CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
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Item Th 22e

Filed:	4/18/2006
180th day	10/15/2006
Staff:	James Johnson
Staff Report:	9/21/2006
Hearing Date:	10/12/2006
Comm Action:	

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-05-202

APPLICANT: Aurora Family LLC **AGENT:** Pete Weeger

PROJECT LOCATION: 2746 Harrow Road & 2685 Vista Del Mar Road, Topanga, Los Angeles County

PROJECT DESCRIPTION: Construct a two story, 32 feet high, 6,216 sq. ft. single family residence with an attached 475 sq. ft. one-car garage and an attached 785 sq. ft. two-car garage on a 9,950 sq. ft. residential building pad/development area; a one-story 22 ft. high, 735 sq. ft. barn (constructed with non-combustible materials) on a separate pad with an area of 1,725 sq. ft.; a 3,500 sq. ft. corral; pool and jacuzzi with solar panels; perimeter fencing; septic system; one water storage tank; rainwater harvesting system; entry gates, drainage structures; landscaping, two temporary construction trailers for residential/office/storage use; revegetation/restoration of one as-built access road and revegetation/restoration of another access road; and request for after-the-fact approval of an as-built water well (and new installation of electric pump and casing for well), temporary placement of an as-built plastic water tank, onsite drainage structures, catch basins with energy dissipaters, and as-completed fuel modification of about 1.5 acres beyond 0.5 acres approved fuel modification for existing residence to northeast. In addition the project includes 5,200 cu. yds. of grading (2,918 cu. yds. of cut and 2,282 cu. yds. of fill); a new onsite access driveway with turnaround; improve and widen a 610 ft. long segment of the approximately 12-20 ft.-wide Harrow Road and Betton Drive to 20 ft. in width; and a lot line adjustment between the subject parcel (2.51 acres in size) and the adjacent parcel (2.53 acres in size) to reduce the subject parcel by 0.28 acres in size resulting in a 2.25 acre lot and 2.79 acre lot.

Existing Lot Area:	2.51 and 2.53 acres
Proposed Lot Area:	2.25 and 2.79 acres
Total Building Pad Areas:	11,675 sq. ft.
Residential Building Pad Area:	9,550 sq. ft.
Barn Building Pad Area:	1,750 sq. ft.
Building Coverage:	6,017 sq/ft
Paved Coverage:	5,952 sq/ft
Landscape Coverage:	5,530 sq/ft

Parking Spaces:	2
Max. Ht. Above Finish Grade:	32 ft. residence 22 ft. barn

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends that the Commission **approve** the proposed project with Sixteen (16) Special Conditions addressing plans conforming to geologic recommendation, landscaping and erosion control plans, removal of natural vegetation, assumption of risk, future development restriction, color restriction, lighting restriction, deed restriction, drainage and polluted runoff control plan, removal of temporary construction trailers, habitat impact mitigation, open space deed restriction, revised plans, livestock maintenance restriction and stable waste management plan, non-combustible barn design, disposal of excavated material, and condition compliance. The project site is located within the Tuna Canyon Significant Watershed, and includes native chaparral that is considered environmentally sensitive habitat. The site is accessed from Tuna Canyon Road by private paved roadways (West Betton Drive and Harrow Road) which include approximately 610 linear ft. of existing dirt roads which are proposed to be improved as part of this application The standard of review for this project are the Chapter 3 policies of the Coastal Act.

LOCAL APPROVALS RECEIVED: Approval in Concept: Los Angeles County Regional Planning Department dated 3/9/2006; Los Angeles County Department of Health Services, dated 3/17/2006; Coastal Commission Approval, Los Angeles County Fire Department, dated 12/28/2005; Final Fuel Modification Plan, County of Los Angeles, Fire Department dated 3/7/2006; Los Angeles County Environmental Health Department Approval water well, dated 10/24/2005; State of California, Department of Fish and Game, Streambed Alteration Agreement, dated December 28, 2005; Department of the Army, Los Angeles District Corps of Engineer, Nationwide Permit Authorization, dated January 31, 2006.

SUBSTANTIVE FILE DOCUMENTS: Los Angeles County Environmental Review Board Meeting Minutes dated November 21, 2005; Biological Survey for 2746 Harrow Road, Topanga by Stephen Nelson, Consulting Biologist, dated September October 2005; Phase One Cultural Survey, by Gary Stickel, Consulting Archaeologist, dated 28 September 2005; Preliminary Geologic & Soils Engineering Investigation, by Subsurface Designs, Inc., dated April 6, 2005; Coastal Permit No. 4-04-053, Shepard; Coastal Permit No. 4-03-085, WF Trust; Coastal Permit No. 4-0z-zzz, Boudreau; Coastal Permit No.4-02-043 and A1, Munro

STAFF RECOMMENDATION:

MOTION: **I move that the Commission approve Coastal Development Permit No. 4-05-202 pursuant to the staff recommendation.**

STAFF RECOMMENDATION OF APPROVAL:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

I. Resolution for Approval with Conditions

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and 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. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. Standard Conditions

1. Notice of Receipt and Acknowledgment. The permit is not valid and development 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 development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development 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. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. 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.

5. 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. PLANS CONFORMING TO GEOLOGIC RECOMMENDATION

By acceptance of this permit, the applicant agrees to comply with the recommendations contained in the Preliminary Geologic and Soils Engineering Investigation, by Subsurface Designs Inc., dated April 6, 2006. These recommendations to be incorporated into all final design and construction plans include recommendations concerning grading and earthwork, foundations, retaining walls, drainage and maintenance.

The final plans approved by the consultants shall be in substantial conformance with the plans approved by the Commission relative to construction, grading, and drainage. Any substantial changes in the proposed development approved by the Commission that may be required by the consultant shall require amendment(s) to the permit(s) or new Coastal Development Permit(s).

2. LANDSCAPE, RESTORATION, EROSION CONTROL AND FUEL MODIFICATION PLANS

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit final revised landscaping and erosion control plans, prepared by a licensed landscape architect or a qualified resource specialist, for review and approval by the Executive Director. The erosion control plans shall be reviewed and approved by the consulting engineering geologist to ensure that the plans are in conformance with the consultants' recommendations. The plans shall incorporate the criteria set forth below. All development shall conform to the approved final revised landscaping and erosion control plans:

A) Landscaping and Erosion Control Plans

1) All graded & disturbed areas on the subject site shall be planted and maintained for erosion control purposes within (60) days of receipt of the certificate of occupancy for the residence. To minimize the need for irrigation all landscaping shall consist primarily of native/drought resistant plants as listed by the California Native Plant Society, Santa. Monica Mountains Chapter, in their document entitled Recommended List of Plants for Landscaping in the Santa Monica Mountains, dated February 5, 1996. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Exotic Pest Plant Council, or as may be identified from time to time by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as a 'noxious weed' by the State of California or the U. S. Federal Government shall be utilized within the property.

   All cut and fill slopes shall be stabilized with planting at the completion of final grading. Planting should primarily be of native plant species indigenous to the Santa Monica Mountains using accepted planting procedures, consistent with fire

safety requirements. Such planting shall be adequate to provide 90 percent coverage within two (2) years, and this requirement shall apply to all disturbed soils. The landscape plan shall be designed with vertical elements to partially screen and soften the visual impact of the structures with trees and shrubs as viewed from the public road located to the west and from the Tuna Canyon Trail located to the south of the project site. Once the temporary construction trailers are removed from the site these areas will be regraded to match the natural landform contour and revegetated with native plants within 30 days of the removal of these temporary structures.

2) The landscape plan shall also include a revegetation program, prepared by a qualified habitat restoration consultant with credentials acceptable to the Executive Director, that utilizes only native plant species that have been obtained from local Santa Monica Mountains genetic stock and are consistent with the surrounding native plant community. Road areas where re-grading and restoration with native plants shall occur will include the 80 foot long road to the existing well and the 360 foot portion of the road leading to the south and southeast portion of the property. Native seeds shall be collected from areas as close to the restoration site as possible. The plan shall specify the preferable time of year to carry out the restoration and describe the supplemental watering requirements that will be necessary, including a detailed irrigation plan. The plan shall also specify performance standards to judge the success of the restoration effort. The revegetation plan shall identify the species, location, and extent of all plant materials and shall use a mixture of seeds and container plants to increase the potential for successful revegetation. The plan shall include a description of technical and performance standards to ensure the successful revegetation of the restored slope. A temporary irrigation system may be used until the plants are established, as determined by the habitat restoration consultant, and as approved by the consulting civil engineer, but in no case shall the irrigation system be in place longer than two (2) years. The restored area shall be planted within thirty (30) days of completion of the remedial grading operations. The restoration plan shall be implemented within ninety (90) days of the issuance of this permit. Revegetation shall provide ninety percent (90%) coverage within five (5) years and shall be repeated, if necessary, to provide such coverage. The Executive Director may extend this time period for good cause. Plantings shall be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with the revegetation requirements.

3) Plantings will be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with applicable landscape requirements.

4) The Permittee shall undertake development in accordance with the final approved plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Coastal Commission - approved amendment to the coastal

development permit, unless the Executive Director determines that no amendment is required

5) Vegetation within 50 feet of the proposed residence may be removed to mineral earth, vegetation within a 200-foot radius of the main structure may be selectively thinned in order to reduce fire hazard. However, such thinning shall only occur in accordance with an approved long-term fuel modification plan submitted pursuant to this special condition. The final fuel modification plan shall include details regarding the types, sizes and location of plant materials to be removed, and how often thinning is to occur. In addition, the applicant shall submit evidence that the final fuel modification plan, as revised, has been reviewed and approved by the Los Angeles County Fire Department, Forestry Division, Fire Prevention Bureau. Any irrigated lawn, turf and ground cover planted within the fifty foot radius of the proposed residence shall be selected from the most drought tolerant species or subspecies, or varieties suited to the Mediterranean climate of the Santa Monica Mountains.

6) Rodenticides containing any anticoagulant compounds (including, but not limited to, Warfarin, Brodifacoum, Bromadiolone or Diphacinone) shall not be used.

7) Fencing of the entire property is prohibited. The only fencing allowed on the property is within 50 feet of the structure and along the driveway on the subject parcel only and an entry gate from Harrow Road. The proposed 3,500 sq. ft. corral as identified on the approved site plan is also allowed. The fencing type and location shall be illustrated on the landscape plan. Fencing shall also be subject to the color requirements outlined in Special Condition No.6 below.

B) Interim Erosion Control Plan

1) The plan shall delineate the areas to be disturbed by grading or construction activities and shall include any temporary access roads, staging areas and stockpile areas. The natural areas on the site shall be clearly delineated on the project site with fencing or survey flags.

2) The plan shall specify that grading shall take place only during the dry season (April 1 – October 31). This period may be extended for a limited period of time if the situation warrants such a limited extension, if approved by the Executive Director. The applicant shall install or construct temporary sediment basins (including debris basins, desilting basins, or silt traps), temporary drains and swales, sand bag barriers, silt fencing, and shall stabilize any stockpiled fill with geofabric covers or other appropriate cover, install geotextiles or mats on all cut or fill slopes, and close and stabilize open trenches as soon as possible. These erosion control measures shall be required on the project site prior to or concurrent with the initial grading operations and maintained throughout the development process to minimize erosion and sediment from runoff waters during construction. All sediment should be retained on-site, unless removed to

an appropriate, approved dumping location either outside of the coastal zone or within the coastal zone to a site permitted to receive fill.

3) The plan shall also include temporary erosion control measures should grading or site preparation cease for a period of more than 30 days, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils and cut and fill slopes with geo-textiles and/or mats, sand bag barriers, silt fencing; temporary drains and swales and sediment basins. The plans shall also specify that all disturbed areas shall be seeded with native grass species and include the technical specifications for seeding the disturbed areas. These temporary erosion control measures shall be monitored and maintained until grading or construction operations resume.

C) Monitoring

Five (5) years from the date of completion of the proposed development, the applicant shall submit for the review and approval of the Executive Director a landscape monitoring report, prepared by a licensed Landscape Architect or qualified Resource Specialist, that assesses the on-site landscaping and certifies whether it is in conformance with the landscape plan approved pursuant to this special condition. The monitoring report shall include photographic documentation of plant species and plant coverage.

If the landscape monitoring report indicates the landscaping is not in conformance with or has failed to meet the performance standards specified in the landscaping plan approved pursuant to these permits, the applicant, or successors in interest, shall submit a revised or supplemental landscape plan for the review and approval of the Executive Director. The supplemental landscaping plan must be prepared by a licensed landscape architect or qualified resource specialist and shall specify measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan. The permittee shall implement the remedial measures specified in the approved supplemental landscape plan.

3. REMOVAL OF NATURAL VEGETATION

Removal of natural vegetation for the purpose of fuel modification within the 50-foot zone surrounding the proposed structure shall not commence until the local government has issued a building or grading permit for the development approved pursuant to this permit. Vegetation thinning within the 50-200 foot fuel modification zone shall not occur until commencement of construction of the structure approved pursuant to this permit.

4. ASSUMPTION OF RISK, WAIVER OF LIABILITY AND INDEMNITY

By acceptance of this permit; the applicant acknowledges and agrees (i) That the site maybe subject to hazards from wildfire; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of

damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commissions approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

5. FUTURE DEVELOPMENT RESTRICTION

This permit is only for the development described in Coastal Development Permit No.4-05-202. Pursuant to Title 14 California Code of Regulations Section 13250(b)(6) and 13253(b)(6), the exemptions otherwise provided in Public Resources Code Section 30610 (a) and (b) shall **not** apply to the entire property. Accordingly, any future improvements to the entire property, including but not limited to the residence, garage, barn, conversion of the non-habitable barn to a habitable structure, the use or addition of any combustible materials for the barn, fencing, gates, grading, and clearing of vegetation, other than as provided for in the approved fuel modification landscape and erosion control plan prepared pursuant to Special Condition Number Two (2), shall require an amendment to Permit No. 4-05-202 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

6. STRUCTURAL APPEARANCE

PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the review and approval of the Executive Director, a color palette and material specifications for the outer surface of all structures, including the water tank authorized by the approval of coastal development, permit 4-05-202. The palette samples shall be presented in a format not to exceed 8 1/2" X 11" X ½" in size. The palette shall include the colors proposed for the all of the roofs, trims, exterior surfaces, driveway surface, retaining walls (visible to exterior), fencing materials, drainage swales, or other structures authorized by this permit. Acceptable colors shall be limited to colors compatible with the surrounding environment (earth tones). Including shades of green, brown and gray with no white, concrete, or light shades, galvanized steel, and no bright tones. All windows shall be comprised of non-glare glass.

The approved structures shall be colored with only the colors and window materials authorized pursuant to this special condition. Alternative colors or materials for future repainting or resurfacing or new windows may only be applied to the structures authorized by Coastal Development Permit No. 4-05-202 if such changes are specifically authorized by the Executive Director as complying with this special condition.

7. LIGHTING RESTRICTION

A. The only outdoor night lighting allowed on the subject parcel are limited to the following to minimize night time intrusion of light and disruption of wildlife traversing this area at night within this rural area:

1. The minimum necessary to light walkways used for entry and exit to the structures, including parking areas and driveways, on the site. This lighting shall be limited to fixtures that do not exceed two feet in height, that are directed downward, and use incandescent bulbs that do not exceed 60 watts, or energy efficient bulbs such as compact florescent that do not exceed a 12 watt rating, or bulbs generating the equivalent amount of lumens, unless a higher wattage is authorized by the Executive Director.

2. Security lighting attached to the residence and garages that are controlled by motion detectors is limited to incandescent bulbs that do not exceed 60 watts, or energy efficient bulbs such as compact florescent that do not exceed a 12 watt rating, or bulbs generating the equivalent amount of Lumens, unless a higher wattage is authorized by the Executive Director.

3. The minimum lighting necessary for safe vehicular use of the driveway. That lighting shall be limited to incandescent bulbs that do not exceed 60 wafts, or energy efficient bulbs such as compact florescent that do not exceed a 12-watt rating, or bulbs generating the equivalent amount of lumens, unless a higher wattage is authorized by the Executive Director.

B. No lighting on the remainder of the parcel, including the slopes and other areas, and no lighting for aesthetic purposes is allowed.

8. DEED RESTRICTION

Prior to issuance of the coastal development permit the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to these permits, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property (hereinafter referred to as the "Standard and Special Conditions"); and (2) imposing all Standard and Special Conditions of these permits as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the applicant's entire parcel or parcels. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

9. DRAINAGE AND POLLUTED RUNOFF CONTROL PLAN

Prior to the issuance of the Coastal Development Permit, the applicant shall submit for the review and approval of the Executive Director, final drainage and runoff control plans, including supporting calculations. The plan shall be prepared by a licensed engineer and shall incorporate structural and non-structural Best Management Practices (BMPs) designed to control the volume, velocity, and pollutant load of stormwater leaving the developed site. The plan shall be reviewed and approved by the consulting engineering geologist to ensure the plan is in conformance with geologist's recommendations. In addition to the specifications above, the plan shall be in substantial conformance with the following requirements:

(a) Selected BMPs (or suites of BMPs) shall be designed to treat, infiltrate or filter stormwater from each runoff event, up to and including the 85th percentile, 24-hour runoff event for volume-based BMPs, and/or the 85th percentile, 1-hour runoff event, with an appropriate safety factor, for flow-based BMPs.

(b) Runoff shall be conveyed off site in a non-erosive manner.

(c) Energy dissipating measures shall be installed at the terminus of outflow drains.

(d) The plan shall include provisions for maintaining the drainage system, including structural BMPs, in a functional condition throughout the life of the approved development. Such maintenance shall include the following: (1) BMPs shall be inspected, cleaned and repaired when necessary prior to the onset of the storm season, no later than September 30th each year and (2) should any of the project's surface or subsurface drainage/filtration structures or other BMPs fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system or BMPs and restoration of the eroded area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the applicant shall submit a repair and restoration plan to the Executive Director to determine if amendment(s) or new Coastal Development Permit(s) are required to authorize such work.

10. REMOVAL OF TEMPORARY CONSTRUCTION TRAILERS

With the acceptance of this coastal permit, the applicants agree that the temporary construction trailers on the site shall be removed within two years of the issuance of this coastal development permit or within thirty (30) days of the applicant's receipt of the Certificate of Occupancy for the proposed residence from the County of Los Angeles, whichever is less, to a site located outside the Coastal Zone or a site with a valid coastal development permit for the installation of the trailer.

11. HABITAT IMPACT MITIGATION

Prior to the issuance of the coastal development permit, the applicant shall submit for the review and approval of the Executive Director, a map delineating all areas of chaparral habitat (ESHA) that will be disturbed by the proposed development, including

by fuel modification requirements on the project site (based on the final fuel modification plan approved by the Los Angeles County Fire Department). The chaparral areas on the site shall be delineated on a detailed map, to scale, illustrating the subject parcel boundaries. The delineation map shall indicate the total acreage for all chaparral onsite that will be impacted by the proposed development, including the fuel modification areas. The existing graded pad and driveway is excluded from the total acreage of ESHA impacted. The delineation shall be prepared by a qualified resource specialist or biologist familiar with the ecology of the Santa Monica Mountains.

Mitigation shall be provided for impacts to the chaparral ESHA from the proposed development and fuel modification requirements by one of the three following habitat mitigation methods:

A. Habitat Restoration

1) Habitat Restoration Plan

Prior to the issuance of the coastal development permit, the applicant shall submit a habitat restoration plan, for the review and approval of the Executive Director, for an area of degraded chaparral habitat equivalent to the area of chaparral ESHA impacted by the proposed development and fuel modification area. The habitat restoration area may either be onsite or offsite within the coastal zone in the City of Malibu or in the Santa Monica Mountains. The habitat restoration area shall be delineated on a detailed site plan, to scale, that illustrates the parcel boundaries and topographic contours of the site. The habitat restoration plan shall be prepared by a qualified resource specialist or biologist familiar with the ecology of the Santa Monica Mountains, and shall be designed to restore the area in question for habitat function, species diversity and vegetation cover. The restoration plan shall include a statement of goals and performance standards, revegetation and restoration methodology, and maintenance and monitoring provisions. If the restoration site is offsite the applicant shall submit written evidence to the Executive Director that the property owner agrees to the restoration work, maintenance and monitoring required by this condition and agrees not to disturb any native vegetation in the restoration area.

The applicant shall submit, on an annual basis for five years, a written report, for the review and approval of the Executive Director, prepared by a qualified resource specialist, evaluating compliance with the performance standards outlined in the restoration plan and describing the revegetation, maintenance and monitoring that was conducted during the prior year. The annual report shall include recommendations for mid-course corrective measures. At the end of the five-year period, a final detailed report shall be submitted for the review and approval of the Executive Director. If this report indicates that the restoration project has been in part, or in whole, unsuccessful, based on the approved goals and performance standards, the applicant shall submit a revised or supplemental restoration plan with maintenance and monitoring provisions, for the review and

approval of the Executive Director, to compensate for those portions of the original restoration plan that were not successful. A report shall be submitted evaluating whether the supplemental restoration plan has achieved compliance with the goals and performance standards for the restoration area. If the goals and performance standards are not met within 10 years, the applicant shall submit an amendment to the coastal development permit for an alternative mitigation program.

The habitat restoration plan shall be implemented prior to occupancy of the residence.

2) Open Space Deed Restriction

No development, as defined in section 30106 of the Coastal Act shall occur in the habitat restoration area, as shown on the habitat restoration site plan, required pursuant to (A)(1) above.

Prior to the issuance of the coastal development permit, the owner of the habitat restoration area shall execute and record a deed restriction in a form and content acceptable to the Executive Director, reflecting the above restriction on development and designating the habitat restoration area as open space. The deed restriction shall include a graphic depiction and narrative legal descriptions of both the parcel and the open space area/habitat restoration area. The deed restriction 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 Commission amendment to this coastal development permit.

3) Performance Bond

Prior to the issuance of the permit, the applicant shall post performance bonds to guarantee implementation of the restoration plan as follows: a) one equal to the value of the labor and materials; and b) one equal to the value of the maintenance and monitoring for a period of 5 years. Each performance bond shall be released upon satisfactory completion of items (a) and (b) above. If the applicant fails to either restore or maintain and monitor according to the approved plans, the Coastal Commission may collect the security and complete the work on the property.

B. Habitat Conservation

Prior to issuance of the coastal development permit, the applicant shall execute and record an open space deed restriction in a form and content acceptable to the Executive Director, over a parcel or parcels containing chaparral ESHA. The chaparral ESHA located on the mitigation parcel or parcels must be of equal or greater area than the ESHA area impacted by the proposed development,

including the fuel modification/brush clearance areas. No development, as defined in section 30106 of the Coastal Act, shall occur on the mitigation parcel(s) and the parcel(s) shall be preserved as permanent open space. The deed restriction shall include a graphic depiction and narrative legal descriptions of the parcel or parcels. The deed restriction 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.

Prior to occupancy of the residence the applicant shall submit evidence, for the review and approval of the Executive Director, that the recorded documents have been reflected in the Los Angeles County Tax Assessor Records.

If the mitigation parcel is larger in size than the impacted habitat area, the excess acreage may be used to provide habitat impact mitigation for other development projects that impact like ESHA.

C. Habitat Impact Mitigation Fund

Prior to the issuance of the coastal development permit, the applicant shall submit evidence, for the review and approval of the Executive Director, that compensatory mitigation, in the form of an in-lieu fee, has been paid to the Santa Monica Mountains Conservancy to mitigate adverse impacts to chaparral habitat ESHA. The fee shall be calculated as follows:

1. Development Area, Irrigated Fuel Modification Zones

The in-lieu fee for these areas shall be $12,000 per acre within the development area and any required irrigated fuel modification zones. The total acreage shall be based on the map delineating these areas required by this condition.

2. Non-irrigated Fuel Modification Zones

The in-lieu fee for non-irrigated fuel modification areas shall be $3,000 per acre. The total acreage shall be based on the map delineating these areas required by this condition.

Prior to the payment of any in-lieu fee to the Santa Monica Mountains Conservancy, the applicant shall submit, for the review and approval of the Executive Director, the calculation of the in-lieu fee required to mitigate adverse impacts to chaparral habitat ESHA, in accordance with this condition. After review and approval of the fee calculation, the fee shall be paid to the Santa Monica Mountains Conservancy. The fee shall be used for the acquisition or permanent preservation of chaparral habitat in the Santa Monica Mountains coastal zone.

12. <u>OPEN SPACE RESTRICTION</u>

No development, as defined in Section 30106 of the Coastal Act, grazing, or agricultural activities shall occur in the Open Space Area as described and depicted in an Exhibit attached to the Notice of Intent to Issue Permit (NOI) that the Executive Director issues for this permit except for:

a. Fuel modification required by the Los Angeles county Fire Department undertaken in accordance with the final approved fuel modification plan required by Special Condition Two (2) and included in Exhibit 18;
b. Drainage and polluted runoff control activities pursuant to Special Condition Two (2) and Special Condition Ten (10);
c. Planting of native vegetation and other restoration activities as required by Special Condition No. Two (2), and if additional plantings or other restoration activities are approved by the Commission as an amendment to this coastal development permit or a new coastal development permit; and
d. Existing easements for roads, trails, and utilities.
e. Water well.

PRIOR TO THE ISSUANCE BY THE EXECUTIVE DIRECTOR OF THE NOI FOR THIS PERMIT, the applicant shall submit for the review and approval of the Executive Director, and upon such approval, for attachment as an Exhibit to the NOI, a formal legal description and graphic depiction, prepared by a licensed surveyor, of the portion of the subject property affected by this condition, as generally described on Exhibit 19 attached to the findings in support of approval of this permit.

13. LIVESTOCK MAINTENANCE AND STABLE WASTE MANAGEMENT PLAN

A. In accordance with the applicant's proposal, the horse facilities on site shall be limited to the keeping or maintaining of no more than 4 horses or ponies or similar number of livestock at any time.

B. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,** the applicant shall submit a stable waste management plan for the review and approval of the Executive Director. The plan shall include management practices for the collection, storage, and disposal of stable wastes, including manure and bedding. Such wastes shall be collected and disposed of offsite in a manner and location prescribed in the approved plan.

C. Any additional or intensified use of the site for livestock maintenance purposes, whether recreational or commercial, shall require an amendment to Coastal Development Permit 4-05-202.

14. REVISED PROJECT PLANS

Prior to issuance of the Coastal Development Permit, the applicant shall submit for the review and approval of the Executive Director, a complete set of revised project plans which shall:

A. Either: (1) delete the proposed barn and 1,725 sq. ft. building pad for barn or (2) reduce the combined size of the two proposed development areas/ graded building pads for both the residence and the barn (development areas/building pads shall include all flat pad areas, as well as all cut/fill slopes but shall not include any grading required for the emergency vehicle hammerhead turnaround, the turnaround area, and the residential access driveway) to a total of no more than 10,000 sq. ft. in total area. The proposed horse facility shall be cut into the western slope of the building pad or turnaround/driveway area. Revised floor and elevation plans for the residence, garage and horse facility shall also be submitted, for the review and approval of the Executive Director, if necessary to reduce the size of the two building pads (including all cut/fill slopes) to a total of 10,000 sq. ft. or less as noted above. The revised grading plan shall be completed and signed by a licensed engineer confirming the size of the pad(s) as noted above and include any revisions to the quantities of cut and fill grading and export as required by the revised grading plan to limit the cut and fill to no more than the proposed total of 5,200 cubic yards. An amendment to this coastal permit is required if the total cut and fill grading on site exceeds 5,200 cubic yards of material.

B. Identifies that all design and construction materials for the barn/corral are non-combustible and will not result in any expansion of the Los Angeles County Fire Department Fuel Modification beyond that required for the residence.

15. Removal of Excess Excavated Material

Prior to the issuance of the Coastal Development Permit, the applicant shall provide evidence to the Executive Director of the location of the disposal site for all excess excavated material from the site. If the disposal site is located in the Coastal Zone, the disposal site must have a valid coastal development permit for the disposal of fill material. If the disposal site does not have a coastal permit, such a permit will be required prior to the disposal of material.

16. Condition Compliance

Within 120 days of Commission action on this coastal development permit application, or within such additional time as the Executive Director may grant for good cause, the applicant shall satisfy all requirements specified in the conditions hereto that the applicant is required to satisfy prior to issuance of this permit.

IV. Findings and Declarations

A. Project Description

The project site is located within a partially developed 16-lot subdivision created in the 1960's prior to the effective date of the Coastal Act in 1977. The sites are located about two miles inland, northwest of Tuna Canyon, and southwest of the Fernwood area in an unincorporated area of Los Angeles County known as Topanga. The western 2.51 acre lot is accessed about one half of a mile to the south of Tuna Canyon Road, along Skyhawk Lane, Hawks Nest Trail, west along Betton Drive and south along Harrow Road to the subject lot which is vacant (Exhibits 1 and 2). The eastern 2.53 acre lot is also accessed south of Tuna Canyon Road, along Skyhawk Lane, Hawk Nest Trail, west along Betton Drive and then south along Vista Del Mar Road to the lot which includes an existing residence approved by Coastal Permit No. 4-03-085 (WF Trust) (Exhibits 1 and 2).

The applicant proposes to construct a two story, 32 feet high, 6,216 sq. ft. single family residence with an attached 475 sq. ft. one-car garage and an attached 785 sq. ft. two-car garage on a 9,950 sq. ft. residential building pad; a one-story 22 ft. high, 735 sq. ft. barn (constructed with non-combustible materials) on a separate pad with an area of 1,725 sq. ft.; a 3,500 sq. ft. corral; pool and jacuzzi with solar panels; perimeter fencing; septic system; one water storage tank; rainwater harvesting system; entry gates, drainage structures; landscaping, two temporary construction trailers for residential/office/storage use; revegetation/restoration of one as-built 80 foot long access road to an 'as built water well; revegetation/restoration of another 360 foot long access road; and request for after-the-fact approval of the as-built water well (and new installation of electric pump and casing for well), temporary placement of an as-built plastic water tank, onsite drainage structures, catch basins with energy dissipaters, and as-completed fuel modification of about 1.5 acres beyond 0.5 acres approved fuel modification for existing residence to northeast. In addition the project includes 5,200 cu. yds. of grading (2,918 cu. yds. of cut and 2,282 cu. yds. of fill); a new onsite access driveway with turnaround; improve and widen a 610 ft. long segment of the approximately 12-20 ft.-wide Harrow Road and Betton Drive to 20 ft. in width; and a lot line adjustment between the subject parcel (2.51 acres in size) and the adjacent parcel (2.53 acres in size) to reduce the subject parcel by 0.28 acres in size resulting in a 2.25 acre lot and 2.79 acre lot. (Exhibits 3- 15)

A water well, an 80 foot long access road to water well, and an existing plastic temporary water tank have been installed/constructed on the project site without the required coastal development permit (Exhibits 4, 14, 15). This application includes the request for after-the-fact authorization of the well, removal and replacement of the plastic water tank with a new permanent water tank, and revegetation/restoration of the 80 foot long road. The applicant has indicated that due to the relatively flat topography and proximity to the existing driveway, the 80 ft. long road will not be necessary in order to maintain the proposed water well in its existing location. In addition, the property has been cleared or thinned for about 80% of the 2.51 acre lot of native vegetation. About 0.5 acres of vegetation has been removed as a result of the approved fuel modification

for the adjoining residence approved in Coastal Permit No. 4-03-085 (WF Trust). The remaining approximate 1.5 acres of vegetation clearance or thinning was completed outside the approved fuel modification area for the adjacent residence and without the required coastal development permit (Exhibit 16). However, the portion of the site where the unpermitted vegetation clearance has occurred will be located entirely within the required fuel modification zones for the new single family residence proposed as part of this application.

Lastly, the proposed project includes the minor adjustment of the lot line between the existing 2.51 acre lot where the new proposed single family residence will be located and an adjoining 2.53 acre lot to east. The subject lot will be 2.25 acres and adjoining lot will be 2.79 acres in size after the adjustment. (Exhibit 3)

Existing development within the vicinity of the proposed project site includes an existing residence on the adjoining lot to the east, two residences on nearby lots located to the north and north east and one residence now under construction on a lot further to the east on Vista Del Mar Road. Further, two residences have been previously approved but not yet constructed on two nearby lots, one on a lot located to the southeast at the end of Vista Del Mar Road and the second on a lot located to the north on Betton Drive. In addition, to the west there are undeveloped privately owned lands. (Exhibit 2).

The building site for the proposed residence and garage is on the saddle between a small hill to the south and a southerly trending ridge within the northeast portion of the 2.51 acre lot. The proposed barn site is located to the west of the residence between Harrow Road (which is proposed to be regraded and restored) on the west and the residential access driveway on the north. Slopes ascend from the northern margin of the proposed residential building pad about 40 feet to a westerly trending ridge at an average slope ratio of 2:1 (26 degrees). Slopes descend from the southwest margin of the proposed building pad about 100 feet into a southerly trending natural drainage ravine at slopes ranging from 1 ½:1 (33 degrees) to 2:1 (26 degrees). Slopes descend from the east margin of the proposed building pad about 60 feet into a southerly trending drainage ravine at slope ratios less than 3:1 (18 degrees). Slope areas were covered with moderate to dense growth of native chaparral, although a significant portion has been either removed or thinned on 80% of the site. The maximum relief within the property is about 100 vertical feet across a horizontal distance of about 400 feet. The elevation of the property ranges from 1,630-foot elevation on the north to 1,530-foot elevation at the southwest corner of the lot in a drainage ravine. This drainage leads to Tuna Canyon Creek, a blue line stream, located about 800 feet to the south of the subject development.

One component of the proposed project includes improving 610 feet of the 12-20 foot wide existing Harrow Road and Betton Drive to a uniform width of 20 feet with an associated drainage structure (Exhibits 4, 5, 6). These road improvements extend across three separate lots located to the north of the applicant's subject lot. Coastal Act Section 30601.5 states as follows:

> ***All holders or owners of any interests of record in the affected property shall be notified in writing of the permit application and invited to join as co-applicant.***

Because this application includes three lots which the applicant has an easement to access the subject property, and the applicant is proposing road paving, grading and drainage improvements, the Commission must notify these property owners of the application pursuant to Section 30601.5. A letter was sent by staff inviting these property owners to join this application as a co-applicant if they so choose (Exhibit 17). No response has been received from these property owners at this time. If a written response is received Staff will indicate so at the Commission meeting.

Further, as noted above, the proposed 10,000 gallon steel, 15 ft high, 10.5 ft diameter, will be partially buried into the area northeast of the proposed residence on the building pad (Exhibit 4). The 10,000 gallon water tank is intended, in part, for fire protection and will be connected to a proposed fire hydrant on site.

Further, the County of Los Angeles Environmental Review Board (ERB) reviewed this project on November 21, 2005. The ERB meetings are working sessions where the appointed ERB members serve in an advisory capacity to the Regional Planning Commission (or the County decision makers) providing recommendations on whether or not the project conforms to the policies of the County LUP. The ERB evaluation and recommendation to the County decision makers (the Regional Planning staff in this case) concluded that the proposed project was consistent with the policies of the County LUP after modifications. The ERB recommended to the County decision makers that the proposed project was consistent after modification with project modifications addressing the following issues: 1) 'guest house/barn' be proposed as one or the other, as residential use is not compatible with keeping of livestock; 2) move the 'guest house/barn' structure closer to the house, to relatively flat area east of currently proposed location; 3) the swimming pool is to remain where currently proposed, not further away from residence; 4) expand Fuel-modification Zone A to 50 ft., omit Zone B and selectively thin vegetation (i.e. no wholesale clearing) in Zone C up to 200 ft. from the structure, rotate the trimming of native shrubs so that individual plants are able to recover from pruning and 'rest' before being pruned again', remove Texas ranger, maple and rosemary, use only locally indigenous species in Zone C; 5) use coast live oak and/or toyon instead of Fremont cottonwood to screen residence; 6) the County made a mistake and has encouraged cumulative impacts by issuing Certificates of Compliance for the lots in this area; 7) recess the water tanks into the ground to reduce the visual impacts; 8) redesign the house to a single story, reduce height of the entry tower; 9) exterior lighting shall be directed downward, of low intensity, at low height and shielded to prevent illumination of surrounding properties and undeveloped areas, outdoor security lighting, if any is used, shall be on a motion detector; 10) use earth tone colors of the surrounding areas on all structures to minimize visual impacts to the viewshed.

The applicant has received an "Approval in Concept" from the County of Los Angeles Department of Regional Planning on 3/9/05 for the proposed residence, garage and driveway improvements. The County's conditions of approval included allowing a two story residence with a maximum height of 35 feet, a guest house located closer to the residence, swimming pool close to the residence, native landscape screening, low intensity exterior lighting directed downward, use earth tone colors on structures, and

other minor conditions. In addition, the proposed project also received a Final Fuel Modification Plan Approval dated 9/6/2006, by the Los Angeles County Fire Department (Exhibit 18).

Since then, the applicant has revised the proposed project to delete the previously proposed guest house/storage structure and, instead, propose a 735 sq. ft., 22 foot high, barn located east of Harrow Road. In order to minimize grading, the barn will be cut into the western building pad slope proposed for the residence. In addition, the proposed drainage structures were revised to include the installation of two separate structures, each with an energy dissipater to split up the quantity and velocity of water flow from the residential build pad and Harrow Road and the from the proposed barn pad.

Although the subject parcel is located within Tuna Canyon Significant Watershed, the project site is located about 800 feet from one tributary of Tuna Canyon Creek to the south. An unnamed drainage located along the western property boundary drains directly into this tributary of Tuna Canyon Creek about 800 feet to the south. This tributary of Tuna Canyon Creek has been designated Environmentally Sensitive Habitat Area (ESHA) by the Certified Malibu/Santa Monica Mountains Land Use Plan. In addition, ESHA was also located on the western portion of the lot, where undisturbed native chaparral was located prior to its unpermitted removal. However, in the event the Commission approves this subject project, the ESHA will be removed from the majority of the lot as part of the Fuel Modification Plan, within Zone A (50 feet from the residence), and thinned as part of the Fuel Modification Plan, Zone C (additional 150 feet from residence). The Los Angeles County Fire Department required that the Final Fuel Modification Plan include two Zones A and C, as the project site is located on the top of a small saddle leading from a ridge requiring the typical fuel modification to adequately protect the proposed development. This issue is discussed further below.

The applicant also submitted a Phase One Cultural Survey for the property by Gary Stickel, Consulting Archaeologist dated 28 September 2005. No cultural resources were found on the site.

B. Environmentally Sensitive Resource Areas

Section 30250(a) of the Coastal Act provides that new development be located within or near existing developed areas able to accommodate it, or in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources:

> ***New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.***

Section 30105.5 of the Coastal Act defines the term "cumulatively," as it is used in Section 30250(a), to mean that:

> ***[T]he incremental effects of an individual project shall be reviewed in conjunction with the effects of past projects, the effects of other current projects, and the effects of probable future projects.***

Sections 30230 and 30231 of the Coastal Act are designed to protect and enhance, or restore where feasible, marine resources and the biologic productivity and quality of coastal waters, including streams.

Section 30230 of the Coastal Act states that:

> ***Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.***

Section 30231 of the Coastal Act states that:

> ***The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.***

In addition, Section 30240 of the Coastal Act states that environmentally sensitive habitat areas must be protected against disruption of habitat values:

> ***(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such 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 such areas, and shall be compatible with the continuance of such habitat areas.***

Sections 30230 and 30231 of the Coastal Act require that the biological productivity and the quality of coastal waters and streams be maintained and, where feasible, restored through among other means, minimizing adverse effects of waste water discharge and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flows, maintaining natural buffer areas that protect riparian habitats, and minimizing alteration of natural streams. In addition, Sections 30107.5 and 30240 of the Coastal Act state that environmentally sensitive habitat areas must be protected against disruption of habitat values. Therefore, when considering any area, such as the Santa Monica Mountains, with regard to an ESHA determination one must focus on three main questions:

1) Is a habitat or species rare or especially valuable?
2) Does the habitat or species have a special nature or role in the ecosystem?
3) Is the habitat or species easily disturbed or degraded by human activities and developments?

The Coastal Commission has found that the Mediterranean Ecosystem in the Santa Mountains is itself rare, and valuable because of its relatively pristine character, physical complexity, and resultant biological diversity. Therefore, habitat areas that provide important roles in that ecosystem are especially valuable and meet the second criterion for the ESHA designation. In the Santa Monica Mountains, coastal sage scrub and chaparral have many important roles in the ecosystem, including the provision of critical linkages between riparian corridors, the provision of essential habitat for species that require several habitat types during the course of their life histories, the provision of essential habitat for local endemics, the support of rare species, and the reduction of erosion, thereby protecting the water quality of coastal streams. For these and other reasons discussed in Exhibit 20, which is incorporated herein, the Commission finds that large contiguous, relatively pristine stands of coastal sage scrub and chaparral in the Santa Monica Mountains meet the definition of ESHA. This is consistent with the Commission's past findings on the Malibu LCP[1].

For any specific property within the Santa Monica Mountains, it is necessary to meet three tests in order to assign the ESHA designation. First, is the habitat properly identified, for example as coastal sage scrub or chaparral? Second, is the habitat undeveloped and otherwise relatively pristine? Third, is the habitat part of a large, contiguous block of relatively pristine native vegetation?

The applicant proposes to construct a two story, 32 feet high, 6,216 sq. ft. single family residence with an attached 475 sq. ft. one-car garage and an attached 785 sq. ft. two-car garage on a 9,950 sq. ft. residential building pad/development area (including cut/fill slopes); a one-story 22 ft. high, 735 sq. ft. non-combustible material barn on a separate pad with an area of 1,725 sq. ft.; a 3,500 sq. ft. corral; pool and jacuzzi with solar panels; perimeter fencing; septic system; two water storage tanks; rainwater harvesting system; entry gates, drainage structures; landscaping, two temporary construction trailers for residential/office/storage use; revegetation/restoration of one as-built access road and revegetation/restoration of another access road; and request for after-the-fact approval of an as-built water well (and new installation of electric pump and casing for well), temporary placement of an as-built plastic water tank, onsite drainage structures, catch basins with energy dissipaters, and as-completed fuel modification of about 1.5 acres beyond 0.5 acres approved fuel modification for existing residence to northeast. In addition the project includes 5,200 cu. yds. of grading (2,918 cu. yds. of cut and 2,282 cu. yds. of fill); a new onsite access driveway with turnaround; improve and widen a 610 ft. long segment of the approximately 12-20 ft.-wide Harrow Road and Betton Drive to 20 ft. in width; and a lot line adjustment between the subject parcel (2.51 acres

[1] Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.

in size) and the adjacent parcel (2.53 acres in size) to reduce the subject parcel by 0.28 acres in size resulting in a 2.25 acre lot and 2.79 acre lot. (Exhibits 1-16).

The proposed grading is necessary to cut a pad into the southern portion of a small ridge on the north and a small knob hill on the south for the proposed building pad and to widen and realign the existing road to the pad on the subject lot. The proposed residential building pad/development area (including cut/fill slopes) will be 9,950 sq. ft. in size. This development area does not include the grading and cut and fill slopes necessary to construct the fire department hammerhead turnaround area and the access driveway to the pad. The barn is proposed to be located on a second flat pad area surrounded by retaining walls totaling 1,725 sq. ft. of flat area. The total development area for the two building pads is 11,675 sq. ft. (including the cut and fill slope area to create these pads). Additional grading is required for the widening and improvement of Harrow Road and Betton Drive to access the site from the western portion of Betton Road which is currently paved. An existing, unpermitted 80 foot long road from the existing Harrow Road to the proposed well site is proposed to be removed and restored by re-grading the area to an approximation of its previously existing topography and revegetating the disturbed area with native vegetation. In addition, the applicant proposes to restore the existing 360 foot road that existed prior to the effective date of the Coastal Act and which is located along the west and southwest portion of property that currently leads to the proposed septic system (Exhibit 4) by revegetating the road with native vegetation and native cobblestone. The applicant proposes to access the septic system as needed from the eastern portion of the property through the garage and proposed driveway to the proposed building site.

The project site is designated as part of the Tuna Canyon Significant Watershed in the certified Malibu/Los Angeles County Land Use Plan. The Tuna Canyon Significant Watershed Area includes about 1,524 acres of land in the coastal Santa Monica Mountains within the watersheds of Tuna and Pena Canyons. The terrain is extremely steep, generally greater than 30% slope, and rugged in this canyon. The majority of the subject site and the surrounding 16-lot subdivision includes flat and sloping land with gentle to moderate slopes. The site elevation extends about 100 feet ranging from about 1,630 to 1,530 feet above sea level. The proposed building pad for the residence will use an existing ‘saddle’ and be cut into a descending ridge and small knob hill at about the 1,612 foot elevation level.

Commission staff has reviewed and analyzed historic aerial photographs of the building site and its immediate vicinity and determined that the western portion of the proposed building pad and the driveway have been disturbed by previous grading that occurred prior to 1977, the effective date of the Coastal Act (Exhibit 21). Unpermitted vegetation clearance has previously occurred on the project site since October 2006. Prior to the unpermitted vegetation removal, relatively undisturbed native chaparral covered the majority of the property. The native vegetation has been thinned and removed over about 80% of the lot beyond the fuel modification required for the approved residence located on a separate parcel to the east of the subject lot. Although the site is now primarily cleared of vegetetation, prior to the unpermitted clearance, the entire project site (with the exception of the existing Harrow Road) constituted environmentally

sensitive habitat area. The proposed project with a 9,950 sq. ft. development area for the residence and an and an additional 1,725 sq. ft. of flat pad/development area for the proposed barn will directly disturb a portion of this chaparral which was considered Environmentally Sensitive Habitat Area (ESHA).

The applicant submitted a Biological Survey for 2746 Harrow Road, the subject lot by Steven Nelson for the project site dated October 2005. This survey states that:

> ***The project site is vegetated almost exclusively with a uniform stand of mixed chaparral. The dominant plant species consist of large evergreen shrubs that grow to 6 feet or higher and form a closed canopy. These species include chamise (Adenostoma fasciculatum) laurel sumac (Malosma laurina), black sage (Salvia mellifera), and big-pod ceanothus (Ceanothus megacarpus). Intermixed with these larger shrubs are isolated patches of scrub vegetation including deerweed (Lotus scoparius), black sage (Salvia mellifera) and California buckwheat (Erigonium fasciculatum). The groundcover throughout the chaparral on site consists largely of leaf litter. Of note, the eastern approximately on-half of the property has been thinned as part of the fuel modification for the developed parcel directly east of the subject parcel. Here, flammable shrubs, such as chamise and laurel sumac have been cut at ground level and the remaining shrubs have been cut back, particularly near the ground. …***
>
> ***The pattern of undisturbed mixed chaparral and thinned chaparral on site is broken along an existing unimproved access road to the property. This road leads from Betton Road to the western portion of the parcel. Openings in the dense shrub canopy along the road have allowed the establishment of limited ruderal vegetation consisting of non-native annual grasses and forbs. These include brome grasses (Bromus sp.), wild oats (Avena sp.) and red-stemmed filaree (Erodium cicutarium).***

The Biological Survey did not identify any sensitive wildlife species on the subject lot. The Biological Survey includes recommendations to minimize adverse effects of the project to the functions and values of the watershed by minimizing the removal of native vegetation on site, providing buffer areas between new development and surrounding habitat areas from "edge effects" (i.e., excessive noise, night lighting, etc.) and protecting downstream areas from erosion and siltation.

The Biological Survey further states that :

> **"Specific measures to accomplish these objectives and that have or should be considered *for the project, include:***
>
> 1. ***Erosion Control – The house and attendant structures are planned to be constructed on the most suitable topography on site. The siting of the house and general site development are also conceptually designed to avoid the filling of the small drainage in the eastern (sic, western) portion of the site. These features should minimize the amount of grading required for the project and alterations to existing drainage patterns. Should the site's development require alterations to the drainage feature, a Section 1602 Streambed Alteration Agreement may be required from the California Department of Fish and Game. The U.S. Army Corps of Engineers may also have jurisdiction if more that 0.10 acre of the drainages (measured within the ordinary high water mark from bank to bank) is either dredged or filled.***
> 2. ***Siltation Control – During final grading engineering and landscaping planning, design criteria should be incorporated to minimize hard impervious surfaces and***

to control storm water runoff. Such design measures are intended to reduce the amount and velocity of runoff thereby minimizing the risk of downstream erosion and siltation that may otherwise degrade or destroy significant riparian habitats within the Tuna Canyon watershed.

3. ***Landscape Design – Native species of plants require little, if any, irrigation should be used for landscaping as well as fuel modification zones. In preparing a plant palette for the project, sources such as the list of native landscaping plants published by the CNPS should be consulted and used as a guideline by the landscape architect. The California Exotic Pest Plant Council's Exotic Pest Plants of Greatest Ecological Concern in California (October, 1999) should also be used as a guide when finalizing the landscape palette so as to avoid invasive horticultural species. Minimization of irrigated wet zones will also act to minimize the expansion of Argentine Ants which is a non-native species commonly associated with residential development.***
4. ***Wildlife – To reduce disturbances to wildlife, all exterior lighting should be directed downward and of low intensity to avoid light and glare from "spilling-over" into nearby habitat areas. In addition, fencing should be limited to the immediate perimeter of the house and yard, including the pool area, if proposed. This will allow wildlife to continue to move across the property to the extent that they do under existing conditions.***

At the time that this Biological Survey was completed in October 2005, the project included a guest house with an attached storage structure totaling 1,400 sq. ft. Since then, the applicant has revised the proposed proposed project to delete the guest house/storage structure and add a 735 sq. ft. barn near the drainage channel. Staff worked with the applicant to relocate the proposed barn as far as possible from the drainage channel on the western portion of the property. The proposed barn is located no closer than about 140 feet from the drainage channel. In addition, a 3,500 sq. ft. corral area proposed for horses is located to the south and east of the proposed barn on the western portion of the property and no closer than about 120 feet from the drainage channel. The proposed barn is now cut into the 9,950 sq. ft. residential building pad as a second flat pad area of about 1,725 sq. ft. surrounded by retaining walls on three sides.

The applicant also proposes to construct a drainage system for the barn and its pad leading to an energy dissipater located about 130 feet from the drainage channel that drains south about 800 feet to a tributary of Tuna Canyon Creek, a blue line stream which is considered ESHA. The Biological Survey did not address this revised project description including a barn and corral.

These measures suggested by the applicant's biologic consultant to minimize the projects adverse effects in a manner that it will be compatible with the functions and values of this significant watershed are incorporated into the proposed project as required by **Special Condition No. Two**, which addresses landscape, erosion control and fuel modifications plans and limits fencing on site, by **Special Condition No. Seven** which addresses exterior lighting restriction, and by **Special Condition No. Nine** which addresses a drainage and polluted runoff control plan.

The applicant's biological consultant notes that the project site is vegetated almost exclusively with "mixed chaparral", primarily consisting of large evergreen shrubs that grow to six feet or higher and form a closed canopy. However, the applicant's biological consultant also asserts that "the mixed chaparral dominating the site is not considered sensitive. However, since the review of the site by the applicant's biologist, Commission staff visited the subject property on August 8, 2006 and confirmed that the chaparral vegetation on the project site had been removed or thinned over 80% of the 2.51 acre lot without the required coastal development permit beyond the approved 0.5 acres as a result of fuel modification for the adjacent residence located to the northeast. In addition, staff notes that the chaparral habitat on the subject site was part of a larger unfragmented block of relatively undisturbed chaparral habitat that extends onto neighboring properties to the north and south. This chaparral vegetation was removed or thinned in the area beyond the adjoining fuel modification area without a coastal development permit. In past Commission permit actions and in its adoption of the Malibu Local Coastal Program, the Commission has found that areas in the Santa Monica Mountains that are vegetated with relatively undisturbed coastal sage scrub and chaparral, where such vegetated areas are part of a larger unfragmented block of habitat, constitute ESHA under the Coastal Act. As a result of the approval of the proposed residence, the fuel modification required by the Los Angeles County Fire Department will include all of this area where vegetation clearance and thinning has occurred and in fact will require additional fuel modification up to about 90% of the subject 2.51 acre lot for Fuel Modification Zones A and C for the residence.

In past Commission actions proposing equestrian facilities, the Commission has considered the guidance provided in a document titled: Stable and Horse Management in the Santa Monica Mountains, dated 1999 prepared by the Resource Conservation District of the Santa Monica Mountains. This document is a manual on Best Management Practices for the reduction of non-point source pollution in coastal watersheds. Riparian areas and those adjacent to streams and drainages are sensitive to increases in the amount of nutrients and sediments, changes in pH and salinity, changes in water patterns, trampling of plant species and compaction of soils. Any water course in the watershed, including a minor drainage at the bottom of the canyon, stream, tributaries, gullies or drainage areas require protection in order to reduce water pollution and enhance the quality of the watershed. In previous permit actions, the Commission has found that setbacks from a water course should be 100 feet from the top bank or edge of the riparian vegetation to minimize adverse impacts to water quality. At this distance any pollutants created from the development are less likely to pollute the water course. The water course can perform all its functions in the watershed, including providing habitat, when horse facilities are located beyond the water course or riparian corridor.

Staff met with the applicant on August 29, 2006 to discuss the proposed location and size of the barn. Staff directed applicant to relocate the horse facilities more than 100 ft. from drainage and minimize all grading associated with barn by simply notching a small barn into the slope below the residential building pad and eliminate any flat pad areas not included within the actual footprint of the structure itself. In response, the applicant has revised the proposed location and design for the barn well beyond the area along

the existing drainage channel. The proposed barn is now located no closer than 140 feet from the drainage channel. The proposed corral is now located no closer than 120 feet from this drainage channel. . However, the applicant is proposing a large barn with an even larger flat pad area that will extend well beyond the footprint of the 735 sq. ft. barn itself which will result in a total development area on site of 11,675 sq. ft., that would be greater than the normally required 10,000 sq. ft. development area.

Within areas of the Santa Monica Mountains with chaparral and coastal sage scrub, which is considered ESHA, the Commission has required, through past permit actions, that development be clustered on a lot and the building pad size not exceed 10,000 sq. ft. as measured from the top of the cut slope to the bottom of the fill slope, excluding the size of the necessary fire truck hammerhead turnaround area, to minimize impacts on this sensitive habitat and the surrounding watershed resulting from both landform alteration and vegetation clearance. In this case, the applicant is proposing to construct two separate flat pad/development areas for the residence and barn that would be approximately 11,675 sq. ft. in combined size. Therefore, in order to bring the size of the two building pads into conformance with the Commission's normally required maximum 10,000 sq ft. development area (which includes the building pad and all cut/fill slopes), **Special Condition No. 14** is necessary to require the applicant to submit revised grading and site plans, for the review and approval of the Executive Director, which either: (1) delete the proposed barn and flat pad area for the barn or (2) reduce the combined size of the two graded building pads (including all cut/fill slopes) to a total of 10,000 sq. ft. or less (including all cut/fill slopes but not including the area of the emergency vehicle hammerhead turnaround and the cut and fill grading areas necessary to construct the turnaround area and residential access driveway).

The proposed horse facility shall be cut into the western slope of the building pad or turnaround/driveway area. In addition, **Special Condition No. 14** also requires that revised floor and elevation plans for the residence, garage and horse facility shall also be submitted for the review and approval of the Executive Director, if necessary, to reduce the size of the two building pads (including all cut/fill sloptes) to a total of 10,000 sq. ft. or less as noted above. The revised grading plan shall be completed, stamped and signed by a licensed engineer to confirm the size of these building pads as measured above and include any revisions to the quantities of cut and fill grading and export as required by the revised grading plan to limit the cut and fill to no more than the proposed total of 5,200 cubic yards. An amendment to this coastal permit is required if the total cut and fill grading on site exceeds 5,200 cubic yards of material.

In addition, the applicant has submitted evidence that the Los Angeles County Fire Department has approved a typical Final Fuel Modification Plan with a Zone A which will require the removal and replanting of native plants within Zone A between the structures and up to 50 feet from the structure and a Zone C extending to 200 feet from the structure which will require the thinning of this chaparral. No Zone B was required for the usual area between Zones A and C (Exhibit 18). The overlapping fuel modification as a result of the existing residence located to the east includes a portion of the proposed residential building pad and the fuel modification area within the northeast portion of the lot. This thinning of ESHA was approved in Coastal Permit No. 4-03-085

(WF Trust) (Exhibit 16) In addition, the property has been cleared or thinned of native vegetation for about 80% of the 2.51 acre lot. About 0.5 acres of vegetation has been removed as result of the approved fuel modification for the adjoining residence approved in Coastal Permit No. 4-03-085 (WF Trust). The remaining approximate 1.5 acres of vegetation clearance or thinning was completed outside the approved fuel modification area. No coastal permits were obtained for the water well, its access road, the water tank and the clearance or thinning of approximately 1.5 acres of vegetation on site. However, as a result of the approval of this proposed residence and its associated fuel modification requirements, all vegetation on a total of about 90% or about 2.25 acres of the subject lot will be removed or thinned.

In past permit actions, the Commission has required that development on sites with environmentally sensitive habitat be clustered within a 10,000 sq. ft. development area in order to minimize the amount of vegetation removal required to comply with Los Angeles County Fuel Modification Requirements. The Commission has authorized the construction of small horse facilities/structures outside of the normally required 10,000 sq. ft. development area only when such structures do not require any additional grading and are designed/constructed using non-combustible building materials that will not necessitate any additional fuel modification requirements. Therefore, in this case, the Commission finds that even if the proposed barn and barn pad area are redesigned pursuant to the requirements of **Special Condition Fourteen (14)** to reduce the combined pad size/development area for all development on site to no more than 10,000 sq. ft. in combined size, the location of the barn on a second graded pad more than 50 ft. to the west of the residence does not serve to adequately cluster development on site in a manner that would minimize vegetation clearance if any additional fuel modification requirements are necessary for the proposed barn. However, in this case, the applicant is proposing to construct the barn/corral entirely with non-combustible building materials in order to ensure that no additional fuel modification/vegetation clearance is required. Therefore, **Special Condition Fourteen (14)** has also been required in order to ensure that the barn does not result in the removal of additional vegetation for fuel modification requirements. Further, **Special Condition Five (5)** requires any future improvements to the barn/corral, including the conversion of the non-habitable barn to a habitable structure or the use or addition of any combustible materials for the barn, shall require an amendment to Permit No. 4-05-202 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

The proposed development includes the construction of a 735 sq. ft. barn with four stalls for horses, a tack room, horse washing room and second floor hay loft, with a proposed 3,500 sq. ft. corral. These equestrian related developments on the project site's 2.51 acre lot are located on the west side which includes slope gradients ranging from relatively flat to about 4:1 on the western portion of the property, all draining west into a north to south drainage channel located along the western property boundary. Most of the lot (80%) has been cleared or thinned of native vegetation either as part of the fuel modification required for the adjoining lot located to the east or on an unpermitted basis. Most of the area surrounding the drainage channel (20%) has not be cleared or thinned of native vegetation except for a road leading to the existing unpermitted water well.

Water runoff from the site is achieved by sheet flow directly into this drainage channel located along the western property boundary draining then into a tributary of Tuna Canyon Creek located about 800 feet to the south. Tuna Canyon Creek is a blue line designated stream.

The Commission has found in past permit actions that the minimizing non-point source pollutants from new development will help to maintain and enhance the quality of coastal waters, streams, wetlands, estuaries and lakes. Non-point source pollution is the pollution of coastal waters (including streams and underground water systems) which enters the waterway from numerous sources which are difficult to identify on an individual basis. Specific non-point source pollutants include suspended solids, coliform bacteria and nutrients. These pollutants can originate from many different sources such as overflow septic systems, storm drains, runoff from roadways, driveways, rooftops and horse facilities.

In addition, confined animal facilities are one of the most recognized sources of non-point source pollutants since these types of developments entail areas which are cleared of vegetation and have concentrated sources of animal wastes. The project site will generate horse wastes, which includes manure, urine, waste feed, and straw, shavings and/or dirt bedding which can be significant contributors to pollution. Horse wastes are a breeding ground for parasites, flies and other vectors. In addition, horse wastes contain nutrients such as phosphorous and nitrogen as well as microorganisms such as coliform bacteria which can cause eutrophication and a decrease in oxygen levels resulting in clouding, algae blooms, and other impacts affecting the biological productivity of coastal waters.

Such cumulative impacts can be minimized through the implementation of drainage and polluted runoff control measures. In addition to ensuring that runoff is conveyed from the site in a non-erosive manner, such measures should also include opportunities for runoff to infiltrate into the ground. Methods such as vegetated filter strips, gravel filters, and other media filter devices allow for infiltration. Because much of the runoff from the site would be allowed to return to the soil, overall runoff volume is reduced and more water is available to replenish groundwater and maintain stream flow. The slow flow of runoff allows sediment and other pollutants to settle into the soil where they can be filtered. The reduced volume of runoff takes longer to reach streams and its pollutant load will be greatly reduced. The applicant proposes two drainage systems on the site; one to drain the residential developed area, the other the barn area. These two drainage systems include energy dissipaters at their termini and the proposed corral will drain with sheet flow, all ultimately into the onsite drainage channel.

Therefore, in order for the proposed development to be consistent with the water and marine resource policies of the Coastal Act, the Commission finds it necessary to require the incorporation of Best Management Practices designed to control the volume, velocity and pollutant load of stormwater leaving the developed site. Critical to the successful function of post-construction structural BMPs in removing pollutants in stormwater to the Maximum Extent Practicable (MEP), is the application of appropriate design standards for sizing BMPs. The majority of runoff is generated from small

storms because most storms are small. Additionally, storm water runoff typically conveys a disproportionate amount of pollutants in the initial period that runoff is generated during a storm event. Designing BMPs for the small, more frequent storms, rather than for the large infrequent storms, results in improved BMP performance at lower cost.

Special Condition Nine requires a drainage and polluted runoff control plan, which will ensure that drainage will be conducted in a non-erosive manner. The Commission finds that a drainage system will serve to minimize the environmental and sensitive habitat degradation associated with erosion. In order to further ensure that adverse impacts to coastal water quality do not result from the proposed project, the Commission finds it necessary to require the applicant to incorporate filter elements that intercept and infiltrate or treat the runoff from the subject site, as is also required by **Special Condition Nine**. Such a plan will allow for the infiltration and filtration of runoff from the developed areas of the site and will capture the initial "first flush" flows that occur as a result of the first storms of the season. This flow carries with it the highest concentration of pollutants that have been deposited on impervious surfaces during the dry season, making the capture of the "first flush" flow a vital component of the drainage and polluted runoff control plan.

The Commission finds that sizing post-construction structural BMPs to accommodate (infiltrate, filter, or treat) the runoff from the 85th percentile storm runoff event, in this case, is equivalent to sizing BMPs based on the point of diminishing returns (i.e., the BMP capacity beyond which, insignificant increases in pollutants removal (and hence water quality protection) will occur, relative to the additional costs. Therefore, the Commission requires the selected post-construction structural BMPs be sized based on design criteria specified in **Special Condition Nine**, and finds this will ensure the proposed development will be designed to minimize adverse impacts to coastal resources, in a manner consistent with the water and marine policies of the Coastal Act.

Additionally, the applicant must monitor and maintain the drainage and polluted runoff control system to ensure that it continues to function as intended throughout the life of the development. Protection against non-point pollution is found in past Commission actions addressing equestrian facilities which have encouraged the use of vegetative devices ("filter strips" or "elements) to filter material before it is carried off the site. Filter strips are areas of vegetation planted between the development and the drainage course which utilize the ability of plants to slow runoff flow rates, effectively increasing percolation, and collect nutrients such as phosphorous and nitrogen reducing the amount that reach the drainage course. Use of filter elements has been found in past Commission actions, including Coastal Development Permit Nos. 4-98-073 (Ballard), 4-99-190 (Mahoney), 4-00-055 (Stark), 4-00-067 (Harris), 400125 (Bomar) to mitigate equestrian facilities as a non-point source of pollution of coastal waters. **Special Condition Nine** includes a provision that runoff from the confined animal areas be filtered either through a vegetated filter strip of some other filter media. The Commission notes that equestrian uses also compacts soils and can have increase erosion on site which can contribute to sedimentation downstream into the tributaries of Lachusa Canyon Creek. Special Condition One and Five addresses mitigation of drainage and polluted runoff from the site.

In addition, to ensure the confined equestrian facility onsite does not generate uncontrolled wastes which could migrate offsite and adversely impact coastal waters, **Special Condition Thirteen** requires the applicant to submit a livestock maintenance restriction and stable waste management plan. Fully implemented, **Special Condition Thirteen** will require management of manure, soiled bedding and removal of these materials from the site to an authorized disposal site.

Further, in this case, due to the important ecosystem roles of coastal sage scrub and chaparral in the Santa Monica Mountains (detailed in Exhibit 20), and, as discussed in detail above, the fact that about a two thirds portion of the subject site was relatively undisturbed in 2005 (prior to its removal on an unpermitted basis since the completion of the applicant's Biological Survey in October 2005) and part of a large, unfragmented block of habitat located to the south and north, the Commission finds that the mixed chaparral located on the project site (excluding the existed Harrow Road and driveways) meets the definition of ESHA under the Coastal Act.

In addition, a portion of the proposed residence and associated graded building pad is proposed to be located on an existing disturbed area on the project site which has been previously thinned as a result of the fuel modification for the adjoining residence located to the east, and does not currently support ESHA (Exhibit 16).

As explained above, the project site and the surrounding area (excluding Harrow Road and the portion of the residence and building pad which is part of the approved fuel modification requirements for the existing residence on the adjacent parcel) constitutes an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5. Section 30240 requires that "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." Section 30240 restricts development on the parcel to only those uses that are dependent on the resource. The applicant proposes to construct a single family residence, garage and barn on the parcel. The development is proposed to be located on a proposed building pad that includes a portion of the fuel modification required for the adjoining lot and which does not currently support ESHA. However, the construction of a residence, garage and barn in that location will still require the removal of chaparral ESHA as a result of creating the proposed building pad resulting in the fuel modification for fire protection purposes within the Zone A 50 feet from the residential structures and the thinning of chaparral ESHA up to a maximum of 200 feet from the structures within Zone C. As single-family residences do not have to be located within ESHAs to function, the Commission does not consider single-family residences to be a use dependent on ESHA resources. Application of Section 30240, by itself, would require denial of the project, because the project would result in significant disruption of habitat values and is not a use dependent on those sensitive habitat resources.

However, the Commission must also consider Section 30010, and the Supreme Court decision in *Lucas v. South Carolina Coastal Council* (1992) 505 U.S. 1003, 112 S.Ct. 2886. Section 30010 of the Coastal Act provides that the Coastal Act shall not be

construed as authorizing the Commission to exercise its power to grant or deny a permit in a manner which will take private property for public use. Application of Section 30010 may overcome the presumption of denial in some instances. The subject of what government action results in a "taking" was addressed by the U.S. Supreme Court in *Lucas v. South Carolina Coastal Council*. In *Lucas*, the Court identified several factors that should be considered in determining whether a proposed government action would result in a taking. For instance, the Court held that where a permit applicant has demonstrated that he or she has a sufficient real property interest in the property to allow the proposed project, and that project denial would deprive his or her property of all economically viable use, then denial of the project by a regulatory agency might result in a taking of the property for public use unless the proposed project would constitute a nuisance under State law. Another factor that should be considered is the extent to which a project denial would interfere with reasonable investment-backed expectations.

The Commission interprets Section 30010, together with the *Lucas* decision, to mean that if Commission denial of the project would deprive an applicant's property of all reasonable economic use, the Commission may be required to allow some development even where a Coastal Act policy would otherwise prohibit it, unless the proposed project would constitute a nuisance under state law. In other words, Section 30240 of the Coastal Act cannot be read to deny all economically beneficial or productive use of land because Section 30240 cannot be interpreted to require the Commission to act in an unconstitutional manner.

In the subject case, the applicant purchased the property on October 7, 2005 for an undisclosed amount of money. The Grant Deed indicates that the documentary transfer tax is not of public record. The lot was designated in the County's certified Land Use Plan in 1986 for residential use. At the time the applicant purchased the lot, the County's certified Land Use Plan did not designate the vegetation on the site as ESHA. Based on these facts the applicant had reason to believe that they had purchased a lot on which they would be able to build a residence.

The Commission finds that in this particular case, other allowable uses for the subject site, such as a recreational park or a nature preserve, are not feasible and would not provide the owner an economic return on the investment. The lot is 2.51 acres, and is located adjacent to other residentially developed and vacant parcels. There is no indication that a public agency would consider it a priority to purchase this lot. The Commission thus concludes that in this particular case there is no viable alternative use for the site other than residential development. The Commission finds, therefore, that outright denial of all residential use on the property would interfere with reasonable investment-backed expectations and deprive the property of all reasonable economic use.

Next the Commission turns to the question of nuisance. There is no evidence that construction of a residence would create a nuisance under California law. Other houses have been constructed in similar situations in chaparral habitat in Los Angeles County, apparently without the creation of nuisances. The County's Health Department has not

reported evidence of septic system failures. In addition, the County has reviewed and approved the applicant's proposed septic system, ensuring that the system will not create public health problems. Furthermore, the use that is proposed is residential, rather than, for example, industrial, which might create noise or odors or otherwise create a public nuisance. In conclusion, the Commission finds that a residential project can be allowed to permit the applicant a reasonable economic use of their property consistent with Section 30010 of the Coastal Act.

While the applicant is entitled under Section 30010 to an assurance that the Commission will not act in such a way as to take their property, this section does not authorize the Commission to avoid application of the policies of the Coastal Act, including Section 30240, altogether. Instead, the Commission is only directed to avoid construing these policies in a way that would take property. Aside from this instruction, the Commission is still otherwise directed to enforce the requirements of the Act. Therefore, in this situation, the Commission must still comply with Section 30240 by avoiding impacts that would disrupt and/or degrade environmentally sensitive habitat, to the extent this can be done without taking the property.

As discussed above, the proposed development will be approved within ESHA in order to provide an economically viable use. Given that the southern and western portion of the site with the exception of the previously disturbed building pad area contains ESHA, there will be significant impacts to ESHA resulting from the required fuel modification area around the approved residential structure. The following discussion of ESHA impacts from new development and fuel modification is based on the findings of the Malibu LCP[2].

In past permit actions, the Commission has limited development within or adjacent to chaparral ESHA to a 10,000 sq. ft. development area, excluding driveways and fire turn around areas. In addition, the Table 1 policies of the certified Malibu/Santa Monica Mountains Land Use Plan, which is used by the Commission as guidance in its permit actions, also limits the size of building pads for new development to no more than 10,000 sq. ft. in total size. In this case, not including the area of the driveway and turnaround, or the proposed septic system, the proposed development area for the residence and associated improvements is approximately 11,675 sq. ft. in size. This does not conform to the maximum development area of 10,000 sq. ft. that the Commission has typically allowed in similar situations on sites containing ESHA. However, given the location of ESHA on the site, there will still be significant impacts to ESHA resulting from construction of the residence, garage, barn on two separate building pads totaling 11,675 sq.ft. and the required fuel modification area around the approved residence and garage structure.

The applicant is proposing a large barn with an even larger flat pad area that will extend well beyond the footprint of the 735 sq. ft. barn itself which will result in a total development area on site of 11,675 sq. ft., that would be greater than the normally required 10,000 sq. ft. development area. In order to bring the proposed size of the two

[2] Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.

building pads into conformance with the Commission's normally required maximum 10,000 sq ft. development area or building pad, **Special Condition No. 14** is necessary to require the applicant to submit revised project plans, for the review and approval of the Executive Director, which either: (1) delete the barn and the flat pad area for the barn or (2) reduce the combined size of the two graded building pads to a total of 10,000 sq. ft. or less (including all cut/fill slopes but not including the area of the emergency vehicle hammerhead turnaround and the cut and fill grading areas necessary to construct the turnaround area and residential access driveway). The proposed horse facility shall be cut into the western slope of the building pad or turnaround/driveway area. Revised floor and elevation plans for the residence, garage and horse facility shall also be submitted for the review and approval of the Executive Director, if necessary, to reduce the size of the two building pads to a total of 10,000 sq. ft. or less as noted above, or eliminate the proposed barn. The revised grading plan shall be completed, stamped and signed by a licensed engineer to confirm the size of these building pads as measured above and include any revisions to the quantities of cut and fill grading and export as required by the revised grading plan to limit the cut and fill to no more than the proposed total of 5,200 cubic yards. An amendment to this coastal permit is required if the total cut and fill grading on site exceeds 5,200 cubic yards of material.

The following discussion of ESHA impacts from new development and fuel modification is based on the findings of the Malibu LCP[3].

Fuel modification is the removal or modification of combustible native or ornamental vegetation. It may include replacement with drought tolerant, fire resistant plants. The amount and location of required fuel modification would vary according to the fire history of the area, the amount and type of plant species on the site, topography, weather patterns, construction design, and siting of structures. There are typically three fuel modification zones applied by the Fire Department:

> Zone A (Setback Zone) is required to be a minimum of 50 feet beyond the edge of protected structures. In this area native vegetation is cleared and only ground cover, green lawn, and a limited number of ornamental plant species are allowed. This zone must be irrigated to maintain a high moisture content.
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> Zone C (Irrigated Zone) is required to extend from the outermost edge of Zone A to a maximum of 200 feet. In this area ground covers may not extend over 18 inches in height. Some native vegetation may remain in this zone if they are adequately spaced, maintained free of dead wood and individual plants are thinned. This zone must be irrigated to maintain a high moisture content.

Thus, the combined required fuel modification area around structure can extend up to a maximum of 200 feet. If there is not adequate area on the project site to provide the required fuel modification for structures, then brush clearance may also be required on adjacent lots, except for Zone A which is located entirely on the subject site. However,

[3] Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.

in this case, although the typical fuel modification zone on this parcel would extend from the approved structures up to 200 feet into chaparral ESHA to the west and north on adjoining parcels owned private property owners. In this case, the required fuel modification zone will extend from the approved structures as generally shown on Exhibit 18, into chaparral ESHA. The proposed development lies upslope from a drainage channel which leads 800 feet south into a blueline stream, which sustains a riparian corridor offsite known as Tuna Canyon Creek. The applicant submitted a Final Fuel Modification Plan approved by the Los Angeles Co. Fire Dept. dated 9/6/06, which notes that a portion of the chaparral ESHA located within the 200 foot fuel modification area along the north, west and south portions of the lot will need to be thinned as a result of the development of the project. To the east is an existing residence (Coastal Permit No. 4-03-085, WF Trust) with an overlapping fuel modification area on the subject parcel. To the west and north are vacant lots with chaparral where the applicant's Zone C fuel modification area will overlap. Therefore, impacts to sensitive chaparral habitat will occur due to required fuel modification for the proposed development on the subject lot and lots located to the south, west and north of the subject lots.

Notwithstanding the need to protect structures from the risk of wildfire, fuel modification results in significant adverse impacts that are in excess of those directly related to the development itself. Within the area next to approved residential structures (Zone A), all native vegetation must be removed and ornamental, low-fuel plants substituted. In Zone B, most native vegetation will be removed or widely spaced or thinned. In this way, for a large area around any permitted structures, native vegetation will be cleared, selectively removed to provide wider spacing, and thinned.

Obviously, native vegetation that is cleared and replaced with ornamental species, or substantially removed and widely spaced will be lost as habitat and watershed cover. Additionally, thinned areas will be greatly reduced in habitat value. Even where complete clearance of vegetation is not required, the natural habitat can be significantly impacted, and ultimately lost. For instance, in coastal sage scrub habitat, the natural soil coverage of the canopies of individual plants provides shading and reduced soil temperatures. When these plants are thinned, the microclimate of the area will be affected, increasing soil temperatures, which can lead to loss of individual plants and the eventual conversion of the area to a dominance of different non-native plant species. The areas created by thinning between shrubs can be invaded by non-native grasses that will over time out-compete native species.

For example, undisturbed coastal sage scrub vegetation typical of coastal canyon slopes, and the down slope riparian corridors of the canyon bottoms, ordinarily contains a variety of tree and shrub species with established root systems. Depending on the canopy coverage, these species may be accompanied by understory species of lower profile. The established vegetative cover, including the leaf detritus and other mulch contributed by the native plants, slows rainfall runoff from canyon slopes and staunches silt flows that result from ordinary erosional processes. The native vegetation thereby limits the intrusion of sediments into downslope creeks. Accordingly, disturbed slopes where vegetation is either cleared or thinned are more directly exposed to rainfall runoff

that can therefore wash canyon soils into down-gradient creeks. The resultant erosion reduces topsoil and steepens slopes, making revegetation increasingly difficult or creating ideal conditions for colonization by invasive, non-native species that supplant the native populations.

The cumulative loss of habitat cover also reduces the value of the sensitive resource areas as a refuge for birds and animals, for example by making them—or their nests and burrows—more readily apparent to predators. The impacts of fuel clearance on bird communities was studied by Stralberg who identified three ecological categories of birds in the Santa Monica Mountains: 1) local and long distance migrators (ash-throated flycatcher, Pacific-slope flycatcher, phainopepla, black-headed grosbeak), 2) chaparral-associated species (Bewick's wren, wrentit, blue-gray gnatcatcher, California thrasher, orange-crowned warbler, rufous-crowned sparrow, spotted towhee, California towhee) and 3) urban-associated species (mourning dove, American crow, Western scrub-jay, Northern mockingbird)[4]. It was found in this study that the number of migrators and chaparral-associated species decreased due to habitat fragmentation while the abundance of urban-associated species increased. The impact of fuel clearance is to greatly increase this edge-effect of fragmentation by expanding the amount of cleared area and "edge" many-fold. Similar results of decreases in fragmentation-sensitive bird species are reported from the work of Bolger et. al. in southern California chaparral[5].

Fuel clearance and habitat modification may also disrupt native arthropod communities, and this can have surprising effects far beyond the cleared area on species seemingly unrelated to the direct impacts. A particularly interesting and well-documented example with ants and lizards illustrates this point. When non-native landscaping with intensive irrigation is introduced, the area becomes favorable for the invasive and non-native Argentine ant. This ant forms "super colonies" that can forage more than 650 feet out into the surrounding native chaparral or coastal sage scrub around the landscaped area[6]. The Argentine ant competes with native harvester ants and carpenter ants displacing them from the habitat[7]. These native ants are the primary food resource for the native coast horned lizard, a California "Species of Special Concern." As a result of Argentine ant invasion, the coast horned lizard and its native ant food resources are diminished in areas near landscaped and irrigated developments[8]. In addition to specific effects on the coast horned lizard, there are other Mediterranean habitat

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[4] Stralberg, D. 2000. Landscape-level urbanization effects on chaparral birds: a Santa Monica Mountains case study. Pp. 125–136 *in* Keeley, J.E., M. Baer-Keeley, and C.J. Fotheringham (eds.). *2nd interface between ecology and land development in California*. U.S. Geological Survey, Sacramento, California.

[5] Bolger, D. T., T. A. Scott and J. T. Rotenberry. 1997. Breeding bird abundance in an urbanizing landscape in coastal Southern California. Conserv. Biol. 11:406-421.

[6] Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. Ecology 79(6):2041-2056.

[7] Holway, D.A. 1995. The distribution of the Argentine ant (*Linepithema humile*) in central California: a twenty-year record of invasion. Conservation Biology 9:1634-1637. Human, K.G. and D.M. Gordon. 1996. Exploitation and interference competition between the invasive Argentine ant, (*Linepithema humile*), and native ant species. Oecologia 105:405-412.

[8] Fisher, R.N., A.V. Suarez and T.J. Case. 2002. Spatial patterns in the abundance of the coastal horned lizard. Conservation Biology 16(1):205-215. Suarez, A.V. J.Q. Richmond and T.J. Case. 2000. Prey selection in horned lizards following the invasion of Argentine ants in southern California. Ecological Applications 10(3):711-725.

ecosystem processes that are impacted by Argentine ant invasion through impacts on long-evolved native ant-plant mutualisms[9]. The composition of the whole arthropod community changes and biodiversity decreases when habitats are subjected to fuel modification. In coastal sage scrub disturbed by fuel modification, fewer arthropod predator species are seen and more exotic arthropod species are present than in undisturbed habitats[10].

Studies in the Mediterranean vegetation of South Africa (equivalent to California shrubland with similar plant species) have shown how the invasive Argentine ant can disrupt the whole ecosystem.[11] In South Africa the Argentine ant displaces native ants as they do in California. Because the native ants are no longer present to collect and bury seeds, the seeds of the native plants are exposed to predation, and consumed by seed eating insects, birds and mammals. When this habitat burns after Argentine ant invasion the large-seeded plants that were protected by the native ants all but disappear. So the invasion of a non-native ant species drives out native ants, and this can cause a dramatic change in the species composition of the plant community by disrupting long-established seed dispersal mutualisms. In California, some insect eggs are adapted to being buried by native ants in a manner similar to plant seeds[12].

While these impacts resulting from fuel modification can be reduced through siting and design alternatives for new development, they cannot be completely avoided, given the high fire risk and the extent of ESHA on the site. The Commission finds that the loss of chaparral ESHA resulting from the removal, conversion, or modification of natural habitat for new development including fuel modification and brush thinning must be mitigated. The acreage of habitat that is impacted must be determined based on the size of the required fuel modification zone.

In this case, the applicants' approved Final Fuel Modification Plan (approved by the Los Angeles County Fire Department) shows the use of the standard two zones of vegetation modification. Zones "A" (setback zone) and "C" (irrigation zone) are shown in a radius extending approximately 200 feet from the proposed structures. In these areas, brush clearance, extending a distance of 200 feet from the proposed residence, will be required on adjacent properties.

The ESHA area affected by the proposed development does not include the existing disturbed roadway extending south from Harrow road and the road to the proposed septic system or the fuel modification approved as a result of the residence located to the northeast of the subject lot proposed for the new residence. since those areas were

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[9] Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. Ecology 79(6):2041-2056. Bond, W. and P. Slingsby. Collapse of an Ant-Plant Mutualism: The Argentine Ant (*Iridomyrmex humilis*) and Myrmecochorous Proteaceae. Ecology 65(4):1031-1037.

[10] Longcore, T.R. 1999. Terrestrial arthropods as indicators of restoration success in coastal sage scrub. Ph.D. Dissertation, University of California, Los Angeles.

[11] Christian, C. 2001. Consequences of a biological invasion reveal the importance of mutualism for plant communities. Nature 413:635-639.

[12] Hughes, L. and M. Westoby. 1992. Capitula on stick insect eggs and elaiosomes on seeds: convergent adaptations for burial by ants. Functional Ecology 6:642-648.

previously graded and or denuded of ESHA prior to the effective date of the Coastal Act and the result of approved Coastal Permit No.4-03-085 (WF Trust), respectively. As such, the ESHA areas that will be impacted by the proposed project are fuel modification and brush clearance areas on the slopes beyond the edges of the fuel modification zone for the existing residence on the adjacent lot and the existing access road on the subject site. The precise area of the undisturbed chaparral ESHA that will be impacted by the proposed development has not been calculated by the applicant on the slopes within the a portion of the proposed building site and Fuel Modification Zones A and C. Therefore, the Commission finds that it is necessary to require the applicant to confirm the area of the ESHA onsite that will be impacted by the proposed development including the areas affected by fuel modification and brush thinning activities, as required by **Special Condition Eleven**.

In the certification of the Malibu LCP the Commission approved three methods for providing mitigation for the unavoidable loss of ESHA resulting from development, including habitat restoration, habitat conservation, and an in-lieu fee for habitat conservation. The Commission finds that these measures are appropriate in this case to mitigate the loss of chaparral habitat on and offsite. These three mitigation methods are provided as three available options for compliance with **Special Condition Eleven**. The first method is to provide mitigation through the restoration of an area of degraded habitat (either on the project site, or at an off-site location) that is equivalent in size to the area of habitat impacted by the development. A restoration plan must be prepared by a biologist or qualified resource specialist and must provide performance standards, and provisions for maintenance and monitoring. The restored habitat must be permanently preserved through the recordation of an open space easement. This mitigation method is provided for in **Special Condition Eleven, subpart A**.

The second habitat impact mitigation method is habitat conservation. This includes the conservation of an area of intact habitat equivalent to the area of the impacted habitat. The lot containing the habitat conservation area must be restricted from future development and permanently preserved. If the mitigation lot is larger in size than the impacted habitat area, the excess acreage could be used to provide habitat impact mitigation for other development projects that impact ESHA. This mitigation method is provided for in **Special Condition Eleven, subpart B**.

The third habitat impact mitigation option is an in-lieu fee for habitat conservation. The fee is based on the habitat types in question, the cost per acre to restore or create the comparable habitat types, and the acreage of habitat affected by the project. In order to determine an appropriate fee for the restoration or creation of chaparral and coastal sage scrub habitat, the Commission's biologist contacted several consulting companies that have considerable experience carrying out restoration projects. Overall estimates varied widely among the companies, because of differences in the strategies employed in planning the restoration (for instance, determining the appropriate number of plants or amount of seeds used per acre) as well as whether all of the restoration planting, monitoring and maintenance was carried out by the consultant or portions are subcontracted. Additionally, the range of cost estimates reflect differences in restoration site characteristics including topography (steeper is harder), proximity to the

coast (minimal or no irrigation required at coastal sites), types of plants (some plants are rare or difficult to cultivate), density of planting, severity of weed problem, condition of soil, etc. Larger projects may realize some economy of scale.

Staff determined the appropriate mitigation for loss of coastal sage scrub or chaparral ESHA should be based on the actual installation of replacement plantings on a disturbed site, including the cost of acquiring the plants (seed mix and container stock) and installing them on the site (hydroseeding and planting). Three cost estimates were obtained for the installation of plants and seeds for one-acre of restoration. These estimates were $9,541, $12,820, and $13,907 per acre of plant installation. The Commission finds it appropriate to average the three estimates of plant installation to arrive at the reasonable in-lieu fee to mitigate for the loss of ESHA associated with the approval of development within an ESHA. Based on this averaging, the required in-lieu fee for habitat mitigation is $12,000 (rounded down from the average figure of $12,089 to simplify administration) per acre of habitat.

The Commission finds that the in-lieu fee of $12,000 per acre is appropriate to provide mitigation for the habitat impacts to ESHA areas where all native vegetation will be removed (the “A” zone required for fuel modification), and where vegetation will be significantly removed and any remaining vegetation will be subjected to supplemental irrigation (the “C” zone required for fuel modification). In these areas, complete removal or significant removal of ESHA, along with irrigation completely alters the habitat and eliminates its value to the native plant and animal community.

ESHA modified for the “C” zone that is thinned and shrubs must be maintained at a certain size to minimize the spread of fire between the individual plants but non-irrigated (required for fuel modification) is certainly diminished in habitat value,. This area is not typically required to be irrigated. As such, the Commission finds that it is not appropriate to require the same level of in-lieu fee mitigation for impacts to ESHA within a non-irrigated “C” zone required for fuel modification. Although the habitat value in the “C” zone (or any other non-irrigated zone) is greatly reduced, it is not possible to precisely quantify the reduction. The Commission’s biologist believes that the habitat value of non-irrigated fuel modification zones is reduced by at least 25 percent (and possibly more) due to the direct loss of vegetation, the increased risk of weed invasion, and the proximity of disturbance. The Commission finds that it is also less costly and less difficult to restore chaparral habitat when some of the native vegetation remains, rather than when all the native habitat is removed. Because of the uncertainty and the inability to precisely quantify the reduction in habitat value, the Commission concludes that it is warranted to impose a mitigation fee of $3,000 per acre (one quarter of the cost of full restoration) for the “C” zone or other non-irrigated fuel modification zone.

In this case, the applicant’s approved fuel modification plan (approved by the Los Angeles County Fire Department) shows the use of the standard two zones of vegetation modification. Zones “A” (setback zone) and “C” (irrigation zone) are shown extending in a radius of approximately 200 feet from the proposed structures. A “C” Zone (thinning zone) is provided for a distance of 150 feet beyond the “A” to the property line. In these areas, brush clearance, extending a distance of 200 feet from

the proposed residence, will be required on adjacent properties. As discussed above, the ESHA area affected by the proposed development does not include the disturbed area or access road since those areas were previously denuded of ESHA prior to the effective date of the Coastal Act. As such, the ESHA areas that will be impacted by the proposed project are the required fuel modification and brush clearance areas on the slopes beyond the edges of the graded pad and access road. The appropriate in-lieu fee calculation would then be based on $12,000 per acre for any irrigated fuel modification area (the "A" Zone) and $3,000 per acre of un-irrigated fuel modification area (Zone "C") or brush clearance area.

Should the applicant choose the in-lieu fee mitigation method, the fee shall be provided to the Mountains Recreation and Conservation Authority (MRCA) for the acquisition, permanent preservation, or restoration of natural habitat areas within the coastal zone. This mitigation method is provided for in **Special Condition Eleven**, subpart C for Zone C only.

The Commission has determined that in conjunction with siting new development to minimize impacts to ESHA, additional actions can be taken to minimize adverse impacts to ESHA. The Commission finds that the use of non-native and/or invasive plant species for residential landscaping results in both direct and indirect adverse effects to native plants species indigenous to the Malibu/Santa Monica Mountains area. Adverse effects from such landscaping result from the direct occupation or displacement of native plant communities by new development and associated non-native landscaping. Indirect adverse effects include offsite migration and colonization of native plant habitat by non-native/invasive plant species (which tend to outcompete native species) adjacent to new development. The Commission notes that the use of exotic plant species for residential landscaping has already resulted in significant adverse effects to native plant communities in the Malibu/Santa Monica Mountains area. Therefore, in order to minimize adverse effects to the indigenous plant communities of the Malibu/Santa Monica Mountains area, **Special Condition Two** requires that all landscaping consist primarily of native plant species and that invasive plant species shall not be used.

The Commission notes that streams and drainages, such as the drainage located on the western portion of the subject site, provide important habitat for riparian plant and animal species. Section 30231 of the Coastal Act provides that the quality of coastal waters and streams shall be maintained and restored whenever feasible through means such as: controlling runoff, preventing interference with surface water flows and alteration of natural streams, and by maintaining natural vegetation buffer areas. In past permit actions the Commission has found that new development adjacent to or upslope of coastal streams and natural drainages results in potential adverse impacts to riparian habitat and marine resources from increased erosion, contaminated storm runoff, introduction of non-native and invasive plant species, disturbance of wildlife, and loss of riparian plant and animal habitat.

However, in previous permit actions, the Commission has found that potential adverse effects of new proposed development on riparian habitat of these streams may be further minimized through the implementation of a drainage and polluted runoff control

plan, which will ensure that erosion is minimized and polluted run-off from the site is controlled and filtered before it reaches natural drainage courses within the watershed. Therefore, the Commission requires **Special Condition Nine,** the Drainage and Polluted Runoff Control Plan, which requires the applicant to incorporate appropriate drainage devices and Best Management Practices (BMPs) to ensure that run-off from the proposed structures, impervious surfaces, and building pad area is conveyed offsite in a non-erosive manner and is treated/filtered to reduce pollutant load before it reaches coastal waterways. **Special Condition Nine** will ensure implementation of these and other BMPs to reduce polluted runoff.

In addition, the Commission has found that night lighting of areas in the Malibu/Santa Monica Mountains area creates a visual impact to nearby scenic roads, parks, and trails. In addition, night lighting may alter or disrupt feeding, nesting, and roosting activities of native wildlife species. The subject site contains environmentally sensitive habitat. Therefore, **Special Condition No. Seven**, the Lighting Restriction, limits night lighting of the site in general; limits lighting to the developed area of the site; and specifies that lighting be shielded downward. The restriction on night lighting is necessary to protect the night time rural character of this portion of the Santa Monica Mountains consistent with the scenic and visual qualities of this coastal area. In addition, low intensity security lighting will assist in minimizing the disruption of wildlife traversing this area at night that are commonly found in this rural and relatively undisturbed area. Thus, the lighting restrictions will attenuate the impacts of unnatural light sources and reduce impacts to sensitive wildlife species.

Furthermore, fencing of the entire site would adversely impact the movement of wildlife through the chaparral ESHA on this over 2.45 acre lot. Therefore, the Commission finds it is necessary to limit fencing to the building pad area within fifty (50) feet of the residential structures and along the main access driveway as required in **Special Condition Two.**

Also, the Commission finds that the amount and location of any new development that may be proposed in the future on the subject site is significantly limited by the unique nature of the site and the environmental constraints discussed above. Therefore, to ensure that any future structures, additions, change in landscaping or intensity of use at the project site, that may otherwise be exempt from coastal permit requirements, are reviewed by the Commission for consistency with the resource protection policies of the Coastal Act, **Special Condition Five**, the future development restriction, has been required. Finally, **Special Condition Eight** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser of the site with recorded notice that the restrictions are imposed on the subject property. In addition, to permanently ensure that no further development occurs on the site outside of the proposed development area and that any potential purchasers of the subject property are aware of the restriction on open space and future development, **Special Condition Twelve** prohibits all development outside of the proposed development area as shown in Exhibit 19, with the exception of fuel modification; proposed roadway regarding and restoration; drainage systems, septic lines & seepage pits; or the planting of native

vegetation and other restoration activities and construction and maintenance of public hiking trails if approved by the Commission as an amendment to this coastal development permit, or as a new coastal development permit.

The applicant proposes two temporary construction trailers located on the existing graded driveway. The Commission finds it necessary to require the removal of these trailers to an appropriate disposal or relocation site within two years of the issuance of this Coastal Permit Amendment or within thirty (30) days of the applicant's receipt of the Certificate of Occupancy for the proposed residence from Los Angeles County, whichever is less, as required by **Special Condition Ten**. The removal of these trailers are necessary to avoid the potential conversion to a second or third dwelling unit and potential cumulative impacts on public services such as road capacity, sewage disposal, water, electricity as well as erosion and sedimentation impacts to the downstream Tuna Canyon Creek environmentally sensitive habitats.

Finally, the Commission notes that the use of rodenticides containing anticoagulant compounds have been linked to the death of sensitive predator species including mountain lions and raptors. These species are a key component of chaparral and coastal sage scrub communities in the Santa Monica Mountains. Therefore, in order to avoid adverse impacts to sensitive predator species, **Special Condition Two** prohibits the use of any rodenticides containing anticoagulant compounds on the subject property.

Therefore for the reasons set forth above, the Commission finds that the proposed project, as conditioned, is consistent with Coastal Act Sections 30230, 30231, 30240 and 30250.

C. Water Quality

The Commission recognizes that new development in the Santa Monica Mountains has the potential to adversely impact coastal water quality through the removal of native vegetation, increase of impervious surfaces, increase of runoff, erosion, and sedimentation, introduction of pollutants such as petroleum, cleaning products, pesticides, and other pollutant sources, as well as effluent from septic systems. Section 30231 of the Coastal Act states that:

> ***The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, minimizing alteration of natural streams.***

The proposed development will result in an increase in impervious surface, which in turn decreases the infiltrative function and capacity of existing permeable land on site. The

reduction in permeable space therefore leads to an increase in the volume and velocity of stormwater runoff that can be expected to leave the site. Further, pollutants commonly found in runoff associated with residential use include petroleum hydrocarbons including oil and grease from vehicles; heavy metals; synthetic organic chemicals including paint and household cleaners; soap and dirt from washing vehicles; dirt and vegetation from yard maintenance; litter; fertilizers, herbicides, and pesticides; and bacteria and pathogens from animal waste. The discharge of these pollutants to coastal waters can cause cumulative impacts such as: eutrophication and anoxic conditions resulting in fish kills and diseases and the alteration of aquatic habitat, including adverse changes to species composition and size; excess nutrients causing algae blooms and sedimentation increasing turbidity which both reduce the penetration of sunlight needed by aquatic vegetation which provide food and cover for aquatic species; disruptions to the reproductive cycle of aquatic species; and acute and sublethal toxicity in marine organisms leading to adverse changes in reproduction and feeding behavior. These impacts reduce the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes and reduce optimum populations of marine organisms and have adverse impacts on human health.

Therefore, in order to find the proposed development consistent with the water and marine resource policies of the Coastal Act, the Commission finds it necessary to require the incorporation of Best Management Practices designed to control the volume, velocity and pollutant load of stormwater leaving the developed site. Critical to the successful function of post-construction structural BMPs in removing pollutants in stormwater to the Maximum Extent Practicable (MEP), is the application of appropriate design standards for sizing BMPs. The majority of runoff is generated from small storms because most storms are small. Additionally, storm water runoff typically conveys a disproportionate amount of pollutants in the initial period that runoff is generated during a storm event. Designing BMPs for the small, more frequent storms, rather than for the large infrequent storms, results in improved BMP performance at lower cost.

The Commission finds that sizing post-construction structural BMPs to accommodate (infiltrate, filter or treat) the runoff from the 85th percentile storm runoff event, in this case, is equivalent to sizing BMPs based on the point of diminishing returns (i.e. the BMP capacity beyond which, insignificant increases in pollutants removal (and hence water quality protection) will occur, relative to the additional costs. Therefore, the Commission requires the selected post-construction structural BMPs be sized based on design criteria specified in **Special Condition Nine**, and finds this will ensure the proposed development will be designed to minimize adverse impacts to coastal resources, in a manner consistent with the water and marine policies of the Coastal Act.

Furthermore, interim erosion control measure implemented during construction and post construction landscaping will serve to minimize the potential for adverse impacts to water quality resulting from drainage runoff during construction and in the post-development stage. Therefore, the Commission finds that **Special Conditions Two and Three** are necessary to ensure the proposed development will not adversely impact water quality or coastal resources through erosion control, vegetation removal and excavated material offsite disposal.

Finally, the proposed development includes the installation of an on-site septic system to serve the residence. The applicants' geologic consultants performed percolation tests and evaluated the proposed septic system. The report concludes that the site is suitable for the septic system and there would be no adverse impact to the site or surrounding areas from the use of a septic system. Further, the County of Los Angeles Environmental Health Department has given in-concept approval of the proposed septic system, determining that the system meets the requirements of the plumbing code. The Commission has found that conformance with the provisions of the plumbing code is protective of coastal resources.

Therefore, the Commission finds that the proposed project, as conditioned to incorporate and maintain a drainage and polluted runoff control plan, is consistent with Section 30231 of the Coastal Act.

D. Geologic Stability and Hazards

Section 30253 of the Coastal Act states:

New development shall:

> ***(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.***
>
> ***(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.***

The proposed development is located in the Malibu area which is generally considered to be subject to an unusually high number of natural hazards. Geologic hazards common to the Malibu area include landslides, erosion, and flooding. In addition, fire is an inherent threat to the indigenous chaparral community of the coastal mountains. Wild fires often denude hillsides in the Santa Monica Mountains of all existing vegetation, thereby contributing to an increased potential for erosion and landslides on property.

The Commission reviews the proposed project's risks to life and property in areas where there are geologic, flood and fire hazards. The applicant proposes to construct a residence, garage and barn as identified above. Regarding the geologic hazard, the applicant submitted the following: Preliminary Geologic and Soils Engineering Investigation, by Subsurface Designs, dated April 6, 2006. This report concludes that:

> It is the professional opinion of this office that construction of the proposed structures is feasible provided that the recommendations contained herein are followed. In addition, all applicable elements of the governing agency Building Codes shall be followed.

The geologic and engineering consultants conclude that the proposed development is feasible and will be free from geologic hazard provided their recommendations are incorporated into the proposed development. This report included several recommendations that addressed the following issues: excavation characteristics, grading and earthwork, structure setbacks, foundations, settlement, floor slabs, excavation erosion control, retaining walls, and drainage and maintenance. To ensure that the recommendations of the consultants have been incorporated into all proposed development the Commission, as specified in **Special Condition One,** requires the applicant to comply with all the recommendations of the consulting geologist and engineer as conforming to all structural and site stability recommendations for the proposed projects. Final plans approved by the consultant shall be in substantial conformance with the plans approved by the Commission. Any substantial changes to the proposed developments, as approved by the Commission, which may be recommended by the consultant shall require an amendment to the permit or a new coastal development permit.

Minimizing erosion of the site is important to reduce geological hazards on the site and minimize sediment deposition in the drainages leading to Tuna Canyon Creek. The applicant has submitted landscape and fuel modification plans for the proposed development. These plans incorporate the use of native species and illustrate how these materials will be used to provide erosion control to those areas of the site disturbed by development activities. These plans also illustrate that vegetation will be "thinned" rather than "cleared" for fuel modification purposes, thus allowing for the continued use of existing native plant materials for on site erosion control. The thinning, rather than complete removal, of native vegetation helps to retain the natural erosion control properties, such as extensive and deep root systems, provided by these species, as noted above, and as required by **Special Condition Two**.

In order to ensure that drainage from the building pad(s) are conveyed from the site and into the watershed in a non-erosive manner and erosion is controlled and minimized during construction, the Commission finds it necessary to require the applicant to submit site drainage plans, as required by **Special Condition Two** and a polluted runoff control plan, as required by **Special Condition Nine**. Furthermore, the Commission finds it necessary to require the applicant, should the proposed improvements to the driveway access or the proposed drainage structures fail or result in erosion, to be solely responsible for any necessary repairs and restoration resulting from this failure along the entire section of the driveway subject to this permit. **Special Condition Two** provides for such maintenance of the access driveways and drainage structures.

In addition, to ensure that excess excavated material is moved off site so as not to contribute to unnecessary landform alternation and to minimize erosion and sedimentation from stockpiled excavated soil, the Commission finds it necessary to require the applicant to dispose of the material at an appropriate disposal site or to a site that has been approved to accept fill material, as specified in **Special Condition Fifteen.**

The Coastal Act also requires that new development minimize the risk to life and property in areas of high fire hazard. The Coastal Act also recognizes that new development may involve the taking of some risk. Coastal Act policies require the Commission to establish the appropriate degree of risk acceptable for the proposed development and to establish who should assume the risk. When development in areas of identified hazards is proposed, the Commission considers the hazard associated with the project site and the potential cost to the public, as well as the individual's right to use his property.

Vegetation in the coastal areas of the Santa Monica Mountains consists mostly of coastal sage scrub and chaparral. Many plant species common to these communities produce and store terpenes, which are highly flammable substances (Mooney in Barbour, Terrestrial Vegetation of California, 1988). Chaparral and sage scrub communities have evolved in concert with, and continue to produce the potential for frequent wild fires. The typical warm, dry summer conditions of the Mediterranean climate combine with the natural characteristics of the native vegetation to pose a risk of wild fire damage to development that cannot be completely avoided or mitigated.

Due to the fact that the proposed project is located in an area subject to an extraordinary potential for damage or destruction from wild fire, the Commission can only approve the project if the applicant assumes the liability from these associated risks. In fact, the property burned in the 1993 Malibu Fire Through the waiver of liability, the applicant acknowledges and appreciates the nature of the fire hazard which exists on the site and which may affect the safety of the proposed development, as incorporated by **Special Condition Four**.

The Commission finds that only as conditioned is the proposed project consistent with Section 30253 of the Coastal Act.

E. Visual Resources.

Section 30251 of the Coastal Act states that:

> ***The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.***

In the review of this project, the Commission reviews the publicly accessible locations where the proposed development is visible to assess potential visual impacts to the public. The Malibu/Santa Monica Mountains Land Use Plan protects visual resources in the Santa Monica Mountains. Tuna Canyon Road is recognized as a "second priority

scenic area" which is given special treatment when evaluating potential impacts caused by new development.

The Commission examines the building site, the proposed grading, and the size of the building pads and structures. The development of the residence, garage, and barn raise two issues regarding the siting and design: one, whether or not public views from public roadways will be adversely impacted, or two, whether or not public views from public lands and trails will be impacted. It is important to note that three residences have been constructed, one is under construction, and two other residences have approved coastal permits but not yet constructed, all located in the immediate vicinity of the project site (Exhibit 2). Assuming the proposed residence, garage and barn will be constructed, the subject project will be visible to a limited degree to the public from public locations within the context of a partially developed subdivision of 16 parcels.

The siting, size and grading for the building pads will be visible from limited portions of Tuna Canyon Road to the west; there are no scenic turnouts from which the project site will be visible. Tuna Canyon Road, a public roadway, encircles the vicinity of the project site to the south, west, and north. There is no public view from Tuna Canyon Road or Saddle Peak Road of this development from the north due to a rise in the topography and one approved residence within the intervening distance. The development is not visible from Tuna Canyon Road located to the south. The proposed grading for the driveway and access road improvements is the minimum amount necessary to meet the emergency vehicle access requirements of the Los Angeles County Fire Department. The applicant also proposes to widen portions of Harrow Road and Betton Drive to meet vehicle access requirements of the Los Angeles County Fire Department.

Regarding public lands, the National Park Service owns land located on parcels located as close as one quarter mile to the east of the subject lot in a canyon below the subject lot. The proposed residence, garage and barn will not be visible from these public lands. Regarding public trails, an existing equestrian and hiking trail, the Tuna Canyon trail, is located about two thirds of a mile to one mile south of the project site. Due to the distance and intervening topography and vegetation, public views of the project site will be limited from this trail.

Because the site will be visible from Tuna Canyon Road to the west and from portions of the Tuna Canyon trail to the south, mitigation to address potential visual impacts is needed for the structures. The proposed two story, 32 foot high, residence, garage, 22 foot high barn and the driveway will be less visually intrusive through the use of earth tones for the structures and roofs of the buildings, including the retaining walls, and non-glare glass which helps the structures blend in with the natural setting. The Commission finds it necessary to impose **Special Condition Six** to restrict the color of the subject structures to those compatible with the surrounding environment and prohibit the use of white or concrete tones, while requiring the use of non-glare glass windows.

The applicant is proposing a large barn with an even larger flat pad area that will extend well beyond the footprint of the 735 sq. ft. barn itself which will result in a total

development area on site of 11,675 sq. ft., that would be greater than the normally required 10,000 sq. ft. development area. In order to bring the proposed size of the two building pads into conformance with the Commission's normally required maximum 10,000 sq ft. development area or building pad, **Special Condition No. 14** is necessary to require the applicant to submit revised project plans, for the review and approval of the Executive Director, to either : (1) delete the barn and flat pad area for the barn or (2) reduce the size of the two graded building pads to a combined total of 10,000 sq. ft. or less (including all cut/fill slopes but not including the area of the emergency vehicle hammerhead turnaround and the cut and fill grading areas necessary to construct the turnaround area and residential access driveway). The proposed horse facility shall be cut into the western slope of the building pad or turnaround/driveway area. Revised floor and elevation plans for the residence, garage and horse facility shall also be submitted for the review and approval of the Executive Director, if necessary, to reduce the size of the two building pads to a total of 10,000 sq. ft. or less as noted above, or eliminate the proposed barn. The revised grading plan shall be completed, stamped and signed by a licensed engineer to confirm the size of these building pads as measured above and include any revisions to the quantities of cut and fill grading and export as required by the revised grading plan to limit the cut and fill to no more than the proposed total of 5,200 cubic yards. An amendment to this coastal permit is required if the total cut and fill grading on site exceeds 5,200 cubic yards of material.

The Commission finds that the amount and location of any new development that may be proposed in the future on the subject site is significantly limited by the unique nature of the site and the environmental constraints discussed above. To ensure that any future additions to the permitted structures, which would otherwise be exempt from coastal permit requirements, are reviewed for consistency with Section 30251 of the Coastal Act, the Commission finds, that it is necessary to require that all future additions or improvements to the permitted structures, or any future development on the subject parcel, will require a permit or permit amendment, as required by **Special Condition Five.**

Further, the Commission has found that the use of native plant materials in landscaping plans can soften the visual impact of construction in the Santa Monica Mountains. The use of native plant materials to revegetate graded or disturbed areas reduces the adverse affects of erosion, which can degrade visual resources in addition to causing siltation pollution in ESHAs, and soften the appearance of development within areas of high scenic quality. The applicant has submitted a landscape and fuel modification plan that uses numerous native species compatible with the vegetation associated with the project site for landscaping and erosion control purposes that will be as required to be revised to include the applicant's revise project description. Furthermore, the plan indicates that only those materials designated by the County Fire Department as being a "high fire hazard" are to be removed as a part of this project and that native materials surrounding the residential structure are to "thinned" rather than "cleared" for wildland fire protection. **Special Condition Two** requires that the landscape plan be designed with vertical elements to partially screen and soften the visual impact of the structures with trees and shrubs as viewed from the public roads located to the west and north, from public lands located to the east, and from the Tuna Canyon Trail located to the

west and south of the project site. In addition, the landscape plan shall be completed within sixty days of residential occupancy and that planting coverage be adequate to provide ninety (90) percent coverage within two (2) years and shall be repeated, if necessary, to provide such coverage.

The Commission has found that night lighting of areas in the Santa Monica Mountains area creates a visual impact to nearby scenic beaches, scenic roads, parks, and trails. In addition, night lighting may alter or disrupt feeding, nesting, and roosting activities of native wildlife species. Therefore, in order to protect the night time rural character of this portion of the Santa Monica Mountains, consistent with the scenic and visual qualities of this coastal area, the Commission limits the nighttime lighting of the property and residence to that necessary for safety as outlined in **Special Condition Seven.**

Finally, **Special Condition Eight** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser of the site with recorded notice that the restrictions are imposed on the subject property.

Therefore, the Commission finds that the project, as conditioned, minimizes impacts to public views to and along the coast and thus, is consistent with Section 30251 of the Coastal Act.

F. New Development / Cumulative Impacts

The proposed development is located in the Santa Monica Mountains, an area where development is severely constrained. Section 30250(a) of the Coastal Act provides that new development be located within or near existing developed areas able to accommodate it, with adequate public services, where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.

Coastal Act Section 30250 states that:

> ***New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.***

Section 30105.5 of the Coastal Act defines the term "cumulatively," as it is used in Section 30250(a), to mean that:

> ***the incremental effects of an individual project shall be reviewed in conjunction with the effects of past projects, the effects of other current projects, and the effects of probable future projects.***

The Coastal Act requires that new development, including land divisions, be permitted within contiguous, or in close proximity to existing developed areas or if outside such areas, only where public services are adequate and only where public access and coastal resources will not be cumulatively affected by such development. The basic goal of the Coastal Act is to concentrate development in or near developed areas able to accommodate it, thereby promoting infilling and avoiding sprawl into areas with significant resource value. Further, the Commission has repeatedly emphasized the need to address the cumulative impacts of new development in the Malibu and Santa Monica Mountains area in past permit action. The Commission has reviewed land division applications to ensure that newly created or reconfigured parcels are of sufficient size, have access to roads and other utilities, are geologically stable and contain an appropriate potential building pad area where future structures can be developed consistent with the resource protection policies of the Coastal Act. In particular, the Commission has ensured that future development on new or reconfigured parcels can minimize landform alteration and other visual impacts, and impacts to environmentally sensitive habitat areas.

The project proposes to adjust two lots into two lots of a slightly different configuration along a shared boundary. As a result of the proposed lot line adjustment, there is no increase in the total number of lots. A review of the Los Angeles County Land Use Plan density designations indicates that the lots are located within the Mountain Land, land use designation allowing one residence per twenty acres of land.

As a result of the lot line adjustment, the western 2.51 acre lot, will become smaller in size at 2.25 acres, while the larger eastern 2.53 acre lot will become 2.79 acres in size (Exhibit 3). Although the existing and resulting sized lots are less than the minimum 20 acres required in the Mountain Land designation, the proposed adjustment of land is about one quarter acre in size, a minor amount of land compared to the original approximate two and one half acre original lots.

Coastal Act Section 30250 provides for three tests to determine whether or not new development is appropriately located from the standpoint of cumulative impacts and when land divisions outside developed areas are appropriate. The first test is whether or not the proposed new development is located within, contiguous, or in close proximity to an existing developed area. If the proposed project does not meet this test then a review of the second and third tests is necessary. The second test is whether or not the location of the new development is in an area able to accommodate it or with adequate public services. The third test is whether or not the proposed project will or will not have significant adverse effects, either individually or cumulatively, on coastal resources. The proposed project site is located outside the developed coastal terrace area, an area where new development can be accommodated, therefore a review of the second and third tests are necessary.

The subject site is located within a 16-lot subdivision created in the 1960's prior to the effective date of the Coastal Act in 1977. These 16 lots are located outside of a developed area, as a result, a review of the surrounding parcels is necessary to complete the first test. The Commission has found that the existing developed area for

the Santa Monica Mountains area is the urbanized strip or coastal terrace along Pacific Coast Highway and is not the inland area of the Santa Monica Mountains such as the proposed project site.

The second test is whether or not there are adequate services (infrastructure) to serve the proposed development. The proposed project sites are located within an existing 16-lot subdivision with a private road system. The applicant proposed to improve portions of Harrow Road and Betton Drive that are currently a dirt road and located beyond Harrow Road's connection to Betton Road that is paved to access the western lot. Betton Drive leads to Skyhawk Lane, also a private road that ultimately leads to Tuna Canyon Road, a public road. A segment of the western portion of Betton Drive is currently not paved but is approved for pavement improvements as part of an approved Coastal Permit No. 4-00-162, (Sayles). The applicant proposes to construct a septic system and domestic water well to serve the proposed residential development as is common in this area. The eastern lot includes an approved residence and garage constructed on the lot with an approved but not constructed barn (Coastal Permit No. 4-03-085 and 4-03-085 A-1 (WF Trust). This eastern lot is served with a paved private road from Betton Drive and Vista Del Mar Roads eventually leading to Tuna Canyon Road, a private septic system and water well that are also common in this area. Therefore, the proposed project is located within an area that is able to accommodate it with private infrastructure services.

The third test is whether or not the proposed project will or will not have significant adverse effects, either individually or cumulatively, on coastal resources. The new development proposed consists of a minor lot line adjustment between two lots. The lot line itself will not directly affect ESHA. The subject lots are parcels are located within the Tuna Canyon Watershed with some existing ESHA on the subject sites. The eastern lot includes an approved residence and garage constructed on site (Coastal Permit No. 4-03-085, WF Trust) and an approved barn not constructed on site (Coastal Permit No. 4-03-085 A-1). The western lot includes a proposed residence, garage and barn with associated grading which is the subject of this application. The proposed lot line adjustment is minor, an adjustment of 0.28 acres (Exhibit 3). The adjustment will not affect the alteration of natural landforms and will not result in any new impacts to sensitive resources in any way.

In addition, the proposed lot configuration will not preclude the ability of the applicant to locate any of the proposed development in a location that would further minimize adverse impacts to sensitive habitat. The residential building sites on each lot will not be changed as a result of this adjustment. The only change will be the applicants proposal to relocate the approved barn on the eastern lot to a location about 30 feet to the west on a portion of the existing western lot as proposed in pending Coastal Permit Amendment Application No. 4-03-085 A2. Therefore, the Commission finds that the proposed project will not create adverse impacts to coastal resources on an individual basis.

The Commission has found that minimizing the cumulative impacts of new development is especially critical in the Malibu/Santa Monica Mountains area because of the large number of lots which already exist, many in remote, rugged mountain and canyon

areas. From a comprehensive planning perspective, the potential development of thousands of existing undeveloped and poorly sited parcels in these mountains creates cumulative impacts on coastal resources and public access over time. Because of the large number of existing undeveloped parcels and potential future development, the demands on road capacity, public services, recreational facilities and beaches could be expected to grow tremendously.

As a means of mitigating the cumulative impact problem in past actions, the Commission has consistently required, as a special condition to development for land divisions and multi-unit projects, participation in the Transfer of Development Credit (TDC) program. (Coastal Permit No. 155-78, Zal; Coastal Permit No. 158-78, Eide; Coastal Permit No. 182-81, Malibu Deville; Coastal Permit No. 196-86, Malibu Pacifica; Coastal Permit No. 5-83-43, Heathercliff; Coastal Permit No. 5-83-591, Sunset-Regan; Coastal Permit No. 5-85-748, Ehrman & Coombs; and Coastal Permit No. 4-97-113, Eisenstein.) The TDC program resulted in the retirement from development of existing, poorly sited, and non-conforming parcels at the same time new parcels or units were created. The intent was to ensure that no net increase in residential units resulted from the approval of land divisions or multi-family projects while allowing development to proceed consistent with the requirements of Section 30250(a).

As discussed above, the Commission has approved new subdivisions, but has continued to require purchase of TDC's as one of the alternative mitigation strategies. Staff review of the proposed project indicates that there is no incremental contribution to cumulative effects, as no new lots are being created. The effects such as additional traffic, sewage disposal, recreational use needs, visual scenic quality and resource degradation associated with the future development of this site are not applicable in this case. There are no new potential impacts to traffic, parking, sewage disposal, recreational use needs, visual scenic quality, and other coastal resources as a result of the proposed lot line adjustment project. Further, the proposed project will not result in any increase in intensity of use or density. Since the proposed project will not result in any new lots or additional residential units, there is no need for a TDC in this case as there will be no potential for an additional residential unit and therefore no individual or cumulative impacts.

In addition, new development raises coastal issues related to cumulative impacts on coastal resources. The construction of a second unit on a site where a primary residence exists intensifies the use of a parcel increasing impacts on public services, such as water, sewage, electricity and roads. New development also raises issues as to whether the location and amount of new development maintains and enhances public access to the coast.

Based on these policies, the Commission has limited the development of second dwelling units (including guest houses) on residential parcels in the Malibu and Santa Monica Mountain areas. The issue of second units on lots with primary residences has been the subject of past Commission action in the certification of the Santa Monica Mountains/Malibu Land Use Plan (LUP). In its review and action on the Malibu LUP, the Commission found that placing an upper limit on the size of second units (750 sq.

ft.) was necessary given the traffic and infrastructure constraints which exist in Malibu and given the abundance of existing vacant residential lots. In this case, the applicant is proposing the construction of a detached barn, which if the second story loft is included, would be larger than 750 sq. ft. in size. Therefore, in order to ensure that potential cumulative impacts to coastal resources are minimized, Special Condition Five (5) requires any future improvements to the barn, including the conversion of the non-habitable barn to a habitable structure or the use or addition of any combustible materials for the barn, shall require an amendment to Permit No. 4-05-202 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

Therefore, the Commission finds that the proposed project will not create impacts to coastal resources on an individual or cumulative basis, and therefore, the Commission finds the project meets the third test of Section 30250. Thus, Commission finds that the proposed project is consistent with Section 30250 of the Coastal Act.

G. Violation

Development has occurred on the subject site without the required coastal development permit including installation of a water well, water tank, an 80 ft. long road, and removal and thining of about 1.5 acres of chaparral vegetation. The applicant purchased this property on October 7, 2005 with native chaparral on the majority of the lot as noted in the Biological Survey dated October 2005 by Steven Nelson. The applicant removed the vegetation during or after October 2005. The water well appears to have been installed by the applicant in 2006. The plastic water storage tank was identified on the subject property at the August 8, 2006 site visit by Commission Staff. The applicant was unable to provide evidence that this well and tank received a coastal permit from this Commission. These water well, tank, and vegetation removal and thinning activities all require a coastal permit in order to be in conformance with the Coastal Act.

This application includes the request for after-the-fact approval of the well, the removal and replacement of the water tank, the restoration of the 80 ft. long road, and the after-the-fact approval for the removal of the chaparral vegetation consistent with the fuel modification requirements for the new proposed residence. In order to ensure that restoration of the unpermitted road and any disturbed areas outside the approved fuel modification zone for the new proposed residence are adequately implemented, **Special Condition Two** has been required. In addition, in order to ensure that the unpermitted development component of this application is resolved in a timely manner, the Commission finds it necessary to require the applicant to fulfill all of the Special Conditions as a prerequisite to the issuance of this permit, as required by **Special Condition Fifteen** within 90 days of Commission action. Only as conditioned, is the proposed development consistent with the Coastal Act.

Although construction has taken place prior to submission of this permit application, consideration of the application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Approval of this permit does not constitute a waiver of any legal action with regard to any alleged violations nor does it constitute an

admission as to the legality of any development undertaken on the subject site without a coastal permit.

H. Local Coastal Program

Section 30604 of the Coastal Act states that:

> ***a) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a local program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).***

Section 30604(a) of the Coastal Act provides that the Commission shall issue a coastal 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 Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the project and accepted by the applicant. As conditioned, the proposed development will not create adverse impacts and is found to be consistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed development, as conditioned, will not prejudice the County of Los Angeles's ability to prepare a Local Coastal Program for this area of the Santa Monica Mountains that is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

I. California Environmental Quality Act

The Coastal Commission's permit process has been designated as the functional equivalent of CEQA. Section 13096(a) of the California Coastal Commission's Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the project, as conditioned by any conditions of approval, to be consistent with any applicable requirements of CEQA. Section 21080.5 (d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse effects that the activity may have on the environment.

As explained in the findings set forth above in this Staff Report, and incorporated fully herein, all feasible mitigation measures have been adopted to avoid or reduce any significant adverse effects the project may have on the environment. In addition, the Commission finds that there are no other feasible alternatives available that would avoid or substantially reduce any significant adverse effects the project may have on the environment, considering the applicants right to use their property. The County has determined that this project is ministerial relative to CEQA and thus was approve in

concept by the County of Los Angeles. Therefore, the proposed project, as conditioned, is consistent with the applicable requirements of CEQA.

405202 aurorafamilyllc report final 9212006

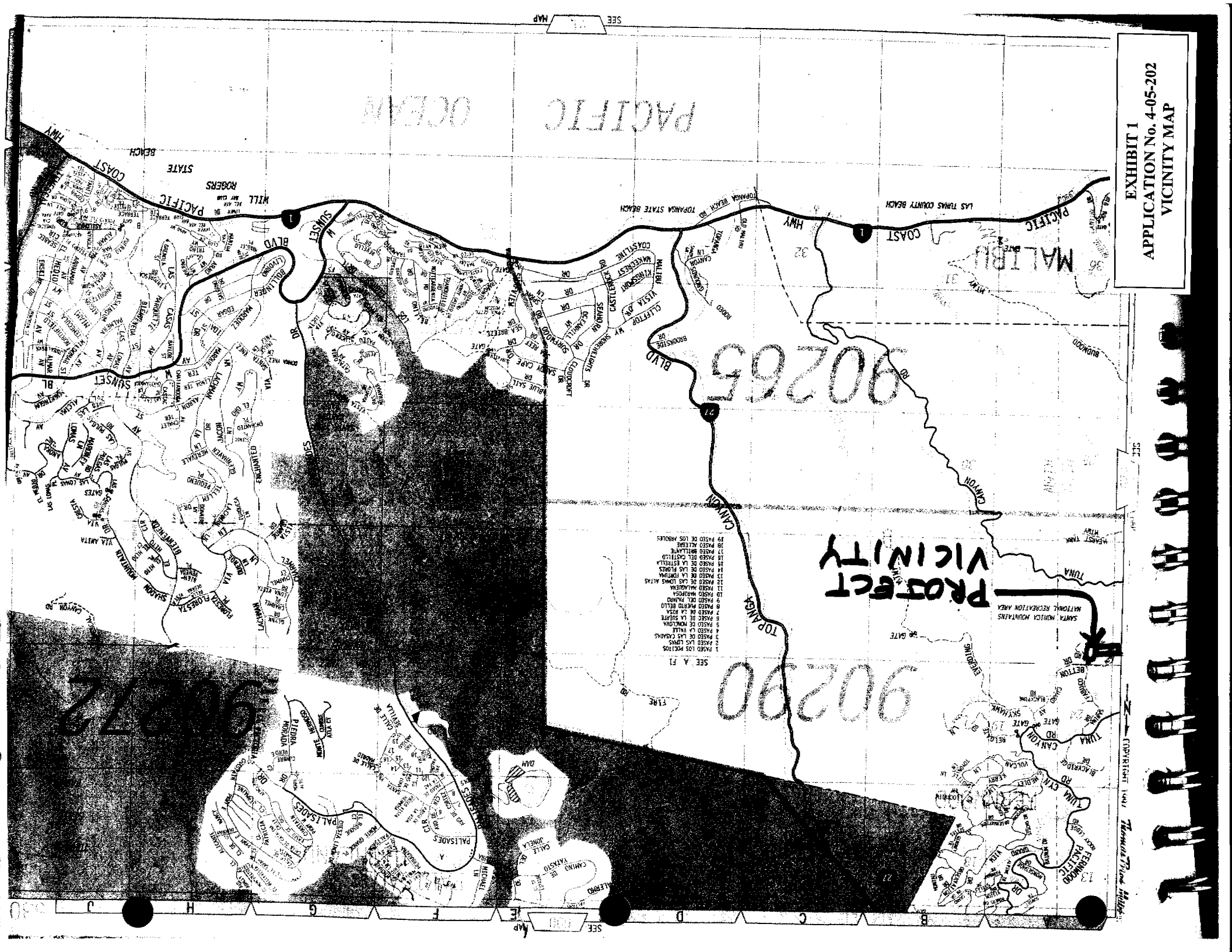


EXHIBIT 1
APPLICATION No. 4-05-202
VICINITY MAP
PROJECT VICINITY
PACIFIC OCEAN
MALIBU
PACIFIC COAST HWY
SUNSET BLVD
TOPANGA CANYON BLVD
TOPANGA BEACH RD
LAS TUNAS COUNTY BEACH
TOPANGA STATE BEACH
PALISADES DR
TUNA CANYON RD
SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA
90265
90290
90272

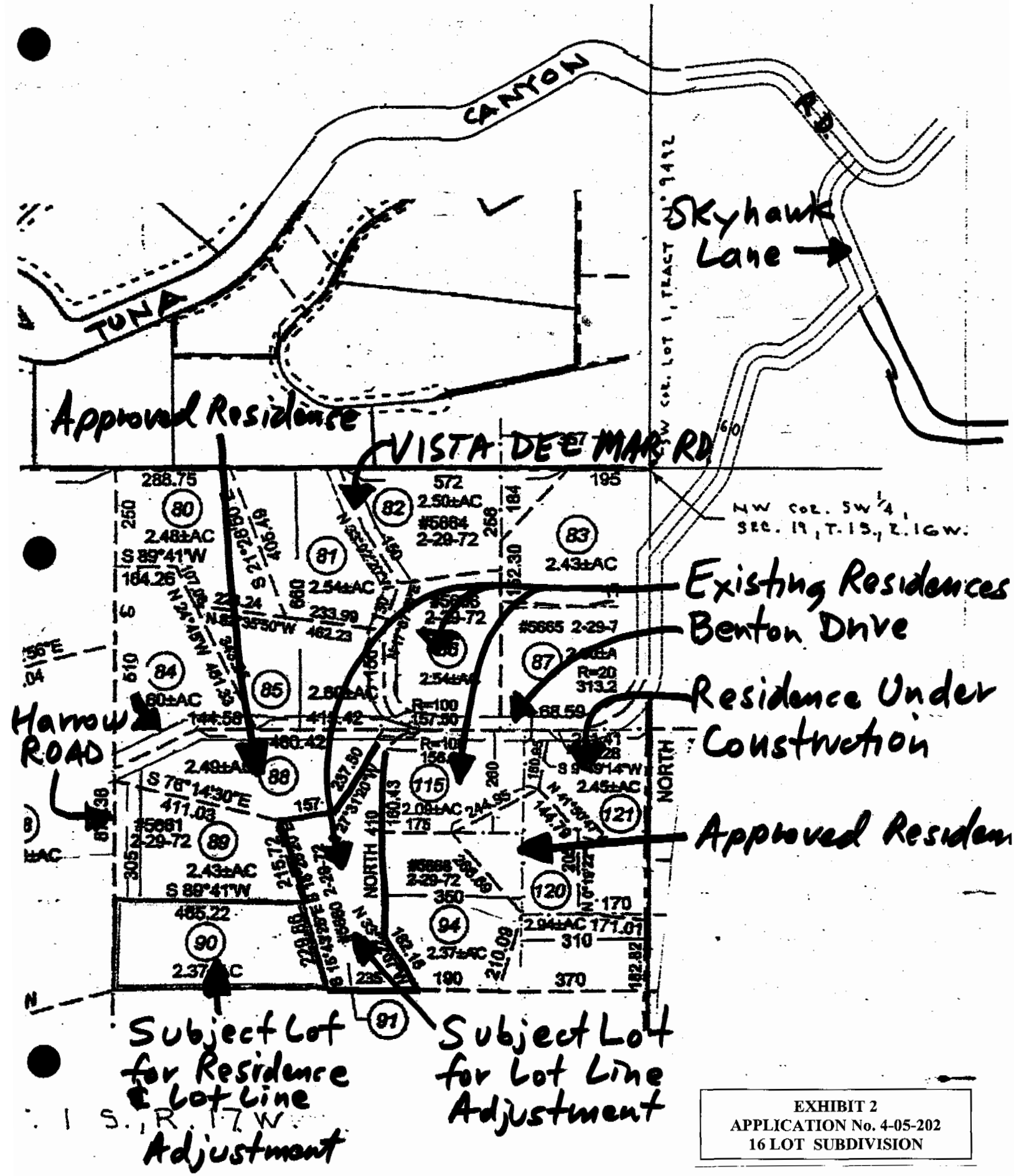


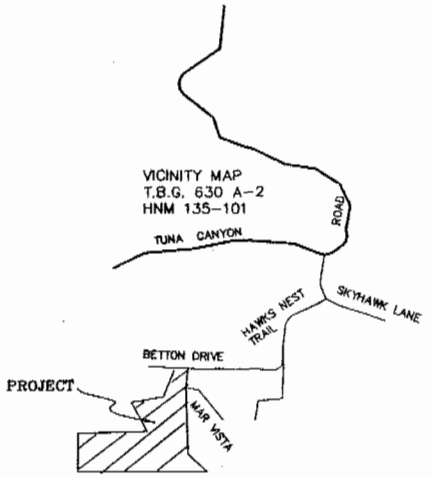
EXHIBIT 2
APPLICATION No. 4-05-202
16 LOT SUBDIVISION

TENTATIVE LOT LINE ADJUSTMENT
MAP NO. CC T200600022

PORTIONS OF THE NE 1/4, SE 1/4, SECTION 24 T.1S., R.17W., S.B.M.

NOTES:
OLD ZONING: A-1-1
THERE ARE NO OAK TREES ON THE PROPERTIES.

APPROVAL IN CONCEPT
SIGNED Chad Somers
DATE 7/13/2006
PLAN CHECK NO. T2006 0002
LOT LINE ADJUSTMENT
Per S[illegible] 3000 et seq of the Public Resources Code and Title 14 of the Administrative Code, State of California
THIS IS NOT A PERMIT
and
is subject to any condition listed below



MAY 16, 2006
SCALE: 1"=100'

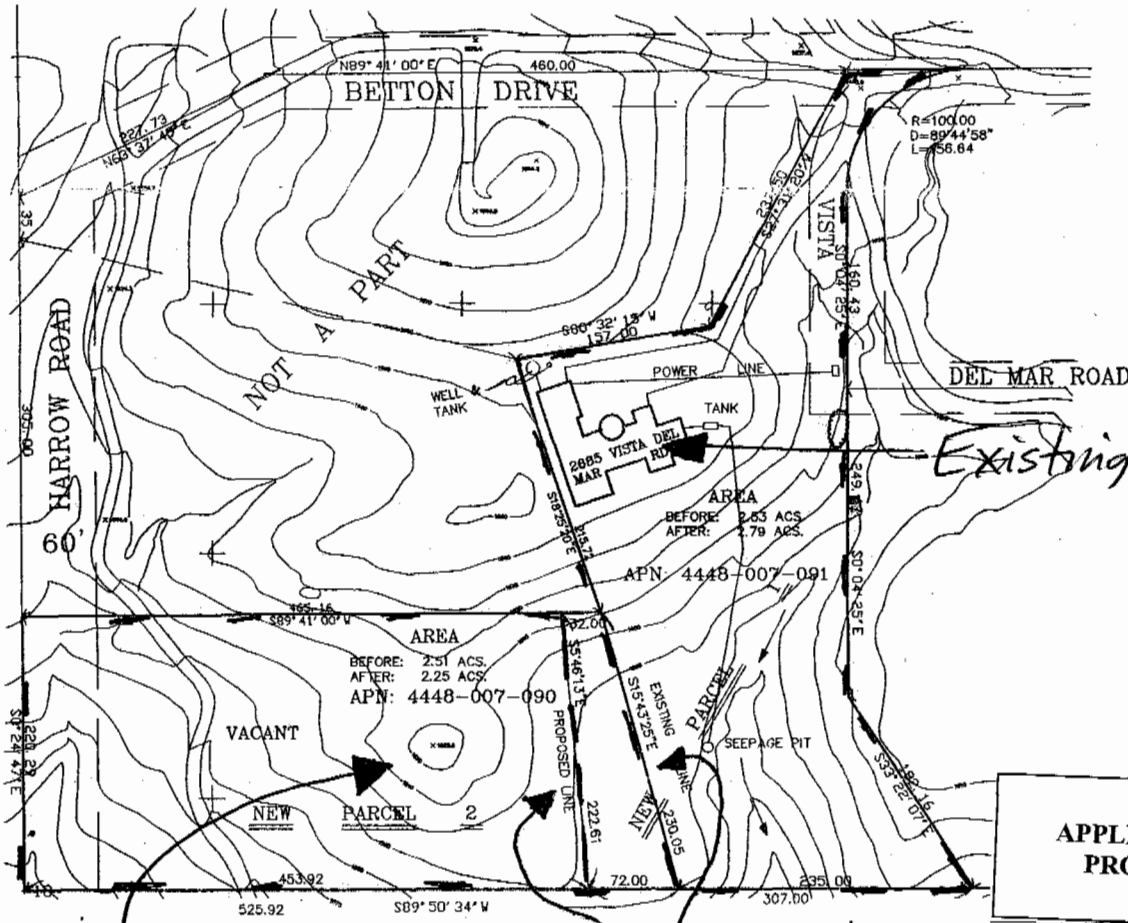
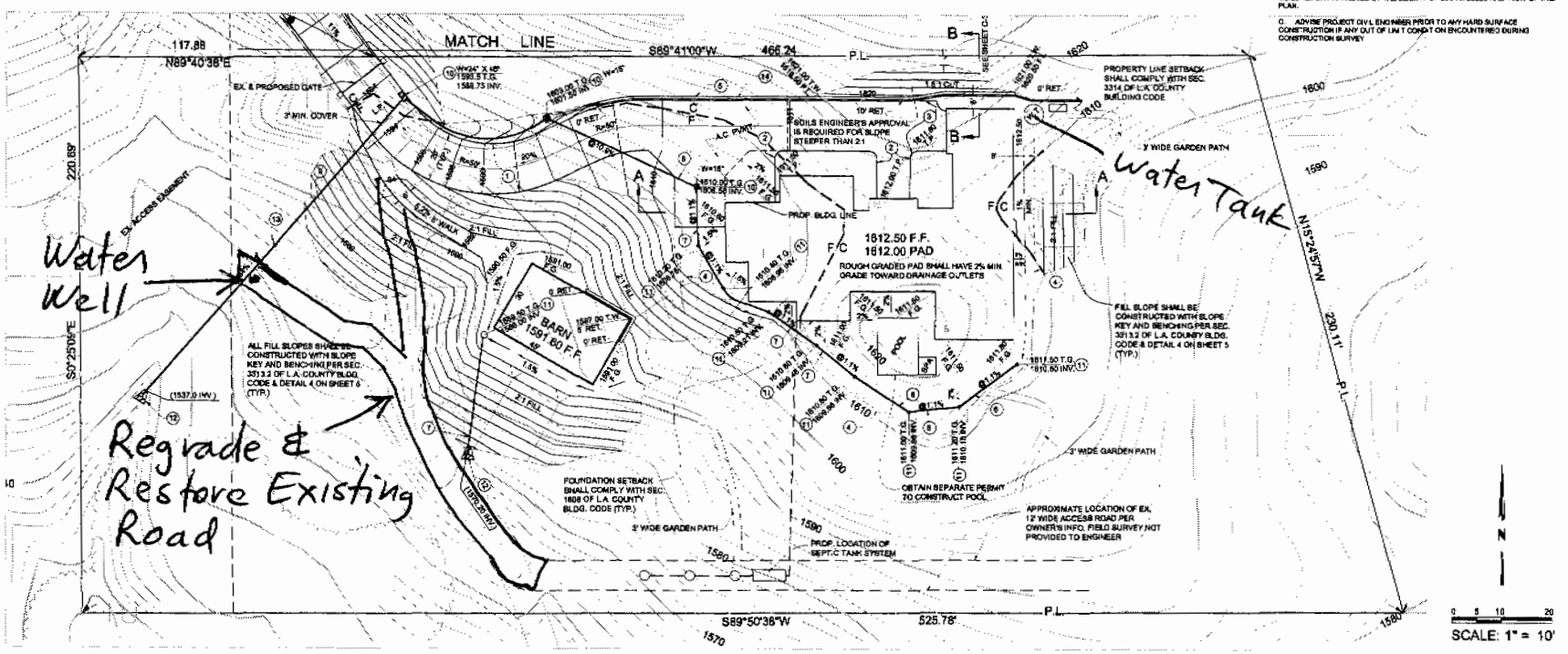


EXHIBIT 3
APPLICATION No. 4-05-202
PROPOSED LOT LINE ADJUSTMENT

LICENSED LAND SURVEYOR
JOHN H. MAC NEIL
EXP. JUNE 30, 2006
NO. 3358
STATE OF CALIFORNIA

JOHN H. MAC NEIL
2330 N. TOPANGA CANYON BLVD.
TOPANGA, CA 90290
310-455-2013

FILE # 9512LLA4



NOTES TO CONTRACTOR:

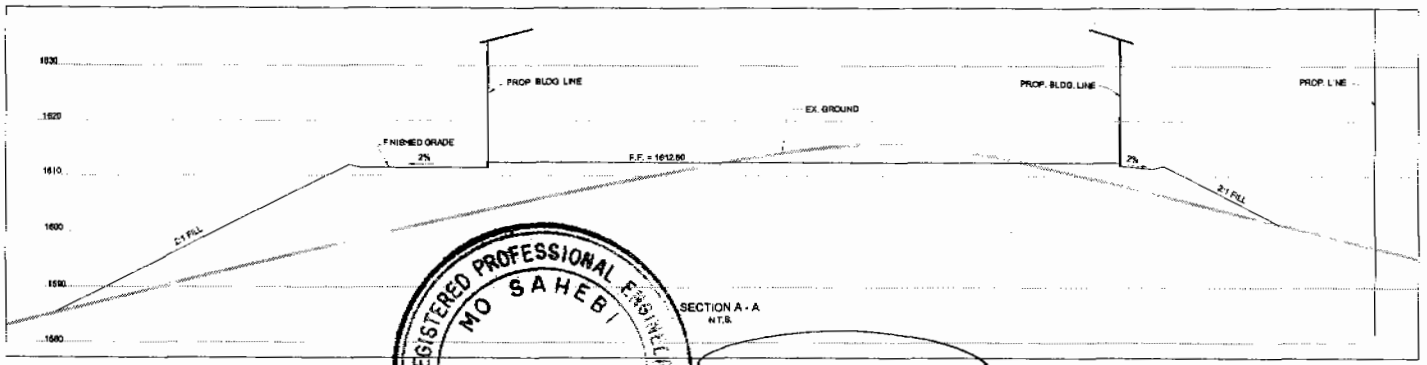
A. SEPARATE BUILDING PERMITS ARE REQUIRED FOR ALL RETAINING WALLS SHOWN ON THIS PLAN.

B. ALL RECOMMENDATIONS AND SPECIFICATIONS STATED IN THE PROJECTS SOILS REPORT APPROVED BY THE COUNTY OF LOS ANGELES ARE PART OF THIS PLAN.

C. ADVISE PROJECT CIVIL ENGINEER PRIOR TO ANY HARD SURFACE CONSTRUCTION IF ANY OUT OF LIMIT CONDITION ENCOUNTERED DURING CONSTRUCTION SURVEY

CONSTRUCTION NOTES:

1 CONST. 20' WIDE ACCESS ROAD PER DETAIL 6 ON SHEET 5
2 CONST. 6" CONC. CURB PER DETAIL 2 ON SHEET 5
3 CONST. HARDSCAPE PER ARCHITECT SPECIFICATIONS
4 CONST. EARTH BERM PER DETAIL 7 ON SHEET 3
5 CONST. 12" CONC. SWALE PER DETAIL 1 ON SHEET 3
PROVIDE 4" P.V.C. DRAINAGE PIPE
PROVIDE 6" P.V.C. DRAINAGE PIPE
PROVIDE 8" P.V.C. DRAINAGE PIPE
PROVIDE 12" R.C.P. DRAINAGE PIPE
CONST. CATCH BASIN WITH FRAME & GRATE PER DETAIL 9 ON SHEET 5
CONST. AREA DRAIN PER ARCH. SPEC.
CONST. GROUTED ROCK RIP RAP PER DETAIL 11 ON SHEET 3
CONST. PIPE CLEAR OUT AND COVER
CONST. 4" PERFORATED SUBDRAIN PIPE PER DETAIL 6 ON SHEET 5
CONST. CONC. DOWN DRAIN PER DETAIL 10 ON SHEET 5 W = 18"
CONST. SPLASH WALL PER DETAIL 3 ON SHEET 5



REGISTERED PROFESSIONAL ENGINEER
MO SAHEBI
NO. 33508
EXP. 6/08
CIVIL
STATE OF CALIFORNIA

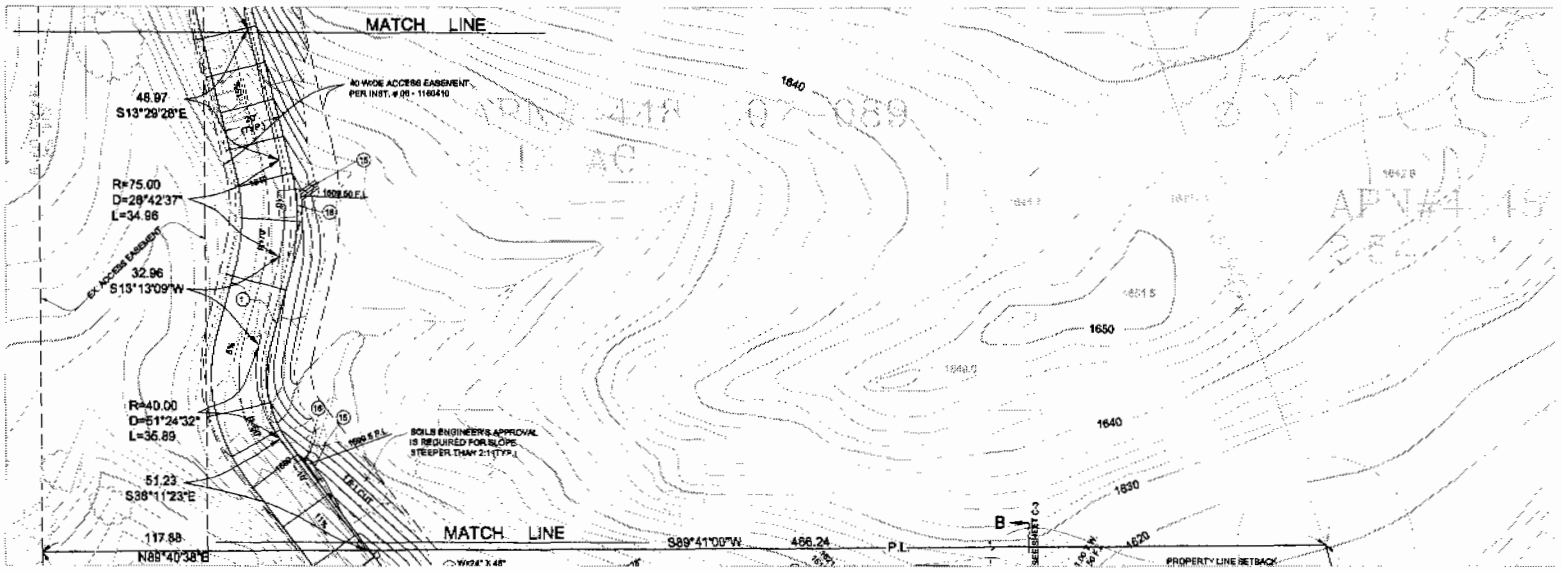
NO.	DATE	REVISION	BY

GRADING PLAN
2746 HARROW ROAD, TOPANGA CANYON

SIGNED
DATE

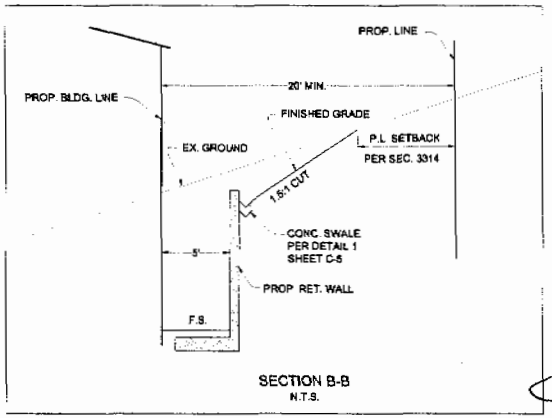
SHEET 2 OF 6
PRN: 2510-173
DATE: 6/29/2006
C - 2

EXHIBIT 4
APPLICATION No. 4-05-202
GRADING PLAN SUBJECT LOT



CONSTRUCTION NOTES:

1. CONST. 20' WIDE ACCESS ROAD PER DETAIL 9 ON SHEET 5
2. CONST. 6" CONC. CURB PER DETAIL 2 ON SHEET 5
3. CONST. HARDSCAPE PER ARCHITECT SPECIFICATIONS
4. CONST. EARTH BERM PER DETAIL 7 ON SHEET 5
5. CONST. 12" CONC. SWALE PER DETAIL 1 ON SHEET 5
6. PROVIDE 4" P.V.C. DRAINAGE PIPE
7. PROVIDE 6" P.V.C. DRAINAGE PIPE
8. PROVIDE 8" P.V.C. DRAINAGE PIPE
9. PROVIDE 18" R.C.P. DRAINAGE PIPE
10. CONST. CATCH BASIN WITH FRAME & GRATE PER DETAIL 6 ON SHEET 5
11. CONST. AREA DRAIN PER LARCH. SPEC.
12. CONST. GROUTED ROCK RIP RAP PER DETAIL 11 ON SHEET 6
13. CONST. P.P.E. CLEAN OUT AND COVER
14. CONST. 4" PERFORATED SUBDRAIN PIPE PER DETAIL 6 ON SHEET 5
    CONST. CONC. DOWN-DRAIN PER DETAIL 10 ON SHEET 5 W = 16"
    CONST. SPLASH WALL PER DETAIL 3 ON SHEET 5



SECTION B-B
N.T.S.

REGISTERED PROFESSIONAL ENGINEER
MO SAHEBI
NO. 33508
EXP. 6/08
CIVIL
STATE OF CALIFORNIA

M. Sahebi

NO.	DATE	REVISION	BY

GRADING PLAN

2746 HARROW ROAD, TOPANGA CANYON

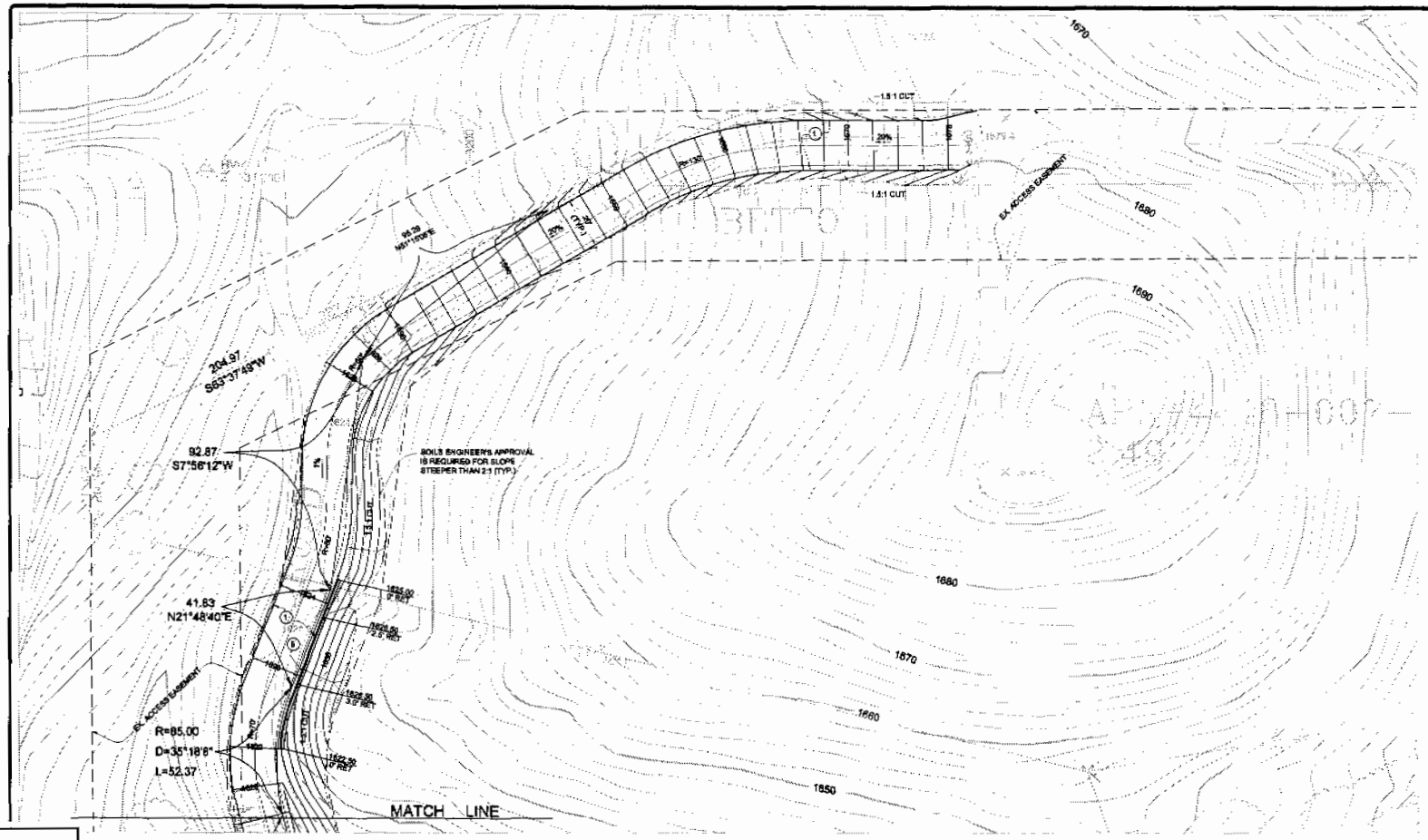
SIGNED
DATE:

SHEET 3 OF 6

PFN: 2510-173
DATE: 6/29/2006

C - 3

EXHIBIT 5
APPLICATION No. 4-05-202
HARROW ROAD GRADING PLAN
ADJACENT LOT TO NORTH



CONSTRUCTION NOTES:

- CONST. 20' WIDE ACCESS ROAD PER DETAIL 9 ON SHEET 5
- CONST. 9" CONC. CURB PER DETAIL 2 ON SHEET 5
- CONST. HARDSCAPE PER ARCHITECT SPECIFICATIONS
- CONST. EARTH BERM PER DETAIL 7 ON SHEET 5
- CONST. 12" CONC. SWALE PER DETAIL 1 ON SHEET 5
- PROVIDE 4" P.V.C. DRAINAGE PIPE
- PROVIDE 6" P.V.C. DRAINAGE PIPE
- PROVIDE 8" P.V.C. DRAINAGE PIPE
- PROVIDE 18" R.C.P. DRAINAGE PIPE
- CONST. CATCH BASIN WITH FRAME & GRATE PER DETAIL 8 ON SHEET 5
- CONST. AREA DRAIN PER ARCH. SPEC
- CONST. GROUTED ROCK RIP RAP PER DETAIL 11 ON SHEET 6
- CONST. PIPE CLEAN OUT AND COVER
- CONST. 4" PERFORATED SUBDRAIN PIPE PER DETAIL 8 ON SHEET 5
- CONST. CONC. DOWN DRAIN PER DETAIL 10 ON SHEET 5 W = 18"
- CONST. SPLASH WALL PER DETAIL 3 ON SHEET 6

REGISTERED PROFESSIONAL ENGINEER
MO SAHEBI
NO. 33508
EXP. 6/08
CIVIL
STATE OF CALIFORNIA

M. Sahebi

NO.	DATE	REVISION	BY

EXHIBIT 6
APPLICATION No. 4-05-202
HARROW ROAD GRADING PLAN
2ND LOT FURTHER TO NORTH

GRADING PLAN

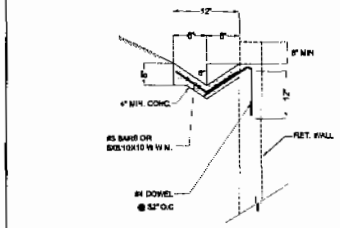
2746 HARROW ROAD, TOPANGA CANYON

B.GHPD
DATE

SHEET 4 OF 6

PFN: 2510-173
DATE: 8/29/2006

C - 4



1 CONCRETE SWALE
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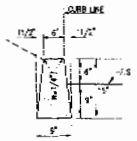

2 6" CONC. CURB
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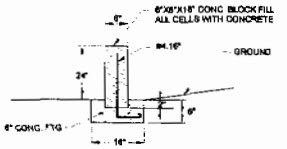

3 SPLASH WALL DETAIL
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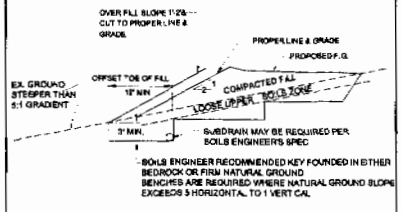

4 TYPICAL FILL AND BENCHING DETAIL
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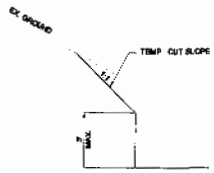

5 TEMPORARY EXCAVATION DETAIL
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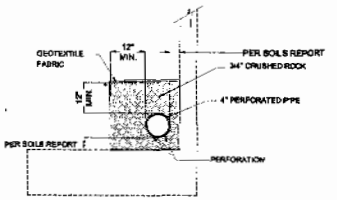

6 SUBDRAIN DETAIL
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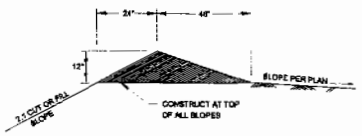

7 EARTH BERM
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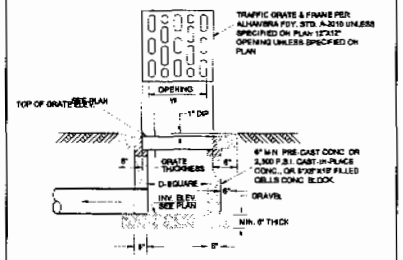
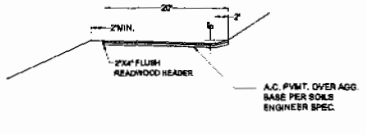


8 CONC. CATCH BASIN
N.T.S.



9 TYPICAL ROAD SECTION
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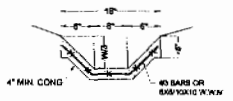

10 CONC. DOWN DRAIN
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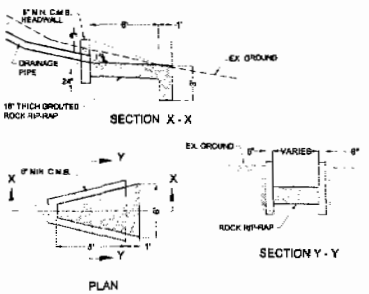


11 OUTLET STRUCTURE
N.T.S.

EXHIBIT 7
APPLICATION No. 4-05-202
HARROW ROAD DRAINAGE

NO.	DATE	REVISION	BY

GRADING PLAN
2746 HARROW ROAD, TOPANGA CANYON

SIGNED
DATE

SHEET 5 OF 6

PFN: 2510-173
DATE: 6/29/2006

C - 5

REGISTERED PROFESSIONAL ENGINEER
MO SAHEBI
NO. 33508
EXP. 6/08
CIVIL
STATE OF CALIFORNIA

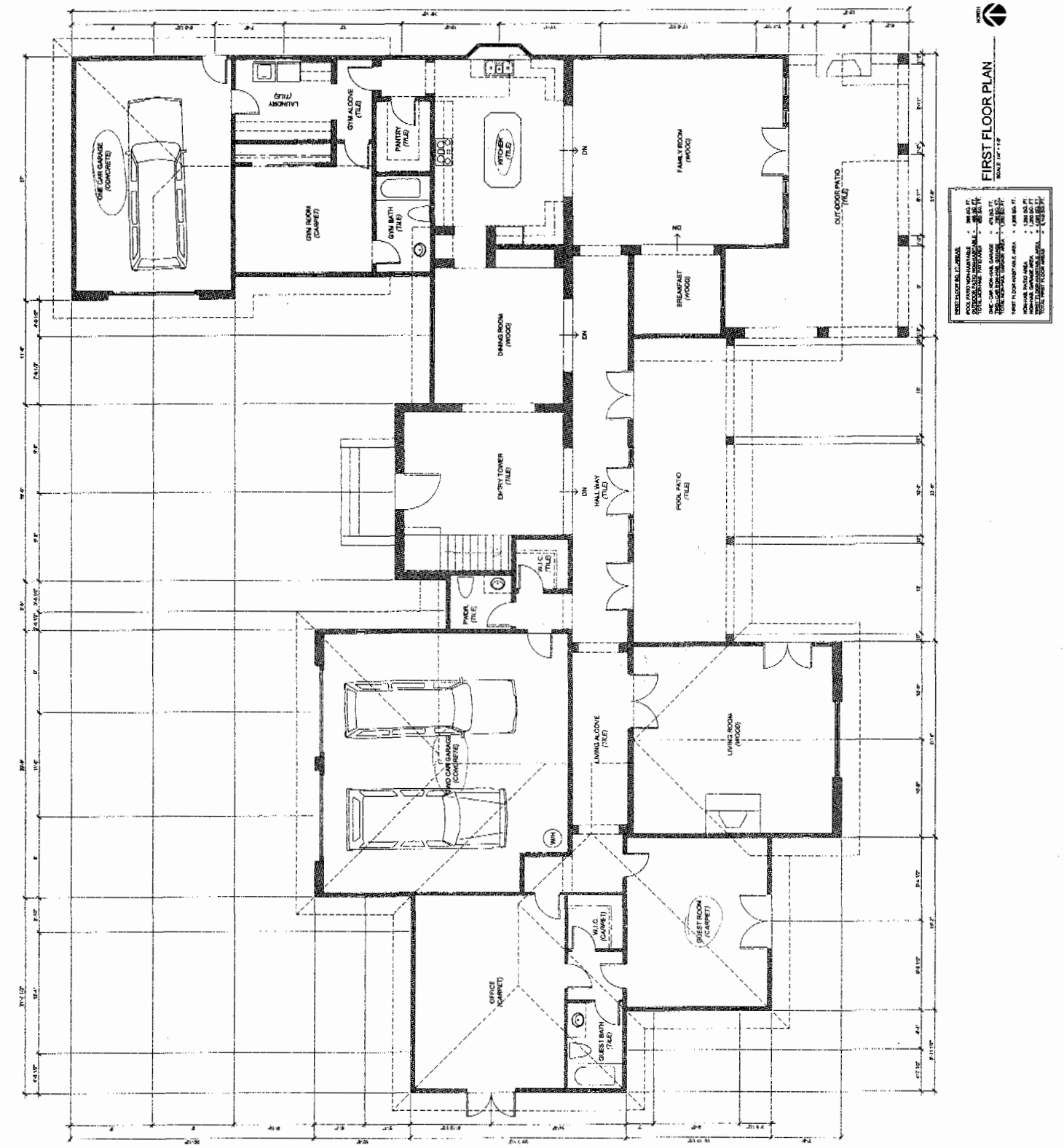


EXHIBIT 8
APPLICATION No. 4-05-202
FIRST FLOOR PLAN

EXHIBIT 9
APPLICATION No. 4-05-202
SECOND FLOOR PLAN

EXHIBIT 10
APPLICATION No. 4-05-202
NORTH & EAST ELEVATIONS

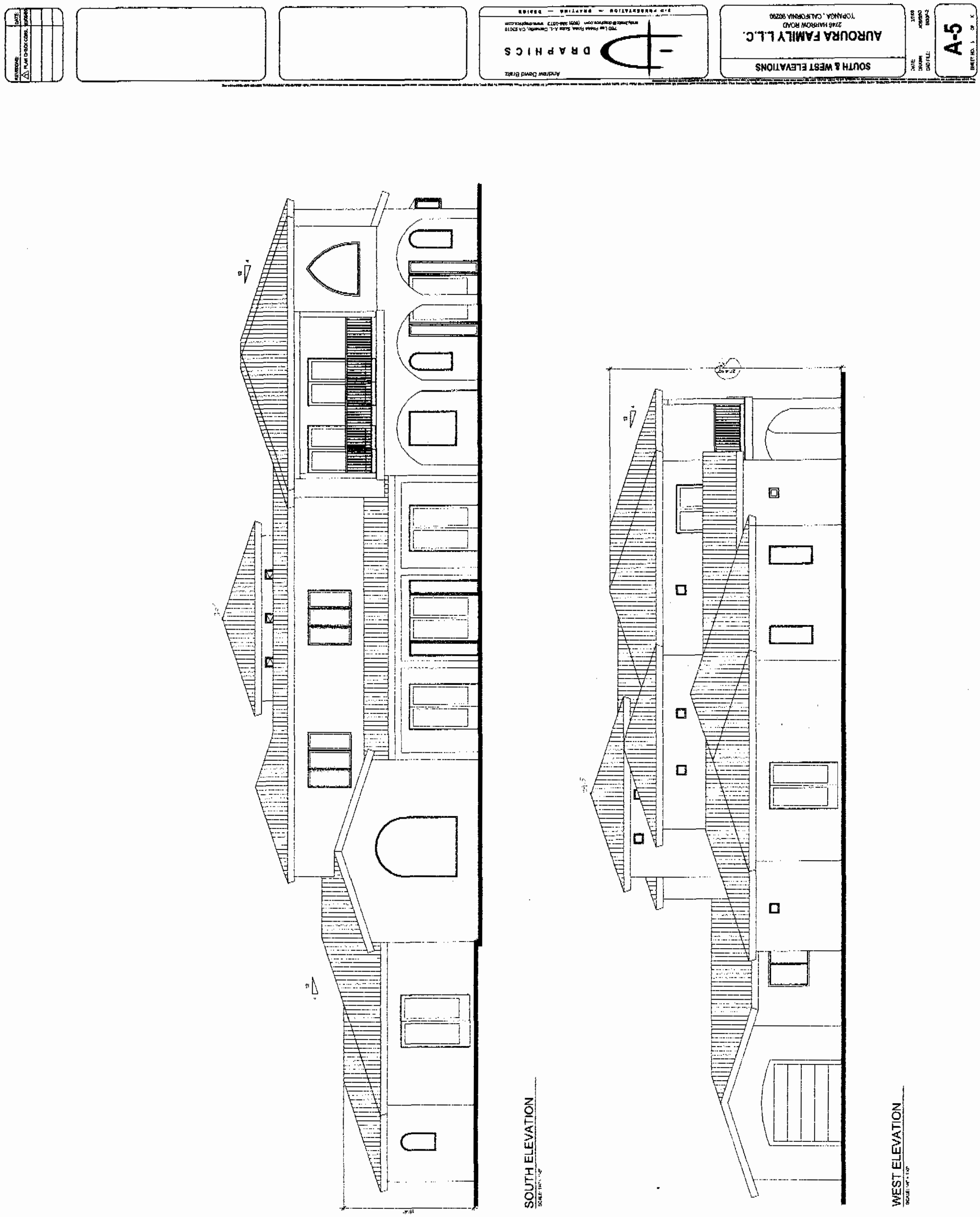


EXHIBIT 11
APPLICATION No. 4-05-202
SOUTH & WEST ELEVATIONS

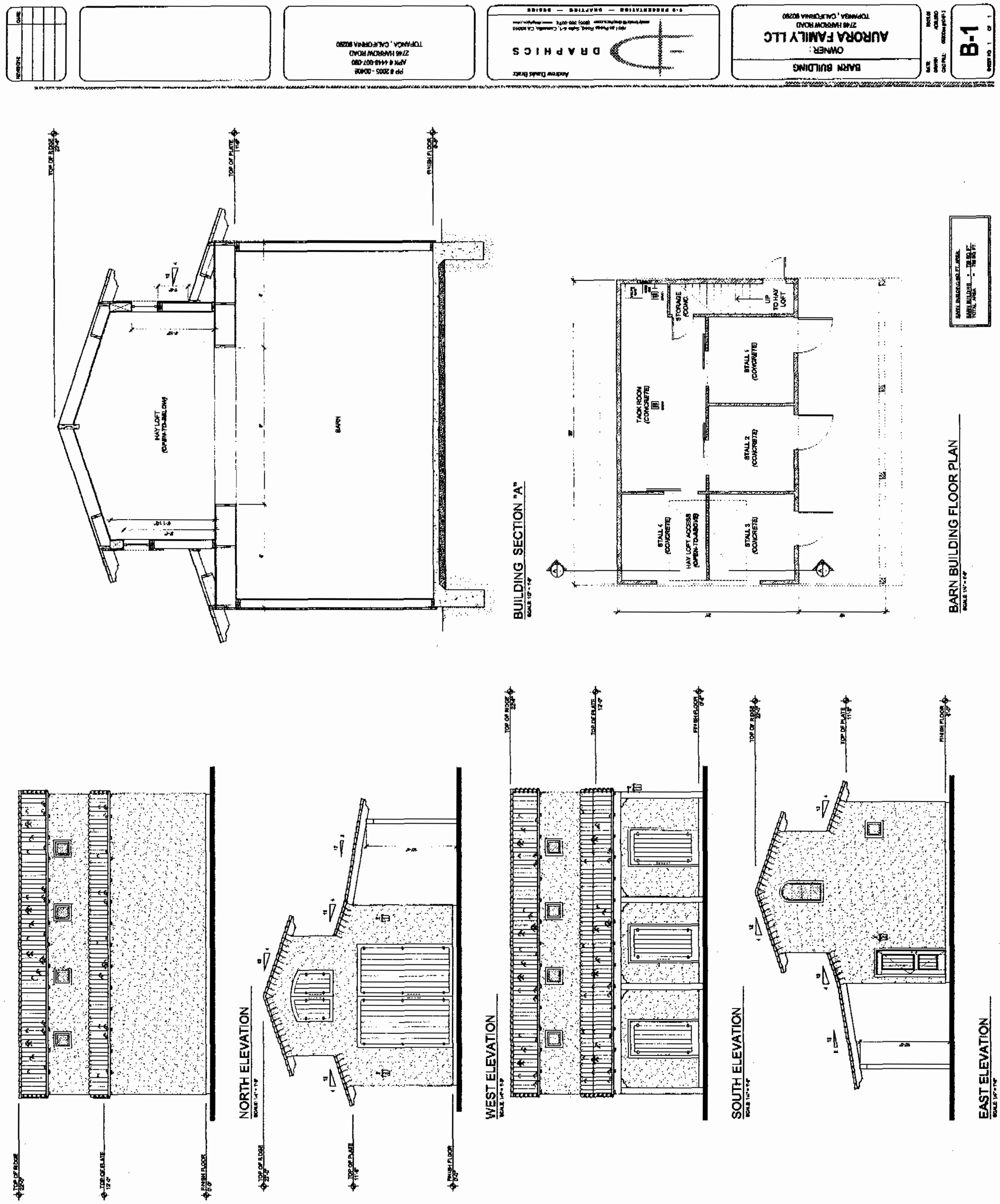
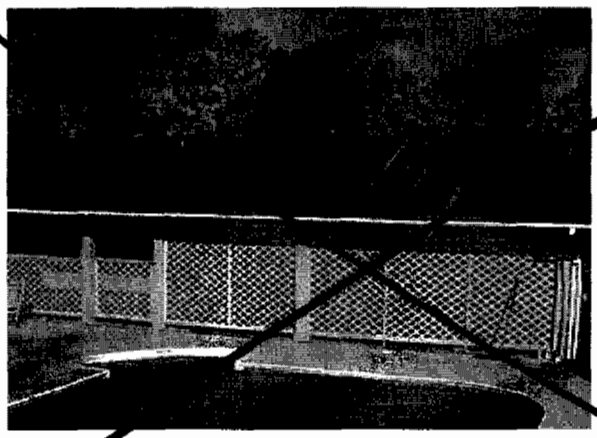
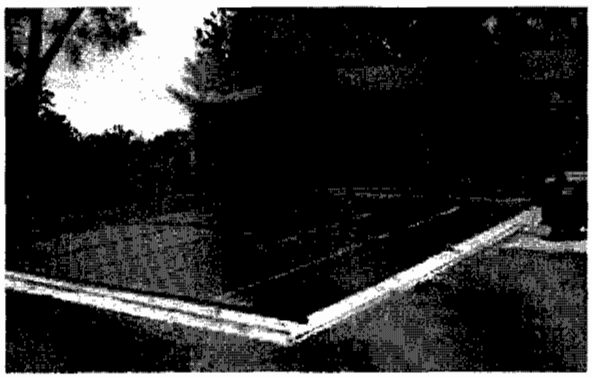


EXHIBIT 12
APPLICATION No. 4-05-202
BARN FLOOR PLAN &
ELEVATIONS



Solar Panel Roof Mount System
24′ x 8′



Solar Panel Ground Mount System
24′ x 8′

Owner: Aurora Family LLC

Project: 2746 Harrow Road, Topanga Ca.

Location: ~~Either~~r on ~~south facing roof or~~ south facing fill slope below pool within safety barrier fence and irrigated zone.

SOLAR DIRECT

http://www.solardirect.com

EXHIBIT 13
APPLICATION No. 4-05-202
SOLAR PANEL SYSTEM

WELL PERMIT APPLICATION

Mt. & Rural / Water & Sewage Program- L A County DHS / Environmental Health
5050 Commerce Drive, Baldwin Park, CA 91706-1423
TEL (626)430-5380 FAX (626)813-3016

PRODUCTION WELL

DATE: 10/24/05

■ NEW WELL CONSTRUCTION	■ PRIVATE DOMESTIC ☐ PUBLIC DOMESTIC
■ RECONSTRUCTION OR RENOVATION	☐ IRRIGATION ☐ Small System
☐ DECOMMISSIONING	☐ INDUSTRIAL ☐ Large System
■ OTHER: TEST BORE/PUMP TEST	☐ GRAVEL PACK ☐ Other :

WELL LOCATION

SITE ADDRESS	CITY	ZIP CODE
2684 HARROW RD.	TOPANGA	90290

Township	Range	Section	Map Book Page/ Grid
01S	17W	24	PAGE 630 A-2

GPS LOCATION : (To be completed after the final seal)

WELL STRUCTURE

Type and Size of Production Casing	6" PVC
Sanitary / Annular Sealing Material	SLURRY / 6 SACK
Depth of Sanitary / Annular Seal	50'
Conductor Casing Seal	1/4" STEEL

CONSULTANT

Company	WB HOMES
Contact Person	PETE WEEGER
Address	2685 VISTA DEL MAR
City , State Zip	TOPANGA, CA 90290
Telephone	310-455-2453

OWNER / DRILLER INFORMATION

Well Owner	AURORA FAMILY LLC
Address	2684 HARROW ROAD
City / Zip Code	TOPANGA, CA 90290
Telephone	310-455-2453
Well Driller	PACIFIC WELL & PUMP CO.
Address	18201 TELEGRAPH RD.
City / Zip Code	SANTA PAULA, CA 93060
C-57 License No.	C-57/692774
Telephone	310-850-9800

WELL DECOMMISSIONING

Well Depth ☐ log / records	
Method of Well Assessment	N/A
Depth and Number of Perforations	
Type of Perforator Size of Perforations	
Type and Amount of Sealant	
Method of Upper Seal Pressure Application	

IF WELL AND GEOLOGIC CONDITIONS ENCOUNTERED IN THE FIELD ARE FOUND TO DIFFER FROM THE SCOPE OF WORK PRESENTED TO THIS OFFICE, WORK PLAN MODIFICATIONS MAY BE REQUIRED

DISPOSITION OF PERMIT (Department Use Only)

THIS PERMIT IS CONSIDERED COMPLETE WHEN THE WORK PLAN IS APPROVED, A FINAL INSPECTION CONDUCTED BY THIS DEPARTMENT, AND THE RECEIPT OF A WELL COMPLETION LOG. NO WELL CONSTRUCTION OR DECOMMISSIONING CAN BE INITIATED WITHOUT THE WORK PLAN APPROVAL FROM THIS DEPARTMENT.

WORK PLAN APPROVAL
This Approval is Valid for 180 Days

Date	REHS
12-22-05	

Conditions

THE PLACEMENT OF THE ANNULAR SEAL MUST BE WITNESSED BY THIS DEPARTMENT. CONTACT THIS OFFICE AND ARRANGE FOR AN APPOINTMENT.

FINAL INSPECTION
Annular seal or final decommissioning seal witnessed

Date	REHS

PERMIT ISSUED
The well log must be submitted to this Department prior to issuance of the final approval

Date	REHS

THE COMPLETED WELL MUST BE PROPERLY DISINFECTED AND MEET BACTERIOLOGICAL STANDARDS PRIOR TO USE

WATE
The water from the well must meet ba

Date	REHS

I hereby agree to comply in every respect with all the regulations of the County Environmental Health Division and with all ordinances and laws of the County of Los Angeles and the State of California pertaining to well construction, reconstruction and decommissioning. Upon completion of the well and within thirty days thereafter, I will furnish the Environmental Health office with a completion log of the well giving date drilled, depth of the well, perforations in the casing, and any other data deemed necessary by County Environmental Health Division.

Applicant's Signature

Applicant Name: (PRINT) PETE J. WEEGER
Telephone: 310-455-2453

76A668-A
-13 (Rev. 10/2000)

EXHIBIT 14
APPLICATION No. 4-05-202
LA COUNTY WATER WELL PERMIT

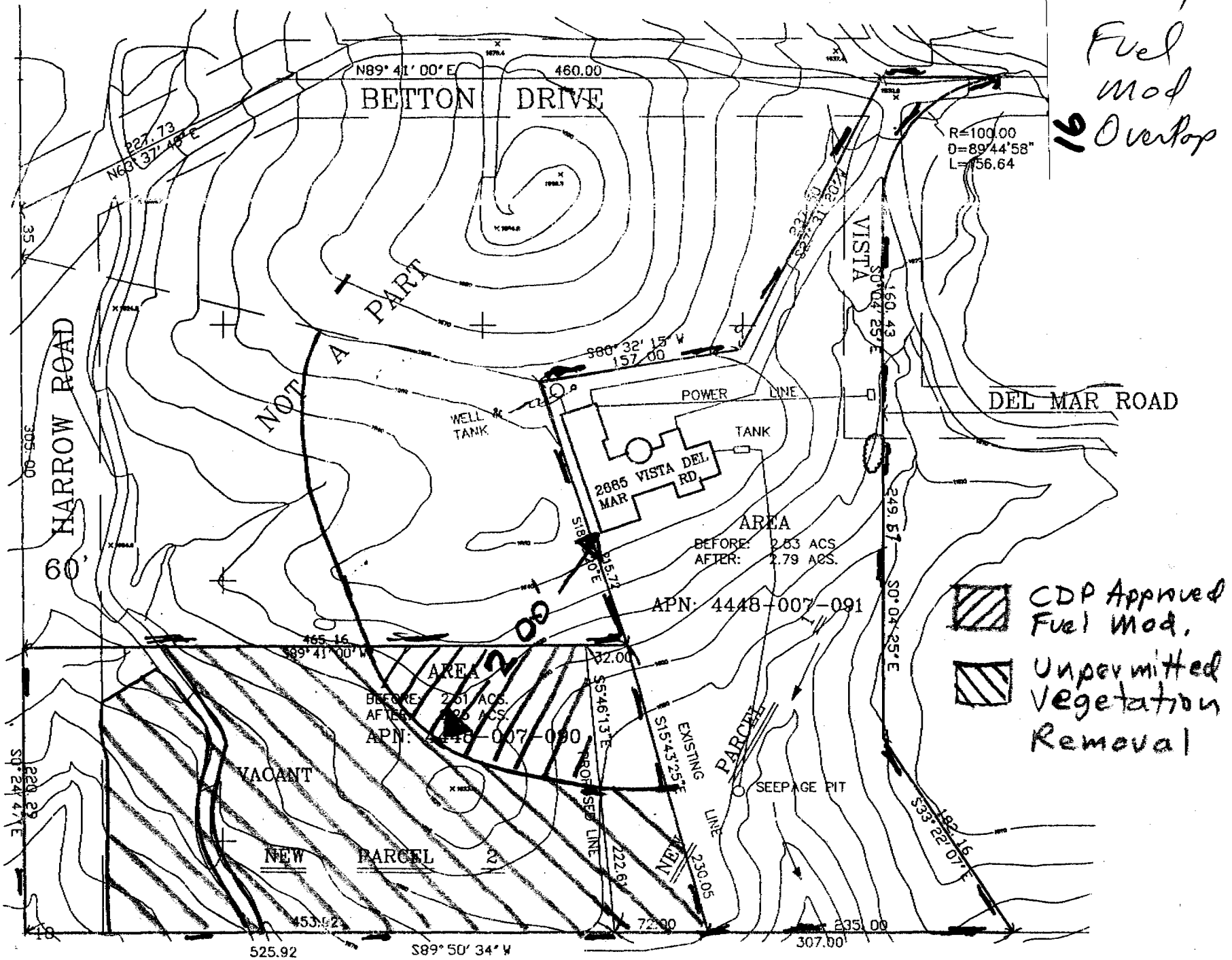
Pacific Well & Pump
18201 Telegraph Road
Santa Paula, CA 93061

Client: Aurora Family LLC
Date: 2/24/06 thru 2/25/06
Address: 2746 Harrow Road, Topanga, CA

24 Hour Pump Test

DATE	TIME	GAUGE	WATER LEVEL	DRAWDOWN	DISCHARGE GPM
02/24/2006		84.75	-195.77		
02/24/2006	05:30 PM	84.75	-195.77		
02/24/2006	06:00 PM	84.75	-195.77	0.00	
02/24/2006	06:30 PM	84.75	-195.77	0.00	47.00
02/24/2006	07:00 PM	84.75	-195.77	0.00	47.00
02/24/2006	07:30 PM	84.75	-195.77	0.00	47.00
02/24/2006	08:00 PM	84.50	-195.20	-0.58	47.00
02/24/2006	09:00 PM	84.50	-195.20	0.00	47.00
02/24/2006	10:00 PM	84.25	-194.62	-0.58	47.00
02/24/2006	11:00 PM	84.00	-194.04	-0.58	47.00
02/25/2006	12:00 AM	84.00	-194.04	0.00	47.00
02/25/2006	01:00 AM	84.00	-194.04	0.00	47.00
02/25/2006	02:00 AM	83.75	-193.46	-0.58	47.00
02/25/2006	03:00 AM	83.75	-193.46	0.00	47.00
02/25/2006	04:00 AM	83.75	-193.46	0.00	47.00
02/25/2006	05:00 AM	83.95	-193.92	0.46	47.00
02/25/2006	06:00 AM	83.95	-193.92	0.00	47.00
02/25/2006	07:00 AM	83.75	-193.46	-0.46	47.00
02/25/2006	08:00 AM	83.95	-193.92	0.46	47.00
02/25/2006	09:00 AM	84.25	-194.62	0.69	46.15
02/25/2006	10:00 AM	83.75	-193.46	-1.16	45.50
02/25/2006	11:00 AM	83.75	-193.46	0.00	46.15
02/25/2006	12:00 PM	83.95	-193.92	0.46	45.50
02/25/2006	01:00 PM	83.95	-193.92	0.00	46.50
02/25/2006	02:00 PM	83.95	-193.92	0.00	46.15
		Average	**Average**	**Drawdown**	**Average**
		80.93	**-186.95**	**-1.85**	**44.69**

Ex 14
Fuel
Mod
16 Overlap



CDP Approved Fuel Mod.

Unpermitted Vegetation Removal

EXHIBIT 16
APPLICATION No. 4-05-202
UNPERMITTED VEGETATION REMOVAL

CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585-1800

September 13, 2006

4448-007-089/088
Eric Andrews
PO Box 312
Topanga, CO 90290

4448-007-084
Trollope Anderson
2218 Margaret Court
Redondo Beach, CA 90278

4448-007-085
John & Helen Lyons
36443 165th St. East
Llano, CA 93544

RE: Coastal Development Permit Application No. 4-05-202, Aurora Family LLC, 2746 Harrow Road & 2685 Vista Del Mar Road, Topanga, CA

Dear Mr. Andrews,
Mr. Anderson,
Mr. and Ms. Lyons,

This office has received an request to process Coastal Permit Application Number 4-05-202 from Aurora Family LLC to construct a 6,216 sq. ft., 32 ft. high, 2-story, single family residence with a 785 sq. ft. attached 2-car garage and a 475 sq. ft. attached 1-car garage; a 735 sq. ft., 22 ft. high, barn; a 3,500 sq. ft. corral; a pool; jacuzzi; solar panels; perimeter fencing; entry gates; septic system; water storage tanks; rainwater harvesting system; drainage structures and catch basins, filter, pipe and riprap; landscaping, two temporary construction trailers; and request for after-the-fact approval of an as-built water well, access road to well, and temporary placement of an as-built plastic water tank. In addition the project includes 5,544 cu. yds. of grading (2,918 cu. yds. of cut and 2,282 cu. yds. of fill, 292 cubic yards of shrinkage and 344 cubic yards of export); a new onsite access driveway with turnaround; improve and widen a 610 ft. long segment of the approximately 12-20 ft.-wide Harrow and Betton Roads to 20 ft. in width; revegetation/restoration of an as-built 80 foot long access road to water well and restore 160 foot portion of existing 360 foot long road along southwest portion of property; and a lot line adjustment between the subject parcel (2.51 acres in size) and the adjacent parcel (2.53 acres in size) to reduce the subject parcel by 0.28 acres in size resulting in a 2.25 acre lot and 2.79 acre lot at 2746 Harrow Road & 2685 Vista Del Mar Road, Topanga, Los Angeles County

The application is filed and scheduled for a public hearing at the Coastal Commission's October 11-13, 2006 meeting in Los Angeles or Orange County.

Coastal Act Section 30601.5 states as follows:

> All holders or owners of any interests of record in the affected property shall be notified in writing of the permit application and invited to join as co-applicant.

EXHIBIT 17
APPLICATION No. 4-05-202
CO-APPLICANT LETTER FOR
HARROW ROAD IMPROVEMENTS

page 1 of 2

Because our records in the application file indicate that you are the owner of a fee interest in the property across which the road paving, grading and drainage improvements or the water main improvements are proposed, the Commission is notifying you of the application pursuant to Section 30601.5. With this letter, staff are inviting you to join this application as a co-applicant if you so choose. If you wish to join as a co-applicant, you may indicate your agreement by signing and returning a copy of this letter. If you have any questions or need further information about this application or the proposed project before you sign and return this letter, please call me or Steve Hudson at the number above or call the applicant's agent, Pete Weeger at 310-455-2453.

Sincerely,

James Johnson
Coastal Program Analyst

cc: Pete Weeger
405202 aurora coapp letters

AGREED: _____
Name(s) (Print)

_____
Signatures

_____
Property Address

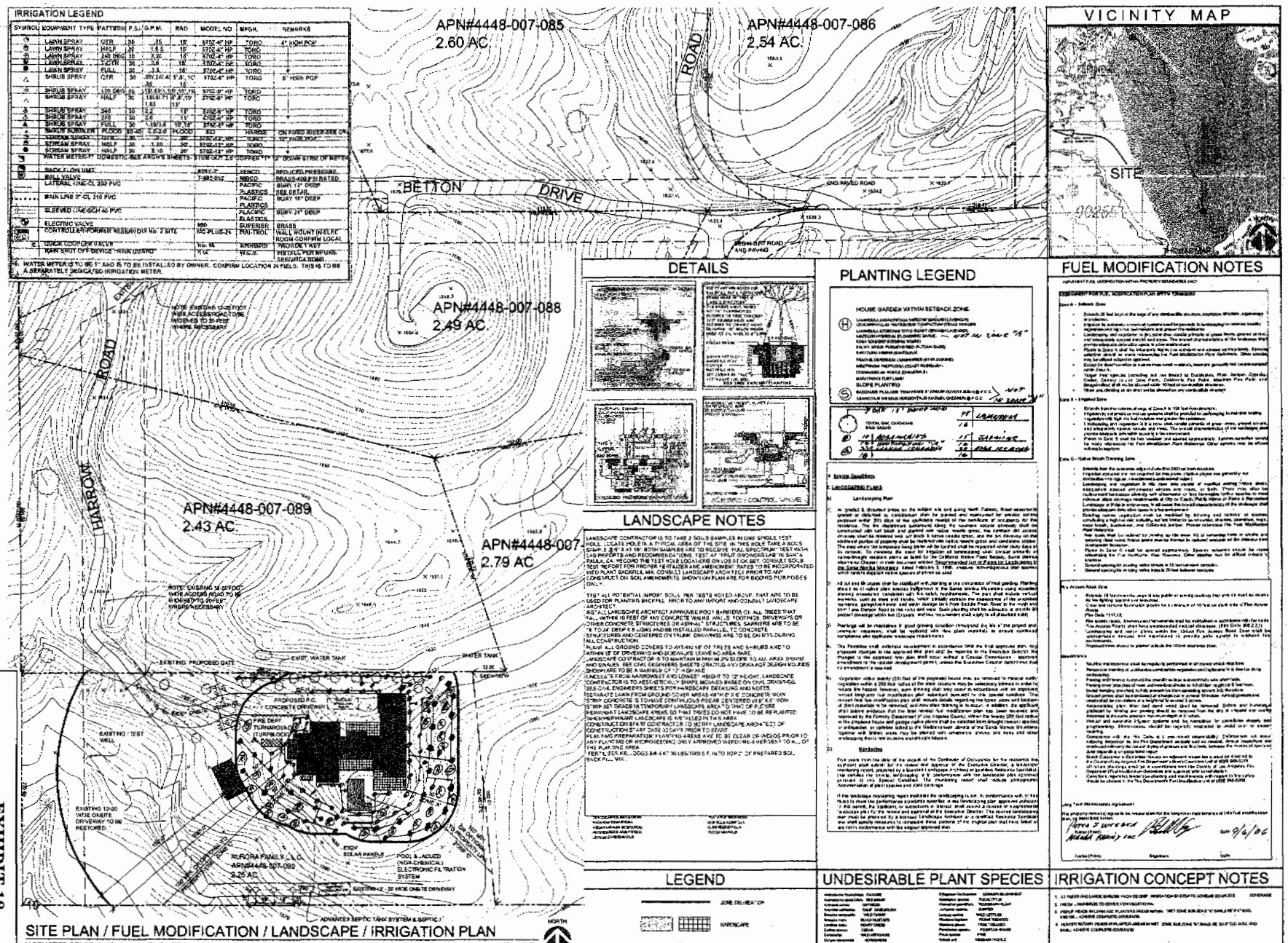
_____
Phone Number

EXHIBIT 18
APPLICATION No. 4-05-202
FINAL FUEL MODIFICATION PLAN

IRRIGATION LEGEND

SYMBOL	EQUIPMENT TYPE	PATTERN	P.S.I.	G.P.M.	RAD.	MODEL NO.	MFGR.	REMARKS
	LAWN SPRAY	QTR	30	.16	15'	570Z-4" HP	TORO	4" HIGH POP
	LAWN SPRAY	HALF	30	1.6	15'	570Z-4" HP	TORO	
	LAWN SPRAY	240 DEG	30	2.40	15'	570Z-4" HP	TORO	
	LAWN SPRAY	3QTR	30	.3.6	15'	570Z-4" HP	TORO	
	LAWN SPRAY	FULL	30	.3.6	15'	570Z-4" HP	TORO	
	SHRUB SPRAY	QTR	30	.08/.04/.40	8'.8'	570Z-4" HP	TORO	8" HIGH POP
	SHRUB SPRAY			.16	15'			
	SHRUB SPRAY	120 DEG	30	.19/.63/1.20	15'/.10'/.15'	570Z-6" HP	TORO	
	SHRUB SPRAY	HALF	30	1.60/.71/.91	8'.8'.15'	570Z-6" HP	TORO	
				1.63	15'			
	SHRUB SPRAY	3/4	30	1.2	13'	570Z-6" HP	TORO	
	SHRUB SPRAY	270	30	2.6	13'	570Z-4" HP	TORO	
	SHRUB SPRAY	FULL	30	1.80/1.6	10'.13'	570Z-6" HP	TORO	
	SHRUB BUBBLER	FLOOD	30-60	2.5-3.6	FLOOD	833	HARRIS	ON PAVED RISER (SEE DE
	STREAM SPRAY	12TH		.20	20'	570Z-12" HP	TORO	30" HIGH POP
	STREAM SPRAY	HALF	30	1.20	20'	570Z-12" HP	TORO	
	STREAM SPRAY	HALF	30	2.10	20'	570Z-12" HP	TORO	
	WATER METER**	DOMESTIC SEE ARCH'S SHEETS - 1" SUPPLY & 2" COPPER FIT						2" OPENING STRAP OF METER
	BACK FLOW UNIT					975XL-S"	SENICO	REDUCED PRESSURE
	BALL VALVE					1-581-012	NIBCO	BRASS-HALF PI RATED
	LATERAL LINE-CL 200 PVC						PACIFIC PLASTICS	SWAY 12" DEEP
	MAIN LINE 2"-CL 315 PVC						PACIFIC PLASTICS	SEE DETAIL SWAY 18" DEEP
	SLEEVING (SIZE-SCH 40 PVC						PACIFIC PLASTICS	SWAY 24" DEEP
	ELECTRIC VALVE					950	SUPERIOR	BRASS
	CONTROLLER-FORMER RESIDENCE No. 7 SITE					JRC PLUS-24	RAIN-TROL	WALL MOUNT IN ELEC ROOM-CONFIRM LOCAT
	CHECK COUPLER VALVE					No. 44	KHOMBARD	PROVIDE 1 KEY
	HAND SHUT OFF DEVICE (HAND LOCKING)					1"-1/2"	WILCO	INSTALL PER NPUMB. SPECIFICATIONS

** WATER METER TO BE 1" AND IS TO BE INSTALLED BY OWNER. CONFIRM LOCATION IN FIELD. THIS IS TO BE A SEPARATELY DEDICATED IRRIGATION METER.



SITE PLAN / FUEL MODIFICATION / LANDSCAPE / IRRIGATION PLAN

X DENOTES GENERAL FENCING IN THIS AREA

1" = 40'-0"

VICINITY MAP

DETAILS

PLANTING LEGEND

HOUSE GARDEN WITHIN SETBACK ZONE

LANDSCAPE NOTES

LANDSCAPE CONTRACTOR IS TO TAKE 2 SOILS SAMPLES IN ONE SINGLE TEST HOLE. LOCATE HOLE IN A TYPICAL AREA OF THE SITE. IN THIS HOLE TAKE A SOILS SAMPLE 6" & 6" & AT 18". BOTH SAMPLES ARE TO RECEIVE FULL SPECTRUM TEST WITH LAB REPORTS AND RECOMMENDATIONS. TEST AT TRUE GROWERS LAB IN SANTA PAULA, CA. RECORD THE TEST HOLE LOCATIONS ON LOS SHEET. CONSULT SOILS TEST REPORT FOR PROPER FERTILIZER MIX AND AMENDMENT RATES TO BE INCORPORATED INTO PLANT BACKFILL MIX. CONSULT LANDSCAPE ARCHITECT PRIOR TO ANY CONSTRUCTION SOIL AMENDMENTS SHOWN ON PLAN ARE FOR BIDDING PURPOSES ONLY.

TEST ALL POTENTIAL IMPORT SOILS PER TESTS NOTED ABOVE, THAT ARE TO BE USED FOR PLANTING BACKFILL PRIOR TO ANY IMPORT AND CONSULT LANDSCAPE ARCHITECT.

INSTALL LANDSCAPE ARCHITECT APPROVED ROOT BARRIERS ON ALL TREES THAT FALL WITHIN 10 FEET OF ANY CONCRETE WALKS AND/OR FOOTINGS, DRIVEWAYS OR OTHER CONCRETE STRUCTURES OR ASPHALT STRUCTURES. BARRIERS ARE TO BE 10 0.4" DEEP X 8' LONG AND INSTALLED PARALLEL TO CONCRETE STRUCTURES AND CENTERED ON TRUNK. DRAWINGS ARE TO BE ON SITE DURING ALL CONSTRUCTION.

PLANT ALL GROUND COVERS TO WITHIN 18" OF TREES AND SHRUBS AND TO WITHIN 18" OF DRIVEWAYS AND SIDEWALKS. LEAVE NO AREA BARE.

LANDSCAPE CONTRACTOR IS TO MAINTAIN MINIMUM SLOPE TO ALL AREA DRAINS AND SWALES. SEE CIVIL ENGINEERS SHEETS GRADING AND DRAINAGE SWALES AND DRAINAGE MOUNDS SHOWN ARE TO BE A MAXIMUM OF 12" HIGH AND CANCELLED FROM NARROWEST AND LOWEST HEIGHT TO 12" HEIGHT. LANDSCAPE CONTRACTOR IS TO ARTIFICIALLY SHAPE MOUNDS BASED ON CIVIL DRAWINGS. SEE CIVIL ENGINEERS SHEETS FOR HARDSCAPE DETAILING AND NOTES.

SEPARATE LAWN FROM GROUND COVER AREAS WITH 6" X 6" CONCRETE WORK STOP. CONCRETE STOP-MUST CONTINUOUS RADIUS CENTERED AT EACH WORK STRIP. SET GRADE IN TEMPORARY LANDSCAPE AREA TO TOP OF FUTURE PERMANENT LANDSCAPE AREAS, SO THAT TREES DO NOT HAVE TO BE REPLANTED WHEN PERMANENT LANDSCAPE IS INSTALLED IN THIS AREA.

CONSTRUCTION STAFF CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT OF CONSTRUCTION STAFF DATE 10 DAYS PRIOR TO RECEIPT.

PLANTING PREPARATION: PLANTING AREAS ARE TO BE CLEAR OF WEEDS PRIOR TO ANY PLANTING OR HYDROSEEDING. ONLY APPROVED HERBICIDE IS RESIDENT TO ALL OF THE PLANTING AREA.

TESTS FOR RE... 20GS 84-447 30 LBS/1000 S.F. INTO TOP 2" OF PREPARED SOIL BACK FILL MIX.

LEGEND

ZONE DELINEATION

HARDSCAPE

PHOTOGRAPH KEY

UNDESIRABLE PLANT SPECIES

FUEL MODIFICATION NOTES

IRRIGATION CONCEPT NOTES

Sheet Title

SITE PLAN / FUEL MODIFICATION / LANDSCAPE / IRRIGATION PLAN /

Job Name

AURORA FAMILY L.L.C. RESIDENCE

2746 HARROW ROAD TOPANGA, CA 90290

A.P.N. # 4448-007-090

COUNTY OF LOS ANGELES FIRE DEPARTMENT FIRE PREVENTION BUREAU FINAL FUEL MODIFICATION PLAN APPROVED

FUEL MODIFICATION UNIT

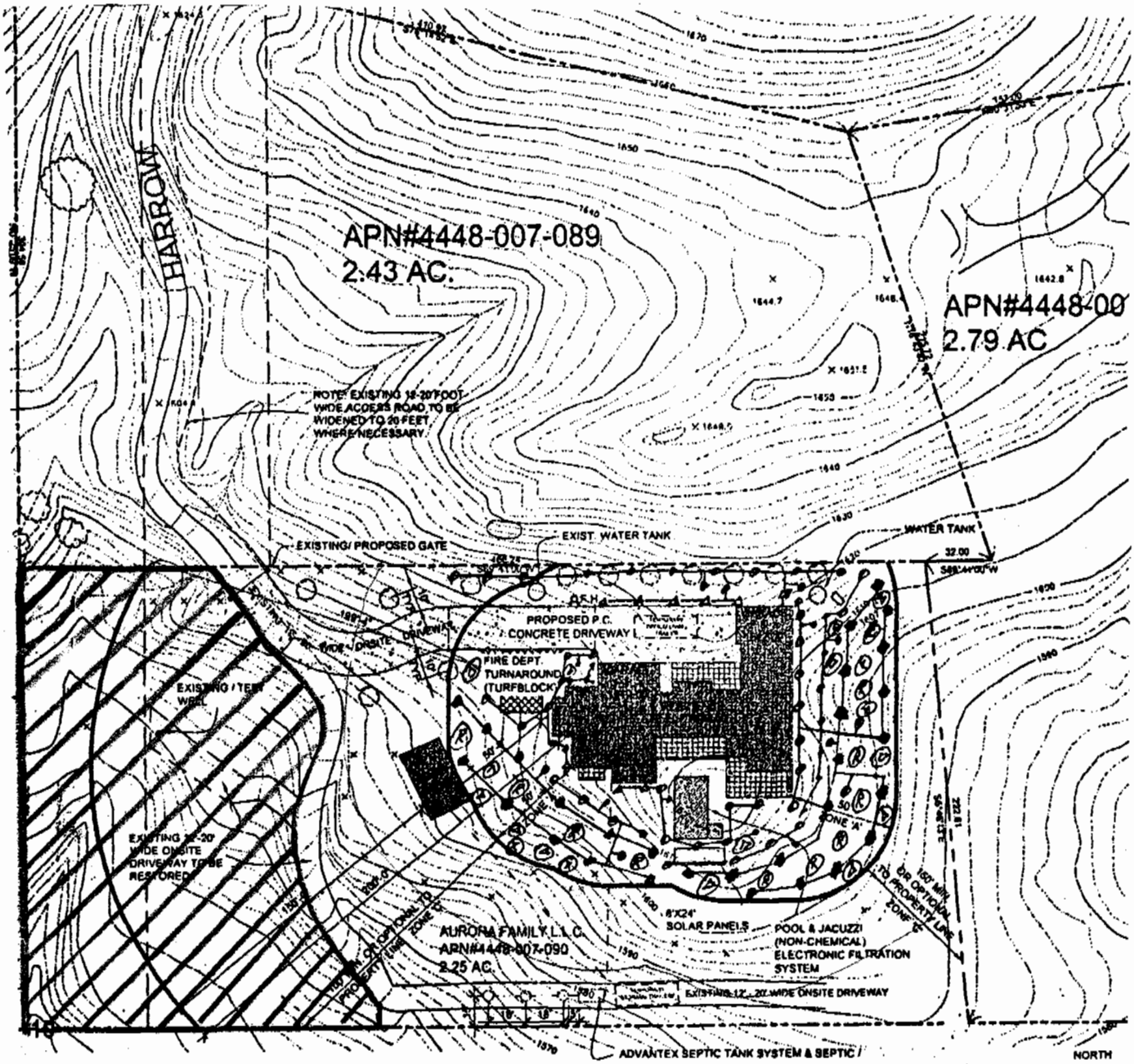
The stamping of this plan and specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of any County ordinance or state law.

Date-Revs.

9/5/06

Sheet

of F-1



SITE PLAN / FUEL MODIFICATION / LANDSCAPE / IRRIGATION PLAN

X DENOTES GENERAL FENCING IN THIS AREA

1" = 40'-0"

OPEN SPACE AREA

EXHIBIT 19
APPLICATION No. 4-05-202
OPEN SPACE DEED RESTRICTION AREA

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, GOVERNOR

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400

MEMORANDUM

FROM: John Dixon, Ph.D.
Ecologist / Wetland Coordinator

TO: Ventura Staff

SUBJECT: Designation of ESHA in the Santa Monica Mountains

DATE: March 25, 2003

In the context of the Malibu LCP, the Commission found that the Mediterranean Ecosystem in the Santa Mountains is rare, and especially valuable because of its relatively pristine character, physical complexity, and resultant biological diversity. Therefore, areas of undeveloped native habitat in the Santa Monica Mountains that are large and relatively unfragmented may meet the definition of ESHA by virtue of their valuable roles in that ecosystem, regardless of their relative rarity throughout the state. This is the only place in the coastal zone where the Commission has recognized chaparral as meeting the definition of ESHA. The scientific background presented herein for ESHA analysis in the Santa Monica Mountains is adapted from the Revised Findings for the Malibu LCP that the Commission adopted on February 6, 2003.

For habitats in the Santa Monica Mountains, particularly coastal sage scrub and chaparral, there are three site-specific tests to determine whether an area is ESHA because of its especially valuable role in the ecosystem. First, is the habitat properly identified, for example as coastal sage scrub or chaparral? The requisite information for this test generally should be provided by a site-specific biological assessment. Second, is the habitat largely undeveloped and otherwise relatively pristine? Third, is the habitat part of a large, contiguous block of relatively pristine native vegetation? This should be documented with an aerial photograph from our mapping unit (with the site delineated) and should be attached as an exhibit to the staff report. For those habitats that are absolutely rare or that support individual rare species, it is not necessary to find that they are relatively pristine, and are neither isolated nor fragmented.

Designation of Environmentally Sensitive Habitat in the Santa Monica Mountains

The Coastal Act provides a definition of "environmentally sensitive area" as: "Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Section 30107.5).

EXHIBIT 20
APP NO. 4-05-202
ESHA Memo

There are three important elements to the definition of ESHA. First, a geographic area can be designated ESHA either because of the presence of individual species of plants or animals or because of the presence of a particular habitat. Second, in order for an area to be designated as ESHA, the species or habitat must be either rare or it must be especially valuable. Finally, the area must be easily disturbed or degraded by human activities.

The first test of ESHA is whether a habitat or species is rare. Rarity can take several forms, each of which is important. Within the Santa Monica Mountains, rare species and habitats often fall within one of two common categories. Many rare species or habitats are globally rare, but locally abundant. They have suffered severe historical declines in overall abundance and currently are reduced to a small fraction of their original range, but where present may occur in relatively large numbers or cover large local areas. This is probably the most common form of rarity for both species and habitats in California and is characteristic of coastal sage scrub, for example. Some other habitats are geographically widespread, but occur everywhere in low abundance. California's native perennial grasslands fall within this category.

A second test for ESHA is whether a habitat or species is especially valuable. Areas may be valuable because of their "special nature," such as being an unusually pristine example of a habitat type, containing an unusual mix of species, supporting species at the edge of their range, or containing species with extreme variation. For example, reproducing populations of valley oaks are not only increasingly rare, but their southernmost occurrence is in the Santa Monica Mountains. Generally, however, habitats or species are considered valuable because of their special "role in the ecosystem." For example, many areas within the Santa Monica Mountains may meet this test because they provide habitat for endangered species, protect water quality, provide essential corridors linking one sensitive habitat to another, or provide critical ecological linkages such as the provision of pollinators or crucial trophic connections. Of course, all species play a role in their ecosystem that is arguably "special." However, the Coastal Act requires that this role be "especially valuable." This test is met for relatively pristine areas that are integral parts of the Santa Monica Mountains Mediterranean ecosystem because of the demonstrably rare and extraordinarily special nature of that ecosystem as detailed below.

Finally, ESHAs are those areas that could be easily disturbed or degraded by human activities and developments. Within the Santa Monica Mountains, as in most areas of southern California affected by urbanization, all natural habitats are in grave danger of direct loss or significant degradation as a result of many factors related to anthropogenic changes.

Ecosystem Context of the Habitats of the Santa Monica Mountains

The Santa Monica Mountains comprise the largest, most pristine, and ecologically complex example of a Mediterranean ecosystem in coastal southern California.

California's coastal sage scrub, chaparral, oak woodlands, and associated riparian areas have analogues in just a few areas of the world with similar climate. Mediterranean ecosystems with their wet winters and warm dry summers are only found in five localities (the Mediterranean coast, California, Chile, South Africa, and south and southwest Australia). Throughout the world, this ecosystem with its specially adapted vegetation and wildlife has suffered severe loss and degradation from human development. Worldwide, only 18 percent of the Mediterranean community type remains undisturbed[1]. However, within the Santa Monica Mountains, this ecosystem is remarkably intact despite the fact that it is closely surrounded by some 17 million people. For example, the 150,000 acres of the Santa Monica Mountains National Recreation Area, which encompasses most of the Santa Monica Mountains, was estimated to be 90 percent free of development in 2000[2]. Therefore, this relatively pristine area is both large and mostly unfragmented, which fulfills a fundamental tenet of conservation biology[3]. The need for large contiguous areas of natural habitat in order to maintain critical ecological processes has been emphasized by many conservation biologists[4].

In addition to being a large single expanse of land, the Santa Monica Mountains ecosystem is still connected, albeit somewhat tenuously, to adjacent, more inland ecosystems[5]. Connectivity among habitats within an ecosystem and connectivity among ecosystems is very important for the preservation of species and ecosystem integrity. In a recent statewide report, the California Resources Agency[6] identified wildlife corridors and habitat connectivity as the top conservation priority. In a letter to governor Gray Davis, sixty leading environmental scientists have endorsed the

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[1] National Park Service. 2000. Draft general management plan & environmental impact statement. Santa Monica Mountains National Recreation Area – California.

[2] Ibid.

[3] Harris, L. D. 1988. Edge effects and conservation of biotic diversity. Conserv. Biol. 330-332. Soule, M. E, D. T. Bolger, A. C. Alberts, J. Wright, M. Sorice and S. Hill. 1988. Reconstructed dynamics of rapid extinctions of chaparral-requiring birds in urban habitat islands. Conserv. Biol. 2: 75-92. Yahner, R. H. 1988. Changes in wildlife communities near edges. Conserv. Biol. 2:333-339. Murphy, D. D. 1989. Conservation and confusion: Wrong species, wrong scale, wrong conclusions. Conservation Biol. 3:82-84.

[4] Crooks, K. 2000. Mammalian carnivores as target species for conservation in Southern California. p. 105-112 *in*: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62. Sauvajot, R. M., E. C. York, T. K. Fuller, H. Sharon Kim, D. A. Kamradt and R. K. Wayne. 2000. Distribution and status of carnivores in the Santa Monica Mountains, California: Preliminary results from radio telemetry and remote camera surveys. p 113-123 *in*: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62. Beier, P. and R. F. Noss. 1998. Do habitat corridors provide connectivity? Conserv. Biol. 12:1241-1252. Beier, P. 1996. Metapopulation models, tenacious tracking and cougar conservation. *In*: Metapopulations and Wildlife Conservation, ed. D. R. McCullough. Island Press, Covelo, California, 429p.

[5] The SMM area is linked to larger natural inland areas to the north through two narrow corridors: 1) the Conejo Grade connection at the west end of the Mountains and 2) the Simi Hills connection in the central region of the SMM (from Malibu Creek State Park to the Santa Susanna Mountains).

[6] California Resources Agency. 2001. Missing Linkages: Restoring Connectivity to the California Landscape. California Wilderness Coalition, Calif. Dept of Parks & Recreation, USGS, San Diego Zoo and The Nature Conservancy. Available at: http://www.calwild.org/pubs/reports/linkages/index.htm

conclusions of that report[7]. The chief of natural resources at the California Department of Parks and Recreation has identified the Santa Monica Mountains as an area where maintaining connectivity is particularly important[8].

The species most directly affected by large scale connectivity are those that require large areas or a variety of habitats, e.g., gray fox, cougar, bobcat, badger, steelhead trout, and mule deer[9]. Large terrestrial predators are particularly good indicators of habitat connectivity and of the general health of the ecosystem[10]. Recent studies show that the mountain lion, or cougar, is the most sensitive indicator species of habitat fragmentation, followed by the spotted skunk and the bobcat[11]. Sightings of cougars in both inland and coastal areas of the Santa Monica Mountains[12] demonstrate their continued presence. Like the "canary in the mineshaft," an indicator species like this is good evidence that habitat connectivity and large scale ecological function remains in the Santa Monica Mountains ecosystem.

The habitat integrity and connectivity that is still evident within the Santa Monica Mountains is extremely important to maintain, because both theory and experiments over 75 years in ecology confirm that large spatially connected habitats tend to be more stable and have less frequent extinctions than habitats without extended spatial structure[13]. Beyond simply destabilizing the ecosystem, fragmentation and disturbance

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[7] Letters received and included in the September 2002 staff report for the Malibu LCP.

[8] Schoch, D. 2001. Survey lists 300 pathways as vital to state wildlife. Los Angeles Times. August 7, 2001.

[9] Martin, G. 2001. Linking habitat areas called vital for survival of state's wildlife Scientists map main migration corridors. San Francisco Chronicle, August 7, 2001.

[10] Noss, R. F., H. B. Quigley, M. G. Hornocker, T. Merrill and P. C. Paquet. 1996. Conservation biology and carnivore conservation in the Rocky Mountains. Conerv. Biol. 10: 949-963. Noss, R. F. 1995. Maintaining ecological integrity in representative reserve networks. World Wildlife Fund Canada.

[11] Sauvajot, R. M., E. C. York, T. K. Fuller, H. Sharon Kim, D. A. Kamradt and R. K. Wayne. 2000. Distribution and status of carnivores in the Santa Monica Mountains, California: Preliminary results from radio telemetry and remote camera surveys. p 113-123 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62. Beier, P. 1996. Metapopulation models, tenacious tracking and cougar conservation. In: Metapopulations and Wildlife Conservation, ed. D. R. McCullough. Island Press, Covelo, California, 429p.

[12] Recent sightings of mountain lions include: Temescal Canyon (pers. com., Peter Brown, Facilities Manager, Calvary Church), Topanga Canyon (pers. com., Marti Witter, NPS), Encinal and Trancas Canyons (pers. com., Pat Healy), Stump Ranch Research Center (pers. com., Dr. Robert Wayne, Dept. of Biology, UCLA). In May of 2002, the NPS *photographed* a mountain lion at a trip camera on the Back Bone Trail near Castro Crest – Seth Riley, Eric York and Dr. Ray Sauvajot, National Park Service, SMMNRA.

[13] Gause, G. F. 1934. The struggle for existence. Balitmore, William and Wilkins 163 p. (also reprinted by Hafner, N.Y. 1964). Gause, G. F., N. P. Smaragdova and A. A. Witt. 1936. Further studies of interaction between predators and their prey. J. Anim. Ecol. 5:1-18. Huffaker, C. B. 1958. Experimental studies on predation: dispersion factors and predator-prey oscillations. Hilgardia 27:343-383. Luckinbill, L. S. 1973. Coexistence in laboratory populations of *Paramecium aurelia* and its predator *Didinium nasutum*. Ecology 54:1320-1327. Allen, J. C., C. C. Brewster and D. H. Slone. 2001. Spatially explicit ecological models: A spatial convolution approach. Chaos, Solitons and Fractals. 12:333-347.

can even cause unexpected and irreversible changes to new and completely different kinds of ecosystems (habitat conversion)[14].

As a result of the pristine nature of large areas of the Santa Monica Mountains and the existence of large, unfragmented and interconnected blocks of habitat, this ecosystem continues to support an extremely diverse flora and fauna. The observed diversity is probably a function of the diversity of physical habitats. The Santa Monica Mountains have the greatest geological diversity of all major mountain ranges within the transverse range province. According to the National Park Service, the Santa Monica Mountains contain 40 separate watersheds and over 170 major streams with 49 coastal outlets[15]. These streams are somewhat unique along the California coast because of their topographic setting. As a "transverse" range, the Santa Monica Mountains are oriented in an east-west direction. As a result, the south-facing riparian habitats have more variable sun exposure than the east-west riparian corridors of other sections of the coast. This creates a more diverse moisture environment and contributes to the higher biodiversity of the region. The many different physical habitats of the Santa Monica Mountains support at least 17 native vegetation types[16] including the following habitats considered sensitive by the California Department of Fish and Game: native perennial grassland, coastal sage scrub, red-shank chaparral, valley oak woodland, walnut woodland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, oak riparian forest, coastal salt marsh, and freshwater marsh. Over 400 species of birds, 35 species of reptiles and amphibians, and more than 40 species of mammals have been documented in this diverse ecosystem. More than 80 sensitive species of plants and animals (listed, proposed for listing, or species of concern) are known to occur or have the potential to occur within the Santa Monica Mountains Mediterranean ecosystem.

The Santa Monica Mountains are also important in a larger regional context. Several recent studies have concluded that the area of southern California that includes the Santa Monica Mountains is among the most sensitive in the world in terms of the number of rare endemic species, endangered species and habitat loss. These studies have designated the area to be a local hot-spot of endangerment in need of special protection[17].

Therefore, the Commission finds that the Santa Monica Mountains ecosystem is itself rare and especially valuable because of its special nature as the largest, most pristine,

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[14] Scheffer, M., S. Carpenter, J. A. Foley, C. Folke and B. Walker. 2001. Catastrophic shifts in ecosystems. Nature 413:591-596.

[15] NPS. 2000. op.cit.

[16] From the NPS report (2000 op. cit.) that is based on the older Holland system of subjective classification. The data-driven system of Sawyer and Keeler-Wolf results in a much larger number of distinct "alliances" or vegetation types.

[17] Myers, N. 1990. The biodiversity challenge: Expanded hot-spots analysis. Environmentalist 10:243-256. Myers, N., R. A. Mittermeier, C. G. Mittermeier, G. A. B. da Fonseca and J. A. Kent. 2000. Biodiversity hot-spots for conservation priorities. Nature 403:853-858. Dobson, A. P., J. P. Rodriguez, W. M. Roberts and D. S. Wilcove. 1997. Geographic distribution of endangered species in the United States. Science 275:550-553.

physically complex, and biologically diverse example of a Mediterranean ecosystem in coastal southern California. The Commission further finds that because of the rare and special nature of the Santa Monica Mountains ecosystem, the ecosystem roles of substantially intact areas of the constituent plant communities discussed below are "especially valuable" under the Coastal Act.

Major Habitats within the Santa Monica Mountains

The most recent vegetation map that is available for the Santa Monica Mountains is the map that was produced for the National Park Service in the mid-1990s using 1993 satellite imagery supplemented with color and color infrared aerial imagery from 1984, 1988, and 1994 and field review[18]. The minimum mapping unit was 5 acres. For that map, the vegetation was mapped in very broad categories, generally following a vegetation classification scheme developed by Holland[19]. Because of the mapping methods used the degree of plant community complexity in the landscape is not represented. For example, the various types of "ceanothus chaparral" that have been documented were lumped under one vegetation type referred to as "northern mixed chaparral." Dr. Todd Keeler-Wolf of the California Department of Fish and Game is currently conducting a more detailed, quantitative vegetation survey of the Santa Monica Mountains.

The National Park Service map can be used to characterize broadly the types of plant communities present. The main generic plant communities present in the Santa Monica Mountains[20] are: coastal sage scrub, chaparral, riparian woodland, coast live oak woodland, and grasslands.

Riparian Woodland

Some 49 streams connect inland areas with the coast, and there are many smaller drainages as well, many of which are "blue line." Riparian woodlands occur along both perennial and intermittent streams in nutrient-rich soils. Partly because of its multi-layered vegetation, the riparian community contains the greatest overall biodiversity of all the plant communities in the area[21]. At least four types of riparian communities are discernable in the Santa Monica Mountains: walnut riparian areas, mulefat-dominated riparian areas, willow riparian areas and sycamore riparian woodlands. Of these, the

[18] Franklin, J. 1997. Forest Service Southern California Mapping Project, Santa Monica Mountains National Recreation Area, Task 11 Description and Results, Final Report. June 13, 1997, Dept. of Geography, San Diego State University, USFS Contract No. 53-91S8-3-TM45.
[19] Holland R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, Dept. of Fish and Game, Natural Heritage Division, Sacramento, CA. 95814.
[20] National Park Service. 2000. Draft: General Management Plan & Environmental Impact Statement, Santa Monica Mountains National Recreation Area, US Dept. of Interior, National Park Service, December 2000. (Fig. 11 in this document.)
[21] Ibid.

sycamore riparian woodland is the most diverse riparian community in the area. In these habitats, the dominant plant species include arroyo willow, California black walnut, sycamore, coast live oak, Mexican elderberry, California bay laurel, and mule fat. Wildlife species that have been observed in this community include least Bell's vireo (a State and federally listed species), American goldfinches, black phoebes, warbling vireos, bank swallows (State listed threatened species), song sparrows, belted kingfishers, raccoons, and California and Pacific tree frogs.

Riparian communities are the most species-rich to be found in the Santa Monica Mountains. Because of their multi-layered vegetation, available water supply, vegetative cover and adjacency to shrubland habitats, they are attractive to many native wildlife species, and provide essential functions in their lifecycles[22]. During the long dry summers in this Mediterranean climate, these communities are an essential refuge and oasis for much of the areas' wildlife.

Riparian habitats and their associated streams form important connecting links in the Santa Monica Mountains. These habitats connect all of the biological communities from the highest elevation chaparral to the sea with a unidirectional flowing water system, one function of which is to carry nutrients through the ecosystem to the benefit of many different species along the way.

The streams themselves provide refuge for sensitive species including: the coast range newt, the Pacific pond turtle, and the steelhead trout. The coast range newt and the Pacific pond turtle are California Species of Special Concern and are proposed for federal listing[23], and the steelhead trout is federally endangered. The health of the streams is dependent on the ecological functions provided by the associated riparian woodlands. These functions include the provision of large woody debris for habitat, shading that controls water temperature, and input of leaves that provide the foundation of the stream-based trophic structure.

The importance of the connectivity between riparian areas and adjacent habitats is illustrated by the Pacific pond turtle and the coast range newt, both of which are sensitive and both of which require this connectivity for their survival. The life history of the Pacific pond turtle demonstrates the importance of riparian areas and their associated watersheds for this species. These turtles require the stream habitat during the wet season. However, recent radio tracking work[24] has found that although the Pacific pond turtle spends the wet season in streams, it also requires upland habitat for refuge during the dry season. Thus, in coastal southern California, the Pacific pond turtle requires both streams and intact adjacent upland habitats such as coastal sage

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[22] Walter, Hartmut. Bird use of Mediterranean habitats in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

[23] USFWS. 1989. Endangered and threatened wildlife and plants; animal notice of review. Fed. Reg. 54:554-579. USFWS. 1993. Endangered and threatened wildlife and plants; notice of 1-year petition finding on the western pond turtle. Fed. Reg. 58:42717-42718.

[24] Rathbun, G.B., N.J. Scott and T.G. Murphy. 2002. Terrestrial habitat use by Pacific pond turtle in a Mediterranean climate. Southwestern Naturalist. (*in Press*).

scrub, woodlands or chaparral as part of their normal life cycle. The turtles spend about four months of the year in upland refuge sites located an average distance of 50 m (but up to 280 m) from the edge of the creek bed. Similarly, nesting sites where the females lay eggs are also located in upland habitats an average of 30 m (but up to 170 m) from the creek. Occasionally, these turtles move up to 2 miles across upland habitat[25]. Like many species, the pond turtle requires both stream habitats and the upland habitats of the watershed to complete its normal annual cycle of behavior. Similarly, the coast range newt has been observed to travel hundreds of meters into upland habitat and spend about ten months of the year far from the riparian streambed[26]. They return to the stream to breed in the wet season, and they are therefore another species that requires both riparian habitat and adjacent uplands for their survival.

Riparian habitats in California have suffered serious losses and such habitats in southern California are currently very rare and seriously threatened. In 1989, Faber estimated that 95-97% of riparian habitat in southern California was already lost[27]. Writing at the same time as Faber, Bowler asserted that, *"[t]here is no question that riparian habitat in southern California is endangered."*[28] In the intervening 13 years, there have been continuing losses of the small amount of riparian woodlands that remain. Today these habitats are, along with native grasslands and wetlands, among the most threatened in California.

In addition to direct habitat loss, streams and riparian areas have been degraded by the effects of development. For example, the coast range newt, a California Species of Special Concern has suffered a variety of impacts from human-related disturbances[29]. Human-caused increased fire frequency has resulted in increased sedimentation rates, which exacerbates the cannibalistic predation of adult newts on the larval stages.[30] In addition impacts from non-native species of crayfish and mosquito fish have also been documented. When these non-native predators are introduced, native prey organisms are exposed to new mortality pressures for which they are not adapted. Coast range newts that breed in the Santa Monica Mountain streams do not appear to have adaptations that permit co-occurrence with introduced mosquito fish and crayfish[31]. These introduced predators have eliminated the newts from streams where they previously occurred by both direct predation and suppression of breeding.

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[25] Testimony by R. Dagit, Resource Conservation District of the Santa Monica Mountains at the CCC Habitat Workshop on June 13, 2002.

[26] Dr, Lee Kats, Pepperdine University, personal communication to Dr J. Allen, CCC.

[27] Faber, P.A., E, Keller, A. Sands and B.M. Massey. 1989. The ecology of riparian habitats of the southern California coastal region: a community profile. U.S. Fish and Wildlife Service Biological Report 85(7.27) 152pp.

[28] Bowler, P.A. 1989. Riparian woodland: An endangered habitat in southern California. Pp 80-97 *in* Schoenherr, A.A. (ed.) Endangered plant communities of southern California. Botanists Special Publication No. 3.

[29] Gamradt, S.C., L.B. Kats and C.B. Anzalone. 1997. Aggression by non-native crayfish deters breeding in California newts. Conservation Biology 11(3):793-796.

[30] Kerby, L.J., and L.B. Kats. 1998. Modified interactions between salamander life stages caused by wildfire-induced sedimentation. Ecology 79(2):740-745.

[31] Gamradt, S.C. and L.B. Kats. 1996. Effect of introduced crayfish and mosquitofish on California newts. Conservation Biology 10(4):1155-1162.

Therefore, because of the essential role that riparian plant communities play in maintaining the biodiversity of the Santa Monica Mountains, because of the historical losses and current rarity of these habitats in southern California, and because of their extreme sensitivity to disturbance, the native riparian habitats in the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

Coastal Sage Scrub and Chaparral

Coastal sage scrub and chaparral are often lumped together as "shrublands" because of their roughly similar appearance and occurrence in similar and often adjacent physical habitats. In earlier literature, these vegetation associations were often called soft chaparral and hard chaparral, respectively. "Soft" and "hard" refers to differences in their foliage associated with different adaptations to summer drought. Coastal sage scrub is dominated by soft-leaved, generally low-growing aromatic shrubs that die back and drop their leaves in response to drought. Chaparral is dominated by taller, deeper-rooted evergreen shrubs with hard, waxy leaves that minimize water loss during drought.

The two vegetation types are often found interspersed with each other. Under some circumstances, coastal sage scrub may even be successional to chaparral, meaning that after disturbance, a site may first be covered by coastal sage scrub, which is then replaced with chaparral over long periods of time.[32] The existing mosaic of coastal sage scrub and chaparral is the result of a dynamic process that is a function of fire history, recent climatic conditions, soil differences, slope, aspect and moisture regime, and the two habitats should not be thought of as completely separate and unrelated entities but as different phases of the same process[33]. The spatial pattern of these vegetation stands at any given time thus depends on both local site conditions and on history (e.g., fire), and is influenced by both natural and human factors.

In lower elevation areas with high fire frequency, chaparral and coastal sage scrub may be in a state of flux, leading one researcher to describe the mix as a "coastal sage-chaparral subclimax."[34] Several other researchers have noted the replacement of chaparral by coastal sage scrub, or coastal sage scrub by chaparral depending on fire history.[35] In transitional and other settings, the mosaic of chaparral and coastal sage

[32] Cooper, W.S. 1922. The broad-sclerophyll vegetation of California. Carnegie Institution of Washington Publication 319. 124 pp.
[33] Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024. (See attached comment document in Appendix).
[34] Hanes, T.L. 1965. Ecological studies on two closely related chaparral shrubs in southern California. Ecological Monographs 41:27-52.
[35] Gray, K.L. 1983. Competition for light and dynamic boundary between chaparral and coastal sage scrub. Madrono 30(1):43-49. Zedler, P.H., C.R. Gautier and G.S. McMaster. 1983. Vegetation change in response to extreme events: The effect of a short interval between fires in California chaparral and coastal sage scrub. Ecology 64(4): 809-818.

scrub enriches the seasonal plant resource base and provides additional habitat variability and seasonality for the many species that inhabit the area.

Relationships Among Coastal Sage Scrub, Chaparral and Riparian Communities

Although the constituent communities of the Santa Monica Mountains Mediterranean ecosystem can be defined and distinguished based on species composition, growth habits, and the physical habitats they characteristically occupy, they are not independent entities ecologically. Many species of plants, such as black sage, and laurel sumac, occur in more than one plant community and many animals rely on the predictable mix of communities found in undisturbed Mediterranean ecosystems to sustain them through the seasons and during different portions of their life histories.

Strong evidence for the interconnectedness between chaparral, coastal scrub and other habitats is provided by "opportunistic foragers" (animals that follow the growth and flowering cycles across these habitats). Coastal scrub and chaparral flowering and growth cycles differ in a complimentary and sequential way that many animals have evolved to exploit. Whereas coastal sage scrub is shallow-rooted and responds quickly to seasonal rains, chaparral plants are typically deep-rooted having most of their flowering and growth later in the rainy season after the deeper soil layers have been saturated[36]. New growth of chaparral evergreen shrubs takes place about four months later than coastal sage scrub plants and it continues later into the summer[37]. For example, in coastal sage scrub, California sagebrush flowers and grows from August to February and coyote bush flowers from August to November[38]. In contrast, chamise chaparral and bigpod ceanothus flower from April to June, buck brush ceanothus flowers from February to April, and hoaryleaf ceanothus flowers from March to April.

Many groups of animals exploit these seasonal differences in growth and blooming period. The opportunistic foraging insect community (e.g., honeybees, butterflies and moths) tends to follow these cycles of flowering and new growth, moving from coastal sage scrub in the early rainy season to chaparral in the spring[39]. The insects in turn are followed by insectivorous birds such as the blue-gray gnatcatcher[40], bushtit, cactus wren, Bewick's wren and California towhee. At night bats take over the role of daytime insectivores. At least 12 species of bats (all of which are considered sensitive) occur in

[36] DeSimone, S. 2000. California's coastal sage scrub. Fremontia 23(4):3-8. Mooney, H.A. 1988. Southern coastal scrub. Chap. 13 *in* Barbour, M.G. and J. Majors; Eds. 1988. Terrestrial vegetation of California, 2nd Edition. Calif. Native Plant Soc. Spec. Publ. #9.
[37] Schoenherr, A. A. 1992. A natural history of California. University of California Press, Berkeley. 772p.
[38] Dale, N. 2000. Flowering plants of the Santa Monica Mountains. California Native Plant Society, 1722 J Street, Suite 17, Sacramento, CA 95814.
[39] Ballmer, G. R. 1995. What's bugging coastal sage scrub. Fremontia 23(4):17-26.
[40] Root, R. B. 1967. The niche exploitation pattern of the blue-gray gnatcatcher. Ecol. Monog.37:317-350.

the Santa Monica Mountains[41]. Five species of hummingbirds also follow the flowering cycle[42].

Many species of 'opportunistic foragers', which utilize several different community types, perform important ecological roles during their seasonal movements. The scrub jay is a good example of such a species. The scrub jay is an omnivore and forages in coastal sage scrub, chaparral, and oak woodlands for insects, berries and notably acorns. Its foraging behavior includes the habit of burying acorns, usually at sites away from the parent tree canopy. Buried acorns have a much better chance of successful germination (about two-fold) than exposed acorns because they are protected from desiccation and predators. One scrub jay will bury approximately 5000 acorns in a year. The scrub jay therefore performs the function of greatly increasing recruitment and regeneration of oak woodland, a valuable and sensitive habitat type[43].

Like the scrub jay, most of the species of birds that inhabit the Mediterranean ecosystem in the Santa Monica Mountains require more than one community type in order to flourish. Many species include several community types in their daily activities. Other species tend to move from one community to another seasonally. The importance of maintaining the integrity of the multi-community ecosystem is clear in the following observations of Dr. Hartmut Walter of the University of California at Los Angeles:

> "Bird diversity is directly related to the habitat mosaic and topographic diversity of the Santa Monicas. Most bird species in this bio-landscape require more than one habitat for survival and reproduction." "A significant proportion of the avifauna breeds in the wooded canyons of the Santa Monicas. Most of the canyon breeders forage every day in the brush- and grass-covered slopes, ridges and mesas. They would not breed in the canyons in the absence of the surrounding shrublands. Hawks, owls, falcons, orioles, flycatchers, woodpeckers, warblers, hummingbirds, etc. belong to this group. Conversely, some of the characteristic chaparral birds such as thrashers, quails, and wrentits need the canyons for access to shelter, protection from fire, and water. The regular and massive movement of birds between riparian corridors and adjacent shrublands has been demonstrated by qualitative and quantitative observations by several UCLA students[44]."

Thus, the Mediterranean ecosystem of the Santa Monica Mountains is a mosaic of vegetation types linked together ecologically. The high biodiversity of the area results

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[41] Letter from Dr. Marti Witter, NPS, dated Sept. 13, 2001, in letters received and included in the September 2002 staff report for the Malibu LCP.

[42] National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701

[43] Borchert, M. I., F. W. Davis, J. Michaelsen and L. D. Oyler. 1989. Interactions of factors affecting seedling recruitment of blue oak (*Quercus douglasii*) in California. Ecology 70:389-404. Bossema, I. 1979. Jays and oaks: An eco-ethological study of a symbiosis. Behavior 70:1-118. Schoenherr, A. A. 1992. A natural history of California. University of California Press, Berkeley. 772p.

[44] Walter, Hartmut. Bird use of Mediterranean habitats in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

from both the diversity and the interconnected nature of this mosaic. Most raptor species, for example, require large areas and will often require different habitats for perching, nesting and foraging. Fourteen species of raptors (13 of which are considered sensitive) are reported from the Santa Monica Mountains. These species utilize a variety of habitats including rock outcrops, oak woodlands, riparian areas, grasslands, chaparral, coastal sage scrub, estuaries and freshwater lakes[45].

When the community mosaic is disrupted and fragmented by development, many chaparral-associated native bird species are impacted. In a study of landscape-level fragmentation in the Santa Monica Mountains, Stralberg[46] found that the ash-throated flycatcher, Bewick's wren, wrentit, blue-gray gnatcatcher, California thrasher, orange-crowned warbler, rufous-crowned sparrow, spotted towhee, and California towhee all decreased in numbers as a result of urbanization. Soule[47] observed similar effects of fragmentation on chaparral and coastal sage scrub birds in the San Diego area.

In summary, all of the vegetation types in this ecosystem are strongly linked by animal movement and foraging. Whereas classification and mapping of vegetation types may suggest a snapshot view of the system, the seasonal movements and foraging of animals across these habitats illustrates the dynamic nature and vital connections that are crucial to the survival of this ecosystem.

Coastal Sage Scrub

"Coastal sage scrub" is a generic vegetation type that is inclusive of several subtypes[48]. In the Santa Monica Mountains, coastal sage scrub is mostly of the type termed "Venturan Coastal Sage Scrub." In general, coastal sage scrub is comprised of dominant species that are semi-woody and low-growing, with shallow, dense roots that enable them to respond quickly to rainfall. Under the moist conditions of winter and spring, they grow quickly, flower, and produce light, wind-dispersed seeds, making them good colonizers following disturbance. These species cope with summer drought by dying back, dropping their leaves or producing a smaller summer leaf in order to reduce water loss. Stands of coastal sage scrub are much more open than chaparral and contain a greater admixture of herbaceous species. Coastal sage scrub is generally restricted to drier sites, such as low foothills, south-facing slopes, and shallow soils at higher elevations.

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[45] National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701. *and* Letter from Dr. Marti Witter, NPS, Dated Sept. 13, 2001, in letters received and included in the September 2002 staff report for the Malibu LCP.

[46] Stralberg, D. 2000. Landscape-level urbanization effects on chaparral birds: A Santa Monica Mountains case study. p 125-136 *in*: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62.

[47] Soule, M. E, D. T. Bolger, A. C. Alberts, J. Wright, M. Sorice and S. Hill. 1988. Reconstructed dynamics of rapid extinctions of chaparral-requiring birds in urban habitat islands. Conserv. Biol. 2: 75-92.

[48] Kirkpatrick, J.B. and C.F. Hutchinson. 1977. The community composition of Californian coastal sage scrub. Vegetatio 35:21-33; Holland, 1986. op.cit.; Sawyer and Keeler-Wolf, 1995, op.cit.

The species composition and structure of individual stands of coastal sage scrub depend on moisture conditions that derive from slope, aspect, elevation and soil type. Drier sites are dominated by more drought-resistant species (e.g., California sagebrush, coast buckwheat, and *Opuntia* cactus). Where more moisture is available (e.g., north-facing slopes), larger evergreen species such as toyon, laurel sumac, lemonade berry, and sugar bush are common. As a result, there is more cover for wildlife, and movement of large animals from chaparral into coastal sage scrub is facilitated in these areas. Characteristic wildlife in this community includes Anna's hummingbirds, rufous-sided towhees, California quail, greater roadrunners, Bewick's wrens, coyotes, and coast horned lizards[49], but most of these species move between coastal sage scrub and chaparral during their daily activities or on a seasonal basis.

Of the many important ecosystem roles performed by the coastal sage scrub community, five are particularly important in the Santa Monica Mountains. Coastal sage scrub provides critical linkages between riparian corridors, provides essential habitat for species that require several habitat types during the course of their life histories, provides essential habitat for local endemics, supports rare species that are in danger of extinction, and reduces erosion, thereby protecting the water quality of coastal streams.

Riparian woodlands are primary contributors to the high biodiversity of the Santa Monica Mountains. The ecological integrity of those riparian habitats not only requires wildlife dispersal along the streams, but also depends on the ability of animals to move from one riparian area to another. Such movement requires that the riparian corridors be connected by suitable habitat. In the Santa Monica Mountains, coastal sage scrub and chaparral provide that function. Significant development in coastal sage scrub would reduce the riparian corridors to linear islands of habitat with severe edge effects[50], reduced diversity, and lower productivity.

Most wildlife species and many species of plants utilize several types of habitat. Many species of animals endemic to Mediterranean habitats move among several plant communities during their daily activities and many are reliant on different communities either seasonally or during different stages of the their life cycle. Without an intact mosaic of coastal sage scrub, chaparral, and riparian community types, many species will not thrive. Specific examples of the importance of interconnected communities, or habitats, were provided in the discussion above. This is an essential ecosystem role of coastal sage scrub.

A characteristic of the coastal sage scrub vegetation type is a high degree of endemism. This is consonant with Westman's observation that 44 percent of the species he sampled in coastal sage scrub occurred at only one of his 67 sites, which were

[49] National Park Service. 2000. Draft: General Management Plan & Environmental Impact Statement, Santa Monica Mountains National Recreation Area, US Dept. of Interior, National Park Service, December 2000.

[50] Environmental impacts are particularly severe at the interface between development and natural habitats. The greater the amount of this "edge" relative to the area of natural habitat, the worse the impact.

distributed from the San Francisco Bay area to Mexico[51]. Species with restricted distributions are by nature more susceptible to loss or degradation of their habitat. Westman said of this unique and local aspect of coastal sage scrub species in California:

> "While there are about 50 widespread sage scrub species, more than half of the 375 species encountered in the present study of the sage scrub flora are rare in occurrence within the habitat range. In view of the reduction of the area of coastal sage scrub in California to 10-15% of its former extent and the limited extent of preserves, measures to conserve the diversity of the flora are needed."[52]

Coastal sage scrub in southern California provides habitat for about 100 rare species[53], many of which are also endemic to limited geographic regions[54]. In the Santa Monica Mountains, rare animals that inhabit coastal sage scrub[55] include the Santa Monica shieldback katydid, silvery legless lizard, coastal cactus wren, Bell's sparrow, San Diego desert woodrat, southern California rufous-crowned sparrow, coastal western whiptail, and San Diego horned lizard. Some of these species are also found in chaparral[56]. Rare plants found in coastal sage scrub in the Santa Monica Mountains include Santa Susana tarplant, Coulter's saltbush, Blockman's dudleya, Braunton's milkvetch, Parry's spineflower, and Plummer's mariposa lily[57]. A total of 32 sensitive species of reptiles, birds and mammals have been identified in this community by the National Park Service.[58]

One of the most important ecological functions of coastal sage scrub in the Santa Monica Mountains is to protect water quality in coastal streams by reducing erosion in the watershed. Although shallow rooted, the shrubs that define coastal sage scrub have dense root masses that hold the surface soils much more effectively than the exotic annual grasses and forbs that tend to dominate in disturbed areas. The native shrubs of this community are resistant not only to drought, as discussed above, but well adapted to fire. Most of the semi-woody shrubs have some ability to crown sprout after

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[51] Westman, W.E. 1981. Diversity relations and succession in Californian coastal sage scrub. Ecology 62:170-184.

[52] Ibid.

[53] Atwood, J. L. 1993. California gnatcatchers and coastal sage scrub: The biological basis for endangered species listing. pp.149-166 *In*: Interface Between Ecology and Land Development in California. Ed. J. E. Keeley, So. Calif. Acad. of Sci., Los Angeles. California Department of Fish and Game (CDFG). 1993. The Southern California Coastal Sage Scrub (CSS) Natural Communities Conservation Plan (NCCP). CDFG and Calif. Resources Agency, 1416 9th St., Sacramento, CA 95814.

[54] Westman, W.E. 1981. op. cit.

[55] Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

[56] O'Leary J.F., S.A. DeSimone, D.D. Murphy, P.F. Brussard, M.S. Gilpin, and R.F. Noss. 1994. Bibliographies on coastal sage scrub and related malacophyllous shrublands of other Mediterranean-type climates. *California Wildlife Conservation Bulletin* 10:1–51.

[57] Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

[58] NPS, 2000, op cit.

fire. Several CSS species (e.g., *Eriogonum cinereum*) in the Santa Monica Mountains and adjacent areas resprout vigorously and other species growing near the coast demonstrate this characteristic more strongly than do individuals of the same species growing at inland sites in Riverside County.[59] These shrub species also tend to recolonize rapidly from seed following fire. As a result they provide persistent cover that reduces erosion.

In addition to performing extremely important roles in the Mediterranean ecosystem, the coastal sage scrub community type has been drastically reduced in area by habitat loss to development. In the early 1980's it was estimated that 85 to 90 percent of the original extent of coastal sage scrub in California had already been destroyed.[60] Losses since that time have been significant and particularly severe in the coastal zone.

Therefore, because of its increasing rarity, its important role in the functioning of the Santa Monica Mountains Mediterranean ecosystem, and its extreme vulnerability to development, coastal sage scrub within the Santa Monica Mountains meets the definition of ESHA under the Coastal Act.

Chaparral

Another shrub community in the Santa Monica Mountain Mediterranean ecosystem is chaparral. Like "coastal sage scrub," this is a generic category of vegetation. Chaparral species have deep roots (10s of ft) and hard waxy leaves, adaptations to drought that increase water supply and decrease water loss at the leaf surface. Some chaparral species cope more effectively with drought conditions than do desert plants[61]. Chaparral plants vary from about one to four meters tall and form dense, intertwining stands with nearly 100 percent ground cover. As a result, there are few herbaceous species present in mature stands. Chaparral is well adapted to fire. Many species regenerate mainly by crown sprouting; others rely on seeds which are stimulated to germinate by the heat and ash from fires. Over 100 evergreen shrubs may be found in chaparral[62]. On average, chaparral is found in wetter habitats than coastal sage scrub, being more common at higher elevations and on north facing slopes.

The broad category "northern mixed chaparral" is the major type of chaparral shown in the National Park Service map of the Santa Monica Mountains. However, northern mixed chaparral can be variously dominated by chamise, scrub oak or one of several species of manzanita or by ceanothus. In addition, it commonly contains woody vines and large shrubs such as mountain mahogany, toyon, hollyleaf redberry, and sugarbush[63]. The rare red shank chaparral plant community also occurs in the Santa Monica Mountains. Although included within the category "northern mixed chaparral" in

[59] Dr. John O'Leary, SDSU, personal communication to Dr. John Dixon, CCC, July 2, 2002
[60] Westman, W.E. 1981. op. cit.
[61] Dr. Stephen Davis, Pepperdine University. Presentation at the CCC workshop on the significance of native habitats in the Santa Monica Mountains. June 13, 2002.
[62] Keely, J.E. and S.C. Keeley. Chaparral. Pages 166-207 in M.G. Barbour and W.D. Billings, eds. North American Terrestrial Vegetation. New York, Cambridge University Press.
[63] Ibid.

the vegetation map, several types of ceanothus chaparral are reported in the Santa Monica Mountains. Ceanothus chaparral occurs on stable slopes and ridges, and may be dominated by bigpod ceanothus, buck brush ceanothus, hoaryleaf ceanothus, or greenbark ceanothus. In addition to ceanothus, other species that are usually present in varying amounts are chamise, black sage, holly-leaf redberry, sugarbush, and coast golden bush[64].

Several sensitive plant species that occur in the chaparral of the Santa Monica Mountains area are: Santa Susana tarplant, Lyon's pentachaeta, marcescent dudleya, Santa Monica Mountains dudleya, Braunton's milk vetch and salt spring checkerbloom[65]. Several occurring or potentially occurring sensitive animal species in chaparral from the area are: Santa Monica shieldback katydid, western spadefoot toad, silvery legless lizard, San Bernardino ring-neck snake, San Diego mountain kingsnake, coast patch-nosed snake, sharp-shinned hawk, southern California rufous-crowned sparrow, Bell's sparrow, yellow warbler, pallid bat, long-legged myotis bat, western mastiff bat, and San Diego desert woodrat.[66]

Coastal sage scrub and chaparral are the predominant generic community types of the Santa Monica Mountains and provide the living matrix within which rarer habitats like riparian woodlands exist. These two shrub communities share many important ecosystem roles. Like coastal sage scrub, chaparral within the Santa Monica Mountains provides critical linkages among riparian corridors, provides essential habitat for species that require several habitat types during the course of their life histories, provides essential habitat for sensitive species, and stabilizes steep slopes and reduces erosion, thereby protecting the water quality of coastal streams.

Many species of animals in Mediterranean habitats characteristically move among several plant communities during their daily activities, and many are reliant on different communities either seasonally or during different stages of their life cycle. The importance of an intact mosaic of coastal sage scrub, chaparral, and riparian community types is perhaps most critical for birds. However, the same principles apply to other taxonomic groups. For example, whereas coastal sage scrub supports a higher diversity of native ant species than chaparral, chaparral habitat is necessary for the coast horned lizard, an ant specialist[67]. Additional examples of the importance of an interconnected communities, or habitats, were provided in the discussion of coastal sage scrub above. This is an extremely important ecosystem role of chaparral in the Santa Monica Mountains.

Chaparral is also remarkably adapted to control erosion, especially on steep slopes. The root systems of chaparral plants are very deep, extending far below the surface and

[64] Ibid.
[65] Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.
[66] Ibid.
[67] A.V. Suarez. Ants and lizards in coastal sage scrub and chaparral. A presentation at the CCC workshop on the significance of native habitats in the Santa Monica Mountains. June 13, 2002.

penetrating the bedrock below[68], so chaparral literally holds the hillsides together and prevents slippage.[69] In addition, the direct soil erosion from precipitation is also greatly reduced by 1) water interception on the leaves and above ground foliage and plant structures, and 2) slowing the runoff of water across the soil surface and providing greater soil infiltration. Chaparral plants are extremely resistant to drought, which enables them to persist on steep slopes even during long periods of adverse conditions. Many other species die under such conditions, leaving the slopes unprotected when rains return. Since chaparral plants recover rapidly from fire, they quickly re-exert their ground stabilizing influence following burns. The effectiveness of chaparral for erosion control after fire increases rapidly with time[70]. Thus, the erosion from a 2-inch rain-day event drops from 5 yd^3/acre of soil one year after a fire to 1 yd^3/acre after 4 years.[71] The following table illustrates the strong protective effect of chaparral in preventing erosion.

Soil erosion as a function of 24-hour precipitation and chaparral age.

Years Since Fire	Erosion (yd^3/acre) at Maximum 24-hr Precipitation of:		
	2 inches	5 inches	11 inches
1	5	20	180
4	1	12	140
17	0	1	28
50+	0	0	3

Therefore, because of its important roles in the functioning of the Santa Monica Mountains Mediterranean ecosystem, and its extreme vulnerability to development, chaparral within the Santa Monica Mountains meets the definition of ESHA under the Coastal Act.

Oak Woodland and Savanna

Coast live oak woodland occurs mostly on north slopes, shaded ravines and canyon bottoms. Besides the coast live oak, this plant community includes hollyleaf cherry, California bay laurel, coffeeberry, and poison oak. Coast live oak woodland is more

[68] Helmers, H., J.S. Horton, G. Juhren and J. O'Keefe. 1955. Root systems of some chaparral plants in southern California. Ecology 36(4):667-678. Kummerow, J. and W. Jow. 1977. Root systems of chaparral shrubs. Oecologia 29:163-177.

[69] Radtke, K. 1983. *Living more safely in the chaparral-urban interface*. General Technical Report PSW-67. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Berkeley, California. 51 pp.

[70] Kittredge, J. 1973. Forest influences — the effects of woody vegetation on climate, water, and soil. Dover Publications, New York. 394 pp. Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. (Table 1). The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024. Vicars, M. (ed.) 1999. FireSmart: protecting your community from wildfire. Partners in Protection, Edmonton, Alberta.

[71] Ibid.

tolerant of salt-laden fog than other oaks and is generally found nearer the coast[72]. Coast live oak also occurs as a riparian corridor species within the Santa Monica Mountains.

Valley oaks are endemic to California and reach their southern most extent in the Santa Monica Mountains. Valley oaks were once widely distributed throughout California's perennial grasslands in central and coastal valleys. Individuals of this species may survive 400-600 years. Over the past 150 years, valley oak savanna habitat has been drastically reduced and altered due to agricultural and residential development. The understory is now dominated by annual grasses and recruitment of seedlings is generally poor. This is a very threatened habitat.

The important ecosystem functions of oak woodlands and savanna are widely recognized[73]. These habitats support a high diversity of birds[74], and provide refuge for many species of sensitive bats[75]. Typical wildlife in this habitat includes acorn woodpeckers, scrub jays, plain titmice, northern flickers, cooper's hawks, western screech owls, mule deer, gray foxes, ground squirrels, jackrabbits and several species of sensitive bats.

Therefore, because of their important ecosystem functions and vulnerability to development, oak woodlands and savanna within the Santa Monica Mountains met the definition of ESHA under the Coastal Act.

Grasslands

Grasslands consist of low herbaceous vegetation that is dominated by grass species but may also harbor native or non-native forbs.

California Perennial Grassland

Native grassland within the Santa Monica Mountains consists of perennial native needlegrasses: purple needlegrass, (Nassella pulchra), foothills needlegrass, (Nassella lepida) and nodding needlegrass (Nassella cernua). These grasses may occur in the same general area but they do not typically mix, tending to segregate based on slope

[72] NPS 2000. op. cit.
[73] Block, W.M., M.L. Morrison, and J. Verner. 1990. Wildlife and oak-woodland interdependency. *Fremontia* 18(3):72–76. Pavlik, B.M., P.C. Muick, S. Johnson, and M. Popper. 1991. *Oaks of California*. Cachuma Press and California Oak Foundation, Los Olivos, California. 184 pp.
[74] Cody, M.L. 1977. Birds. Pp. 223–231 *in* Thrower, N.J.W., and D.E. Bradbury (eds.). *Chile-California Mediterranean scrub atlas*. US/IBP Synthesis Series 2. Dowden, Hutchinson & Ross, Stroudsburg, Pennsylvania. National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701
[75] Miner, K.L., and D.C. Stokes. 2000. Status, conservation issues, and research needs for bats in the south coast bioregion. Paper presented at *Planning for biodiversity: bringing research and management together*, February 29, California State University, Pomona, California.

and substrate factors[76]. Mixed with these native needlegrasses are many non-native annual species that are characteristic of California annual grassland[77]. Native perennial grasslands are now exceedingly rare[78]. In California, native grasslands once covered nearly 20 percent of the land area, but today are reduced to less than 0.1 percent[79]. The California Natural Diversity Database (CNDDB) lists purple needlegrass habitat as a community needing priority monitoring and restoration. The CNDDB considers grasslands with 10 percent or more cover by purple needlegrass to be significant, and recommends that these be protected as remnants of original California prairie. Patches of this sensitive habitat occur throughout the Santa Monica Mountains where they are intermingled with coastal sage scrub, chaparral and oak woodlands.

Many of the raptors that inhabit the Santa Monica Mountains make use of grasslands for foraging because they provide essential habitat for small mammals and other prey. Grasslands adjacent to woodlands are particularly attractive to these birds of prey since they simultaneously offer perching and foraging habitat. Particularly noteworthy in this regard are the white-tailed kite, northern harrier, sharp-shinned hawk, Cooper's hawk, red-shouldered hawk, red-tailed hawk, golden eagle, American kestrel, merlin, and prairie falcon[80].

Therefore, because of their extreme rarity, important ecosystem functions, and vulnerability to development, California native perennial grasslands within the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

California Annual Grassland

The term "California annual grassland" has been proposed to recognize the fact that non-native annual grasses should now be considered naturalized and a permanent feature of the California landscape and should be acknowledged as providing important ecological functions. These habitats support large populations of small mammals and provide essential foraging habitat for many species of birds of prey. California annual grassland generally consists of dominant invasive annual grasses that are primarily of Mediterranean origin. The dominant species in this community include common wild oats (Avena fatua), slender oat (Avena barbata), red brome (Bromus madritensis ssp. Rubens), ripgut brome, (Bromus diandrus), and herbs such as black mustard (Brassica nigra), wild radish (Raphanus sativus) and sweet fennel (Foeniculum vulgare). Annual grasslands are located in patches throughout the Santa Monica Mountains in previously disturbed areas, cattle pastures, valley bottoms and along roadsides. While many of

[76] Sawyer, J. O. and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society, 1722 J St., Suite 17, Sacramento, CA 95814.
[77] Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.
[78] Noss, R.F., E.T. LaRoe III and J.M. Scott. 1995. Endangered ecosystems of the United States: a preliminary assessment of loss and degradation. Biological Report 28. National Biological Service, U.S. Dept. of Interior.
[79] NPS 2000. op. cit.
[80] NPS 2000. op. cit.

these patches are dominated by invasive non-native species, it would be premature to say that they are never sensitive or do not harbor valuable annual native species. A large number of native forbs also may be present in these habitats[81], and many native wildflowers occur primarily in annual grasslands. In addition, annual grasslands are primary foraging areas for many sensitive raptor species in the area.

Inspection of California annual grasslands should be done prior to any impacts to determine if any rare native species are present or if any rare wildlife rely on the habitat and to determine if the site meets the Coastal Act ESHA criteria.

Effects of Human Activities and Development on Habitats within the Santa Monica Mountains

The natural habitats of the Santa Monica Mountains are highly threatened by current development pressure, fragmentation and impacts from the surrounding megalopolis. The developed portions of the Santa Monica Mountains represents the extension of this urbanization into natural areas. About 54% of the undeveloped Santa Monica Mountains are in private ownership[82], and computer simulation studies of the development patterns over the next 25 years predict a serious increase in habitat fragmentation[83]. Development and associated human activities have many well-documented deleterious effects on natural communities. These environmental impacts may be both direct and indirect and include the effects of increased fire frequency, of fire clearance, of introduction of exotic species, and of night lighting.

Increased Fire Frequency

Since 1925, all the major fires in the Santa Monica Mountains have been caused by human activities[84]. Increased fire frequency alters plant communities by creating conditions that select for some species over others. Strong resprouting plant species such as laurel sumac, are favored while non-sprouters like bigpod ceanothus, are at a disadvantage. Frequent fire recurrence before the non-sprouters can develop and reestablish a seed bank is detrimental, so that with each fire their chances for propagation are further reduced. Resprouters can be sending up new shoots quickly, and so they are favored in an increased fire frequency regime. Also favored are weedy and invasive species. Dr. Steven Davis in his abstract for a Coastal Commission

[81] Holstein, G. 2001. Pre-agricultural grassland in Central California. Madrono 48(4):253-264. Stromberg, M.R., P. Kephart and V. Yadon. 2001. Composition, invasibility and diversity of coastal California grasslands. Madrono 48(4):236-252.
[82] National Park Service. 2000. Draft: General Management Plan & Environmental Impact Statement, Santa Monica Mountains National Recreation Area, US Dept. of Interior, National Park Service, December 2000.
[83] Swenson, J. J., and J. Franklin. 2000. The effects of future urban development on habitat fragmentation in the Santa Monica Mountains. Landscape Ecol. 15:713-730.
[84] NPS, 2000, op. cit.

Workshop stated[85] "*We have evidence that recent increases in fire frequency has eliminated drought-hardy non-sprouters from chaparral communities near Malibu, facilitating the invasion of exotic grasses and forbs that further exacerbate fire frequency.*" Thus, simply increasing fire frequency from about once every 22 years (the historical frequency) to about once every 12 years (the current frequency) can completely change the vegetation community. This has cascading effects throughout the ecosystem.

Fuel Clearance

The removal of vegetation for fire protection in the Santa Monica Mountains is required by law in "Very High Fire Hazard Severity Zones"[86]. Fuel removal is reinforced by insurance carriers[87]. Generally, the Santa Monica Mountains are considered to be a high fire hazard severity zone. In such high fire hazard areas, homeowners must often resort to the California FAIR Plan to obtain insurance. Because of the high risk, all homes in "brush areas" are assessed an insurance surcharge if they have less than the recommended 200-foot fuel modification zone[88] around the home. The combination of insurance incentives and regulation assures that the 200-foot clearance zone will be applied universally[89]. While it is not required that all of this zone be cleared of vegetation, the common practice is simply to disk this zone, essentially removing or highly modifying all native vegetation. For a new structure not adjacent to existing structures, this results in the removal or modification of a minimum of three acres of vegetation[90]. While the directly impacted area is large, the effects of fuel modification extend beyond the 200-foot clearance area.

Effects of Fuel Clearance on Bird Communities

The impacts of fuel clearance on bird communities was studied by Stralberg who identified three ecological categories of birds in the Santa Monica Mountains: 1) local and long distance migrators (ash-throated flycatcher, Pacific-slope flycatcher, phainopepla, black-headed grosbeak), 2) chaparral-associated species (Bewick's wren, wrentit, blue-gray gnatcatcher, California thrasher, orange-crowned warbler, rufous-crowned sparrow, spotted towhee, California towhee) and 3) urban-associated species

[85] Davis, Steven. Effects of fire and other factors on patterns of chaparral in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

[86] 1996 Los Angeles County Fire Code Section 1117.2.1

[87] Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024. Vicars, M. (ed.) 1999. FireSmart: protecting your community from wildfire. Partners in Protection, Edmonton, Alberta.

[88] Fuel Modification Plan Guidelines. Co. of Los Angeles Fire Department, Fuel Modification Unit, Prevention Bureau, Forestry Division, Brush Clearance Section, January 1998.

[89] Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024.

[90] Ibid.

(mourning dove, American crow, Western scrub-jay, Northern mockingbird)[91]. It was found in this study that the number of migrators and chaparral-associated species decreased due to habitat fragmentation while the abundance of urban-associated species increased. The impact of fuel clearance is to greatly increase this edge-effect of fragmentation by expanding the amount of cleared area and "edge" many-fold. Similar results of decreases in fragmentation-sensitive bird species are reported from the work of Bolger et al. in southern California chaparral[92].

Effects of Fuel Clearance on Arthropod Communities

Fuel clearance and habitat modification may also disrupt native arthropod communities, and this can have surprising effects far beyond the cleared area on species seemingly unrelated to the direct impacts. A particularly interesting and well-documented example with ants and lizards illustrates this point. When non-native landscaping with intensive irrigation is introduced, the area becomes favorable for the invasive and non-native Argentine ant. This ant forms "super colonies" that can forage more than 650 feet out into the surrounding native chaparral or coastal sage scrub around the landscaped area[93]. The Argentine ant competes with native harvester ants and carpenter ants displacing them from the habitat[94]. These native ants are the primary food resource for the native coast horned lizard, a California "Species of Special Concern." As a result of Argentine ant invasion, the coast horned lizard and its native ant food resources are diminished in areas near landscaped and irrigated developments[95]. In addition to specific effects on the coast horned lizard, there are other Mediterranean habitat ecosystem processes that are impacted by Argentine ant invasion through impacts on long-evolved native ant-plant mutualisms[96]. The composition of the whole arthropod community changes and biodiversity decreases when habitats are subjected to fuel modification. In coastal sage scrub disturbed by fuel modification, fewer arthropod

[91] Stralberg, D. 2000. Landscape-level urbanization effects on chaparral birds: a Santa Monica Mountains case study. Pp. 125–136 *in* Keeley, J.E., M. Baer-Keeley, and C.J. Fotheringham (eds.). *2nd interface between ecology and land development in California*. U.S. Geological Survey, Sacramento, California.
[92] Bolger, D. T., T. A. Scott and J. T. Rotenberry. 1997. Breeding bird abundance in an urbanizing landscape in coastal Southern California. Conserv. Biol. 11:406-421.
[93] Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. Ecology 79(6):2041-2056.
[94] Holway, D.A. 1995. The distribution of the Argentine ant (*Linepithema humile*) in central California: a twenty-year record of invasion. Conservation Biology 9:1634-1637. Human, K.G. and D.M. Gordon. 1996. Exploitation and interference competition between the invasive Argentine ant, (*Linepithema humile*), and native ant species. Oecologia 105:405-412.
[95] Fisher, R.N., A.V. Suarez and T.J. Case. 2002. Spatial patterns in the abundance of the coastal horned lizard. Conservation Biology 16(1):205-215. Suarez, A.V. J.Q. Richmond and T.J. Case. 2000. Prey selection in horned lizards following the invasion of Argentine ants in southern California. Ecological Applications 10(3):711-725.
[96] Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. Ecology 79(6):2041-2056. Bond, W. and P. Slingsby. Collapse of an Ant-Plant Mutualism: The Argentine Ant (*Iridomyrmex humilis*) and Myrmecochorous Proteaceae. Ecology 65(4):1031-1037.

predator species are seen and more exotic arthropod species are present than in undisturbed habitats[97].

Studies in the Mediterranean vegetation of South Africa (equivalent to California shrubland with similar plant species) have shown how the invasive Argentine ant can disrupt the whole ecosystem.[98] In South Africa the Argentine ant displaces native ants as they do in California. Because the native ants are no longer present to collect and bury seeds, the seeds of the native plants are exposed to predation, and consumed by seed eating insects, birds and mammals. When this habitat burns after Argentine ant invasion the large-seeded plants that were protected by the native ants all but disappear. So the invasion of a non-native ant species drives out native ants, and this can cause a dramatic change in the species composition of the plant community by disrupting long-established seed dispersal mutualisms. In California, some insect eggs are adapted to being buried by native ants in a manner similar to plant seeds[99].

Artificial Night Lighting

One of the more recently recognized human impacts on ecosystem function is that of artificial night lighting as it effects the behavior and function of many different types of organisms[100]. For literally billions of years the only nighttime sources of light were the moon and stars, and living things have adapted to this previously immutable standard and often depend upon it for their survival. A review of lighting impacts suggests that whereas some species are unaffected by artificial night lighting, many others are severely impacted. Overall, most impacts are negative ones or ones whose outcome is unknown. Research to date has found negative impacts to plants, aquatic and terrestrial invertebrates, amphibians, fish, birds and mammals, and a detailed literature review can be found in the report by Longcore and Rich[101].

Summary

In a past action, the Coastal Commission found[102] that the Santa Monica Mountains Mediterranean Ecosystem, which includes the undeveloped native habitats of the Santa Monica Mountains, is rare and especially valuable because of its relatively pristine

[97] Longcore, T.R. 1999. Terrestrial arthropods as indicators of restoration success in coastal sage scrub. Ph.D. Dissertation, University of California, Los Angeles.
[98] Christian, C. 2001. Consequences of a biological invasion reveal the importance of mutualism for plant communities. Nature 413:635-639.
[99] Hughes, L. and M. Westoby. 1992. Capitula on stick insect eggs and elaiosomes on seeds: convergent adaptations for burial by ants. Functional Ecology 6:642-648.
[100] . Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024.
[101] Ibid, and Ecological Consequences of Artificial Night Lighting, Conference, February 23-24, 2002, UCLA Los Angeles, California.
[102] Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.

character, physical complexity, and resultant biological diversity. The undeveloped native habitats within the Santa Monica Mountains that are discussed above are ESHA because of their valuable roles in that ecosystem, including providing a critical mosaic of habitats required by many species of birds, mammals and other groups of wildlife, providing the opportunity for unrestricted wildlife movement among habitats, supporting populations of rare species, and preventing the erosion of steep slopes and thereby protecting riparian corridors, streams and, ultimately, shallow marine waters.

The importance the native habitats in the Santa Monica Mountains was emphasized nearly 20 years ago by the California Department of Fish and Game[103]. Commenting on a Draft Land Use Plan for the City of Malibu, the Regional Manager wrote that, "It is essential that large areas of land be reclassified to reflect their true status as ESHAs. One of the major needs of the Malibu LUP is that it should provide protection for entire drainages and not just stream bottoms." These conclusions were supported by the following observations:

> "It is a fact that many of the wildlife species of the Santa Monica Mountains, such as mountain lion, deer, and raccoon, have established access routes through the mountains. They often travel to and from riparian zones and development such as high density residential may adversely affect a wildlife corridor.
>
> Most animal species that exist in riparian areas will, as part of their life histories, also be found in other habitat types, including chapparal (sic) or grassland. For example, hawks nest and roost in riparian areas, but are dependent on large open areas for foraging. For the survival of many species, particularly those high on the food chain, survival will depend upon the presence of such areas. Such areas in the Santa Monica Mountains include grassland and coastal sage scrub communities, which have been documented in the SEA studies as supporting a wide diversity of plant and animal life."

This analysis by the Department of Fish and Game is consonant with the findings of the Commission in the case of the Malibu LCP, and with the conclusion that large contiguous areas of relatively pristine native habitat in the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

[103] Letter from F. A. Worthley, Jr. (CDFG) to N. Lucast (CCC) re Land Use Plan for Malibu dated March 22, 1983.

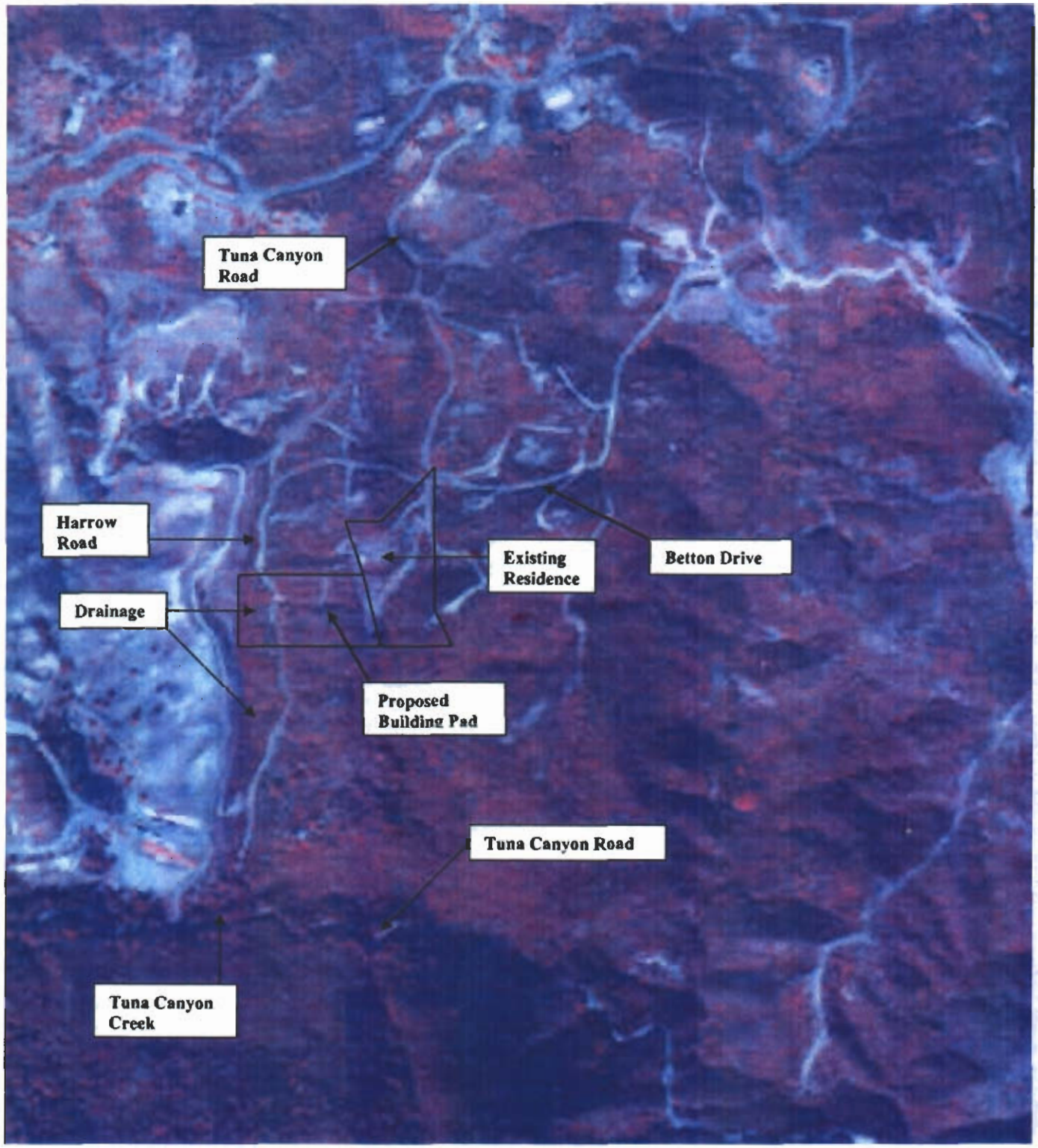

EXHIBIT 21
APPLICATION NO. 4-05-202
1977 AERIAL PHOTO
(Property lines are approximate)