enclosures

5.97 419
Exhibit 17
p5