

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
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Commission Action:



STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-02-186
APPLICANT: Steve Breese and Kelly Pessis
AGENT: Terry Valente
PROJECT LOCATION: 26111 Idlewild Way, Malibu (Los Angeles County)

PROJECT DESCRIPTION: Construction of a new 3,262 sq. ft. pre fab single family house with 428 sq. ft. attached garage, driveway with turnaround, septic tank and seepage pits, retaining walls, 400 cubic yards of cut and export and 900 cubic yards of removal and recompaction.

Lot area:	19,219 sq. ft.
Building coverage:	2676 sq. ft.
Pavement coverage:	1400 sq. ft.
Landscape coverage:	1500 sq. ft.

LOCAL APPROVALS RECEIVED: County of Los Angeles Department of Regional Planning, Approval in Concept, April 6, 2002; County of Los Angeles Fire Department, Preliminary Fuel Modification Plan Approval, June 19, 2002; County of Los Angeles Fire Department, Fire Prevention Engineering Approval, June 4, 2002; County of Los Angeles Environmental Health Services, Preliminary Septic System Approval, August 14, 2002; County of Los Angeles, Department of Public Works, Geotechnical and Materials Engineering Division, Preliminary Geologic Approval, September 8, 2003.

SUBSTANTIVE FILE DOCUMENTS: Certified Malibu/Santa Monica Mountains Land Use Plan; "Engineering Geologic Report," West Coast Geotechnical, May 6, 1998; "Geotechnical Engineering Investigation," West Coast Geotechnical, May 22, 1998; "Report of Percolation Tests," Geoplan, Inc., April 30, 2002; "Engineering Geologic Memorandum/Update," Geoplan, Inc., May 29, 2002; "Update Geotechnical Engineering Report," West Coast Geotechnical, June 14, 2002.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **approval** of the proposed project with **Eight (8) Special Conditions** relating to (1) geologic recommendations, (2) landscaping and erosion control, (3) removal of excess excavated material, (4) wildfire waiver, (5) drainage and polluted runoff control, (6) future development, (7) deed restriction, and (8) revised plans. The proposed project is located within the Malibu Bowl Small Lot Subdivision, an area where the Commission has consistently applied the Slope Intensity Formula to establish a maximum gross structural area (GSA) for projects, based on the area and slope of the building site. The proposed residence is consistent with the maximum GSA appropriate for the project site. As conditioned, the proposed project will be consistent with the applicable policies of the Coastal Act.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. Approval with Conditions

I. STAFF RECOMMENDATION

MOTION: *I move that the Commission approve Coastal Development Permit No 4-02-186 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.

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves the 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 Geological Recommendations

All recommendations contained in the Engineering Geologic Report dated May 6, 1998, the Geotechnical Engineering Investigation dated May 22, 1998 and the Update Geotechnical Engineering Report dated June 14, 2002 prepared by West Coast Geotechnical, and the Report of Percolation Tests dated April 30, 2002 and the Engineering Geologic Memorandum/Update dated May 29, 2002 prepared by Geoplan, Inc. shall be incorporated into all final design and construction, including recommendations concerning grading, drainage, backfill, retaining walls, sewage disposal, site preparation, setbacks, concrete slabs-on-grade, AC pavement, expansive soils, temporary excavations and shoring, plan review, and site observations. Final plans (as revised pursuant to Special Condition No. 8 below) must be reviewed and approved by the project's consulting geotechnical engineer and geologist. ***Prior to issuance of the coastal development permit,*** the applicant shall submit, for review and approval by the Executive Director, two sets of plans with evidence of the consultant's review and approval of all project plans.

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

2. Landscaping and Erosion Control Plans

Prior to the issuance of the coastal development permit, the applicant shall submit two sets of landscaping and erosion control plans, prepared by a licensed landscape architect or qualified resource specialist, for review and approval by the Executive Director. The landscaping and erosion control plans shall be reviewed and approved by the geotechnical engineering and geologic consultant to ensure that the plans are in conformance with the consultant's recommendations. The plans shall identify the species, extent, and location of all plant materials and shall incorporate the following criteria:

A) Landscaping Plan

- 1) All graded and disturbed areas on the subject site shall be planted and maintained for erosion control purposes within thirty (30) days of completion of the proposed development. To minimize the need for irrigation and to screen and soften the visual impact of development, landscaping shall consist of primarily 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, and shall be compatible with the character of the surrounding native environment. Invasive, non-indigenous plant species that tend to supplant native species shall not be used. The plan shall specify the erosion control measures to be implemented and the materials necessary to accomplish short-term stabilization, as needed on the site.
- 2) All cut and fill slopes shall be stabilized with planting at the completion of final grading. Planting should be of native plant species indigenous to the Santa Monica Mountains, compatible with the surrounding environment, using accepted planting procedures, and consistent with fire safety requirements. Such planting shall be adequate to provide ninety (90) percent coverage within two (2) years, and this requirement shall apply to all disturbed and graded soils.
- 3) 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 applicable landscape requirements.
- 4) All existing invasive pepper trees onsite shall be removed.
- 5) The plan shall specify that vegetation within the protected zone of all oaks trees onsite shall remain natural, to the extent feasible, and there shall be no irrigation within the protected zone of all oak trees onsite.
- 6) During construction, fencing or other similar protection shall be placed around the protected zone of all oak trees onsite, there shall be no disturbance within the protected zone of all oak trees onsite, and there shall be no storage of construction equipment or materials within the protected zone of all oak trees onsite.
- 7) 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.

- 8) Vegetation within 50 feet of the proposed house 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 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 fuel modification plan has been reviewed and approved by the Forestry Department of Los Angeles County. Irrigated lawn, turf and ground cover planted within the fifty foot radius of the proposed house shall be selected from the most drought tolerant species or subspecies, or varieties suited to the Mediterranean climate of the Santa Monica Mountains.

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 sites shall be clearly delineated on the project site with fencing or survey flags.
- 2) The plan shall specify that should grading take place during the rainy season (November 1 – March 31) 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, 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 through out 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 the coastal zone or to a site within the coastal zone 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 thirty (30) days, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils, and cut and fill slopes with geotextiles 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 this permit, 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 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 the material.

4. Wildfire Waiver of Liability

Prior to the issuance of the coastal development permit, the applicant shall submit a signed document which shall indemnify and hold harmless the California Coastal Commission, its officers, agents, and employees against any and all claims, demands, damages, costs, and expenses of liability arising out of the acquisition, design, construction, operation, maintenance, existence, or failure of the permitted project in an area where an extraordinary potential for damage or destruction from wildfire exists as an inherent risk to life and property.

5. 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, two sets of 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 the amount of stormwater runoff produced by all storms 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 (i.e., 2 or greater), 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.

6. Future Development Restriction

This permit is only for the development described in Coastal Development Permit 4-02-186. Pursuant to Title 14 California Code of Regulations section 13250(b)(6), the exemptions otherwise provided in Public Resources Code section 30610(a) shall not apply to the development governed by Coastal Development Permit 4-02-186. Accordingly, any future structures, future improvements, or change of use to the permitted structures authorized by this permit, including but not limited to, any grading, clearing or other disturbance of vegetation and fencing, other than as provided for in the approved fuel modification/landscape plan prepared pursuant to Special Condition No. 2 shall require an amendment to Coastal Development Permit 4-02-186 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

7. 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 this permit, 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 this permit 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.

8. Revised Plans

Prior to issuance of the coastal development permit, the applicant shall submit, for the review and approval of the Executive Director, two sets of revised project plans that include a site plan illustrating all proposed development. The plans shall show that all proposed structures are located outside of the protected zone of all oak trees onsite. In particular, the retaining wall in the eastern corner of the property shall be located outside of the protected zone of the two large oak trees in that area; the proposed encroachment is shown on Exhibit 6. Any changes to the plans other than the changes required pursuant to this Special Condition shall require an amendment to the coastal development permit.

The applicant shall also submit reduced copies of the revised plans (8 ½" x 11" in size) to be recorded as exhibits along with the deed restriction (Special Condition No. 7). The permittee shall undertake development in accordance with the approved final 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 Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

IV. Findings and Declarations

The Commission hereby finds and declares:

A. Project Description and Background

The applicant proposes the construction of a 3,262 sq. ft. pre fab single family residence with a 428 sq. ft. attached garage, driveway with turnaround, septic tank and seepage pits, retaining walls, 400 cubic yards of cut and export and 900 cubic yards of removal and recompaction on one parcel in the Malibu Bowl Small Lot Subdivision (Exhibits 1-5). The proposed project site is located on Idlewild Way off of Newell Road, just north of the Corral Canyon Road and Newell Road intersection. The parcels immediately surrounding the subject site are developed with single family residences. The Malibu Bowl small lot subdivision was formerly an oak woodland that has been highly disturbed by dense residential development. Due to the level of disturbance this area is not considered to be an environmentally sensitive habitat area (ESHA). However, the area surrounding this subdivision is considered to be ESHA as it contains undisturbed contiguous stands of oak woodland and chaparral habitat. In addition, the proposed project site is not visible from any public scenic highways or other public scenic view points.

B. Hazards and Geologic Stability

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

Section 30253 of the Coastal Act states, in pertinent part, that 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.***

Geology

The applicant has submitted the Engineering Geologic Report dated May 6, 1998, the Geotechnical Engineering Investigation dated May 22, 1998 and the Update Geotechnical Engineering Report dated June 14, 2002 prepared by West Coast Geotechnical, and the Report of Percolation Tests dated April 30, 2002 and the Engineering Geologic Memorandum/Update dated May 29, 2002 prepared by Geoplan, Inc., which evaluate the geologic stability of the subject site in relation to the proposed development. Based on their evaluation of the site's geology and the proposed development the consultants have found that the project site is suitable for the proposed project. The Update Geotechnical Engineering Report dated June 14, 2002 prepared by West Coast Geotechnical concludes:

Based upon our consultation and coordination with the project engineering geologist, GeoPlan, Inc., recent site reconnaissance, corresponding geotechnical analyses, and experience with the subject and similar projects, the proposed development is considered feasible from a geotechnical engineering standpoint, provided our recommendations are made part of development plans and implemented during construction. It is the opinion of West Coast Geotechnical that the proposed development will be safe against hazard from landslide, settlement or slippage, and that the proposed development will not have an adverse affect on the stability of the subject site or immediate vicinity, provided our recommendations are made part of the development plans and implemented during construction.

The engineering geologic and geotechnical consultants conclude that the proposed development is feasible and will be free from geologic hazard provided their recommendations are incorporated into the proposed development. The Geologic/Geotechnical Reports contain several recommendations to be incorporated into project construction, design, and drainage to ensure the stability and geologic safety of the proposed project site and adjacent property. To ensure that the recommendations of the consultant have been incorporated into all proposed development the Commission, as specified in **Special Condition No. 1**, requires the applicant to submit project plans certified by the consulting geologist and geotechnical engineer as conforming to all structural and site stability recommendations for the proposed project. Final plans approved by the consultant shall be in substantial conformance with the plans approved by the Commission. Any substantial changes to the proposed development, 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.

The Commission finds that controlling and diverting run-off in a non-erosive manner from the proposed structures, impervious surfaces, and building pad will minimize erosion and add to the geologic stability of the project site. To ensure that adequate drainage and erosion control are included in the proposed development the Commission requires the applicant to submit drainage and interim erosion control plans certified by the consultants, as specified in **Special Conditions Nos. 2 and 5**. Special Condition No. 5 requires the applicants to maintain a functional drainage system at the subject site to insure that run-off from the project site is diverted in a non-erosive manner to minimize erosion at the site for the life of the proposed development. Should the drainage system of the project site fail at any time, the applicant will be responsible for any repairs or restoration of eroded areas as consistent with the terms of Special Condition No. 5.

The Commission also finds that landscaping of graded and disturbed areas on the subject site will serve stabilize disturbed soils, reduce erosion and thus enhance and maintain the geologic

stability of the site. Therefore, **Special Condition No. 2** requires the applicant to submit and implement landscaping plans that utilize and maintain native and noninvasive plant species compatible with the surrounding area in order to revegetate all graded or disturbed areas.

Invasive and non-native plant species are generally characterized as having a shallow root structure in comparison with their high surface/foilage weight. The Commission notes that non-native and invasive plant species with high surface/foilage weight and shallow root structures do not serve to stabilize slopes and that such vegetation results in potential adverse effects to the stability of the project site. Native species, alternatively, tend to have a deeper root structure than non-native and invasive species, and once established aid in preventing erosion. Therefore, the Commission finds that in order to ensure site stability, all slopes and disturbed and graded areas of the site shall be landscaped with appropriate native plant species, as specified in Special Condition No. 2.

In addition, to ensure excess excavated material is moved off site so as not to contribute to unnecessary landform alteration 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 No. 3**.

The Commission finds that the proposed project, as conditioned, will minimize potential geologic hazards of the project site and adjacent properties.

Wild Fire

The proposed project is located in the Santa Monica Mountains, an area subject to an extraordinary potential for damage or destruction from wild fire. Typical vegetation in 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. Through **Special Condition No. 4**, the wildfire waiver of liability, the applicant acknowledges the nature of the fire hazard which exists on the site and which may affect the safety of the proposed development. Moreover, through acceptance of Special Condition No. 4, the applicant also agrees to indemnify the Commission, its officers, agents and employees against any and all expenses or liability arising out of the acquisition, design, construction, operation, maintenance, existence, or failure of the permitted project.

For the reasons set forth above, the Commission finds that, as conditioned, the proposed project is consistent with Section 30253 of the Coastal Act.

C. Environmentally Sensitive Resources

Sections 30231 and 30240 of the Coastal Act state:

Section 30231:

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.

Section 30240:

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

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

The applicant proposes to develop a 3,262 sq. ft. pre fab single family residence with a 428 sq. ft. attached garage, driveway with turnaround, septic tank and seepage pits, retaining walls, 400 cubic yards of cut and export and 900 cubic yards of removal and recompaction. Several large oak trees are present onsite. The footprint of a retaining wall in the eastern corner of the parcel encroaches into the protected zone of two large oak trees in that area (Exhibit 6).

As previously mentioned, the Malibu Bowl Small Lot Subdivision was formerly an oak woodland that has been highly disturbed by dense residential development that removed many of the oak trees and significantly degraded the habitat value of this area. Due to the level of disturbance the subject site and the immediate surrounding area cannot be considered to be an environmentally sensitive habitat area (ESHA). However, the site does contain some large remnant oak trees. Through past permit actions on residential development in the Santa Monica Mountains the Commission has found that native oak trees are an important coastal resource. Native trees prevent the erosion of hillsides and stream banks, moderate water temperatures in streams through shading, provide food and habitat, including nesting, roosting, and burrowing to a wide variety of wildlife species, contribute nutrients to watersheds, and are important scenic elements in the landscape. The area surrounding the Malibu Bowl small lot subdivision is considered to be ESHA as it contains large tracts of contiguous undisturbed oak woodland and chaparral habitat. The remaining oak trees within the subdivision do provide some habitat for a wide variety of wildlife species and are considered to be an important part of the character and scenic quality of the area. In past permit actions, the Commission has required that the removal of native trees, particularly oak trees, or encroachment of structures into the root zone be avoided unless there is no feasible alternative for siting development. In addition, the Commission has found that if removal of an oak tree is required the loss of the oak tree must be mitigated at a ratio of 10:1.

Oak trees are a part of the California native plant community and need special attention to maintain and protect their health. Oak trees in residentially landscaped areas often suffer decline and early death due to conditions that are preventable. Damage can often take years to become evident and by the time the tree shows obvious signs of disease it is usually too late to restore the health of the tree. Oak trees provide important habitat and shading for other animal species, such as deer and bees. Oak trees are very long lived, some up to 250 years old, relatively slow growing becoming large trees between 30 to 70 feet high, and are sensitive to surrounding land uses, grading or excavation at or near the roots and irrigation of the root area particularly during the summer dormancy. Improper watering, especially during the hot summer months when the tree is dormant and disturbance to root areas are the most common causes of tree loss.

The article entitled "Oak Trees: Care and Maintenance" prepared by the Forestry Department of the County of Los Angeles states:

Oaks are easily damaged and very sensitive to disturbances that occur to the tree or in the surrounding environment. The root system is extensive but surprisingly shallow, radiating out as much as 50 feet beyond the spread of the tree leaves, or canopy. The ground area at the outside edge of the canopy, referred to as the dripline, is especially important: the tree obtains most of its surface water and nutrients here, as well as conducts an important exchange of air and other gases.

This publication goes on to state:

Any change in the level of soil around an oak tree can have a negative impact. The most critical area lies within 6' to 10' of the trunk: no soil should be added or scraped away. . . . Construction activities outside the protected zone can have damaging impacts on existing trees. . . . Digging of trenches in the root zone should be avoided. Roots may be cut or severely damaged, and the tree can be killed. . . . Any roots exposed during this work should be covered with wet burlap and kept moist until the soil can be replaced. The roots depend on an important exchange of both water and air through the soil within the protected zone. Any kind of activity which compacts the soil in this area blocks this exchange and can have serious long term negative effects on the trees. If paving material must be used, some recommended surfaces include brick paving with sand joints, or ground coverings such as wood chips . . .

The Commission recognizes that oak trees are vulnerable to the types of impacts described above, and, therefore, should be afforded special protection. In this case, the applicant is proposing a retaining wall that encroaches within the five-foot protective zone of two oak trees as measured from the dripline of the trees (Exhibit 6). In past permit actions, the Commission has consistently required that, where feasible, development shall be located outside of this five-foot protective zone. To ensure that oak trees onsite are protected from development impacts, the Commission requires that the applicant revise their plans to relocate any structures, particularly the retaining wall, outside of the protected zone of the oak trees onsite, as specified in **Special Condition No. 8**. In addition, in order to protect the oak trees onsite from impacts caused by irrigation and construction, the Commission finds that it is necessary to require protective fencing around the protective zone of the oak trees and prohibit irrigation and the storage of any construction materials within the protective zone of the oak trees as required in **Special Condition No. 2**.

The Commission therefore finds that the proposed project, as conditioned, is consistent with Sections 30231 and 30240 of the Coastal Act regarding protection of oak trees.

D. Cumulative Impacts

The proposed project involves the construction of a new single family residence, which is defined under the Coastal Act as new development. New development raises issues with respect to cumulative impacts on coastal resources. Sections 30250 and 30252 of the Coastal Act address the cumulative impacts of new development.

Section 30250(a) of the Coastal Act states:

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 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 the surrounding parcels.

Section 30252 of the Coastal Act states:

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

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.

Throughout the Malibu/Santa Monica Mountains coastal zone there are a number of areas, which were subdivided in the 1920's and 30's into very small "urban" scale lots. These subdivisions, known as "small lot subdivisions" are comprised of parcels of less than one acre but more typically range in size from 4,000 to 5,000 square feet. The total buildout of these dense subdivisions would result in a number of adverse cumulative impacts to coastal resources. Cumulative development constraints common to small lot subdivisions were documented by the Coastal Commission and the Santa Monica Mountains Comprehensive Planning Commission in the January 1979 study entitled: "Cumulative Impacts of Small Lot Subdivision Development In the Santa Monica Mountains Coastal Zone".

The study acknowledged that the existing small lot subdivisions can only accommodate a limited amount of additional new development due to major constraints to buildout of these areas that include: Geologic, road access, water quality, disruption of rural community character, creation of unreasonable fire hazards and others. Following an intensive one year planning effort regarding impacts on coastal resources by Coastal Commission staff, including five months of public review and input, new development standards relating to residential development on small lots in hillsides, including the Slope-Intensity/Gross Structural Area Formula (GSA) were incorporated into the Malibu District Interpretive Guidelines in June 1979. A nearly identical Slope Intensity Formula was incorporated into the 1986 certified Malibu/Santa Monica Mountains Land Use Plan under policy 271(b)(2) to reduce the potential effects of buildout as discussed below.

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 that 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 this, the demands on road capacity, public services, recreational facilities, and beaches could be expected to grow tremendously.

Policy 271(b)(2) of the Malibu/Santa Monica Mountains LUP, which has been used as guidance by the Coastal Commission, requires that new development in small lot subdivisions comply with the Slope Intensity Formula for calculating the allowable Gross Structural Area (GSA) of a residential unit. Past Commission action certifying the LUP indicates that the Commission considers the use of the Slope Intensity Formula appropriate for determining the maximum level of development that may be permitted in small lot subdivision areas consistent with the policies of the Coastal Act. The basic concept of the formula assumes the suitability of development of small hillside lots should be determined by the physical characteristics of the building site, recognizing that development on steep slopes has a high potential for adverse impacts on resources. Following is the formula and description of each factor used in its calculation:

Slope Intensity Formula:

$$\text{GSA} = (A/5) \times ((50-S)/35) + 500$$

GSA = the allowable gross structural area of the permitted development in square feet. The GSA includes all substantially enclosed residential and storage areas, but does not include garages or carports designed for storage of autos.

A = the area of the building site in square feet. The building site is defined by the applicant and may consist of all or a designated portion of the one or more lots comprising the project location. All permitted structures must be located within the designated building site.

S = the average slope of the building site in percent as calculated by the formula:

$$S = I \times L/A \times 100$$

I =	contour interval in feet, at not greater than 25-foot intervals, resulting in at least 5 contour lines
L =	total accumulated length of all contours of interval "I" in feet
A =	the area being considered in square feet

The proposed project is located in the small lot subdivision of Malibu Bowl and involves the construction of a new 3,262 sq. ft. pre fab single family residence an attached 428 sq. ft. garage. The applicant has submitted a GSA calculation in conformance to Policy 271(b)(2) of the Malibu/Santa Monica Mountains LUP. This calculation arrived at a maximum GSA of 3,246 sq. ft. of habitable space. Staff has confirmed that the applicant's calculations conform to the formula used by the Commission in past permit decisions. The proposed 3,262 sq. ft. of habitable space is generally consistent with the maximum allowable GSA of 3,246 sq. ft. Although the proposed square footage exceeds the maximum allowable GSA by 16 square feet the increase in square footage is so minimal it will not result in any adverse cumulative impacts and is consistent with the intent of the GSA formula.

Some additions and improvements to residences on small steep lots within these small lot subdivisions have been found to adversely impact the area. Many of the lots in these areas are so steep or narrow that they cannot support a large residence without increasing or exacerbating the geologic hazards on and/or off site. Additional buildout of small lot subdivisions affects water usage and has the potential to impact water quality of coastal streams in the area. Other impacts to these areas from the buildout of small lot subdivisions include increases in traffic along mountain road corridors and greater fire hazards. For all of these reasons, future improvements on the subject property could cause adverse cumulative impacts on the limited resources of the subdivision. The Commission, therefore, finds it necessary for the applicant to record a future improvements deed restriction on this lot, as noted in **Special Condition No. 6**, which would 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.

Finally, **Special Condition No. 7** 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

The Commission therefore finds that the proposed project, only as conditioned, is consistent with Sections 30250(a) and 30252 of the Coastal Act.

E. 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, and 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:

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.

As described in detail in the previous sections, the applicant proposes to construct a 3,262 sq. ft. pre fab single family residence with a 428 sq. ft. attached garage, driveway with turnaround, septic tank and seepage pits, retaining walls, 400 cubic yards of cut and export and 900 cubic yards of removal and recompaction.

The proposed development will result in an increase in impervious surface at the subject site, which in turn decreases the infiltrative function and capacity of existing permeable land on site. 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 project 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 sites. 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 to accommodate (infiltrate, filter or treat) the runoff from the more frequent storms, rather than for the largest infrequent storms, results in improved BMP performance at lower cost.

For design purposes, with case-by-case considerations, post-construction structural BMPs (or suites of BMPs) should be designed to treat, infiltrate or filter the amount of stormwater runoff produced by all storms up to and including the 85th percentile, 24-hour storm event for volume-based BMPs, and/or the 85th percentile, 1-hour storm event, with an appropriate safety factor

(i.e., 2 or greater), for flow-based BMPs. The American Society of Civil Engineers (ASCE) and the Water Environment Federation (WEF) have recommended a numerical BMP design standard for storm water that is derived from a mathematical equation to maximize treatment of runoff volume for water quality based on rainfall/runoff statistics and which is economically sound.¹ The maximized treatment volume is cut-off at the point of diminishing returns for rainfall/runoff frequency. On the basis of this formula and rainfall/runoff statistics, the point of diminishing returns for treatment control is the 85th percentile storm event. Therefore, the Commission requires the selected post-construction structural BMPs be sized based on design criteria specified in **Special Condition No. 5**, 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 measures 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 Condition No. 2** is necessary to ensure the proposed development will not adversely impact water quality or coastal resources.

Finally, the proposed development includes the installation of on-site private sewage disposal systems to serve the residence. The County of Los Angeles, Department of Health Services, 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.

For the reasons set forth above, 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.

F. Local Coastal Program

Section 30604 of the Coastal Act states:

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 Development Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program that 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 projects and are accepted by the applicant. As conditioned, the proposed development will not

¹ *Urban Runoff Quality Management, WEF Manual of Practice No. 23, ASCE manual and Report on Engineering Practice No. 87.* WEF, Alexandria, VA; ASCE, Reston, VA. 259 pp (1998); Urbonas, Guo, and Tucker, "Optimization of Stormwater Quality Capture Volume," in *Urban Stormwater Quality Enhancement - Source Control, Retrofitting, and Combined Sewere Technology, Proceedings of an Engineering Foundation Conference*, Harry C. Torno, ed. October 1989. New York: ASCE, pp. 94-110.

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' ability to prepare a Local Coastal Program for this area which is also consistent with the policies of Chapter 3 of the Coastal Act, as required by Section 30604(a).

G. CEQA

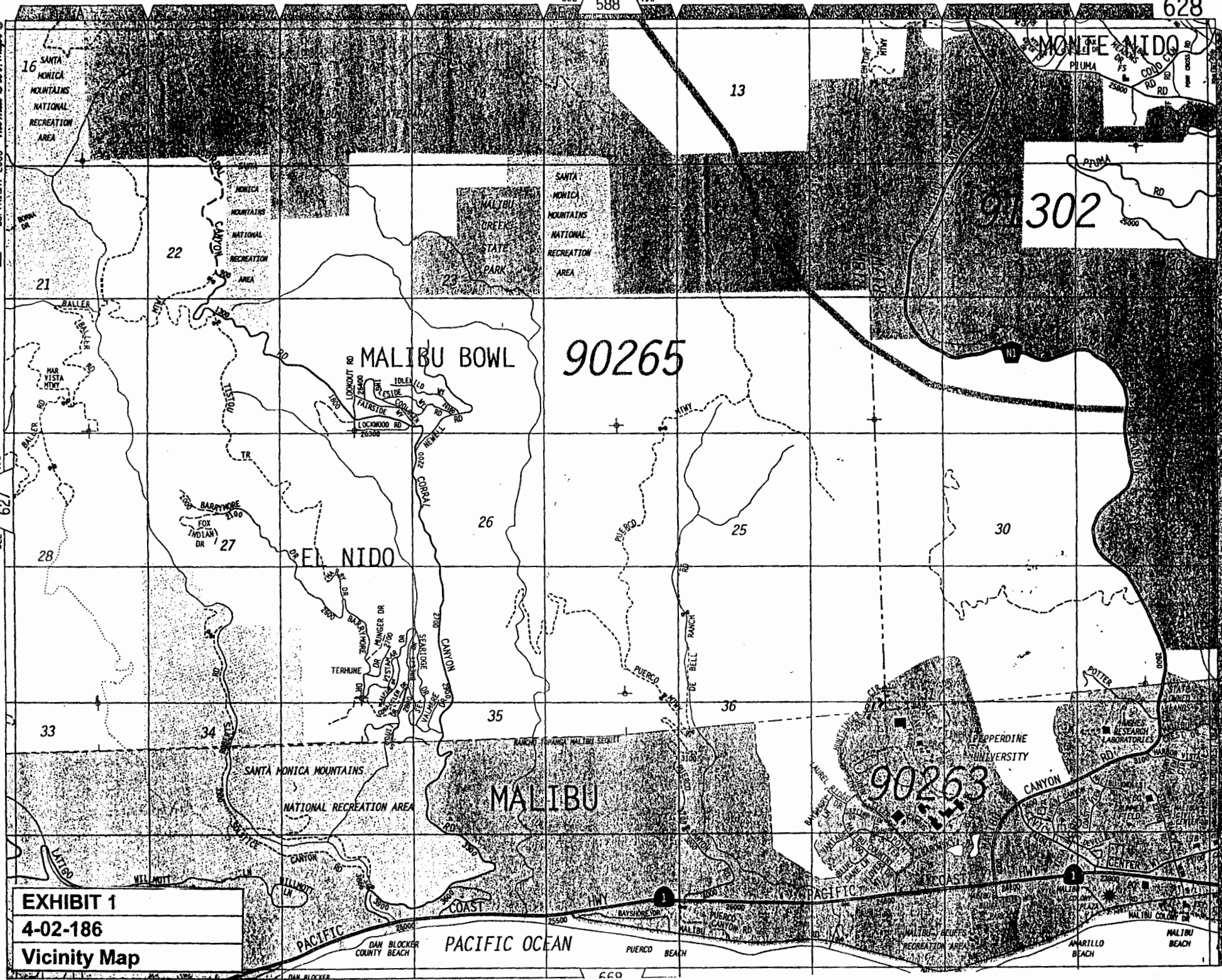
Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (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 which would substantially lessen any significant adverse effect that the activity may have on the environment.

The Commission finds that the proposed project, as conditioned, will not have significant adverse effects on the environment within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed project, as conditioned, has been adequately mitigated and is determined to be consistent with CEQA and the policies of the Coastal Act.

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MAP 627

EXHIBIT 1
4-02-186
Vicinity Map



90265

90263

91302

MALIBU BOWL

EL NIDO

MALIBU

PEPPERDINE UNIVERSITY

MALIBU COLLEGE

PACIFIC OCEAN

PACIFIC

PUERCO BEACH

AMARILLO BEACH

MALIBU BEACH

16 SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA

22

13

SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA

21

MALIBU CREEK STATE PARK

90265

28

27

26

25

30

33

34

35

36

SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA

MALIBU

PEPPERDINE UNIVERSITY

MALIBU COLLEGE

PACIFIC

PACIFIC OCEAN

PUERCO BEACH

AMARILLO BEACH

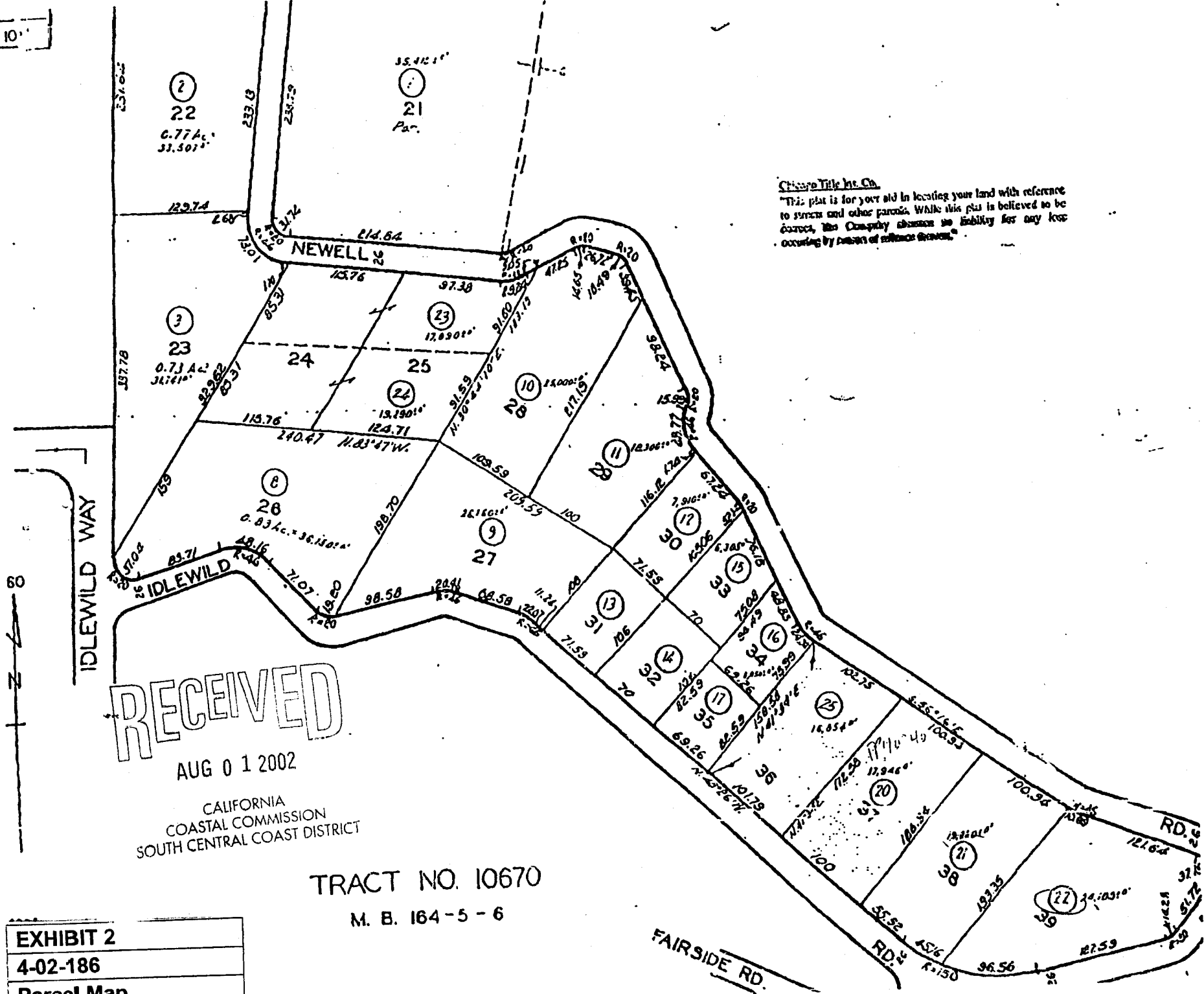
MALIBU BEACH

EXHIBIT 1

4-02-186

Vicinity Map

10'



Chicago Title Ins. Co.
 This plat is for your aid in locating your land with reference to streets and other parcels. While this plat is believed to be correct, the Company assumes no liability for any loss occasioned by reason of reliance thereon.

RECEIVED

AUG 01 2002

CALIFORNIA
 COASTAL COMMISSION
 SOUTH CENTRAL COAST DISTRICT

TRACT NO. 10670

M. B. 164-5-6

EXHIBIT 2
4-02-186
Parcel Map

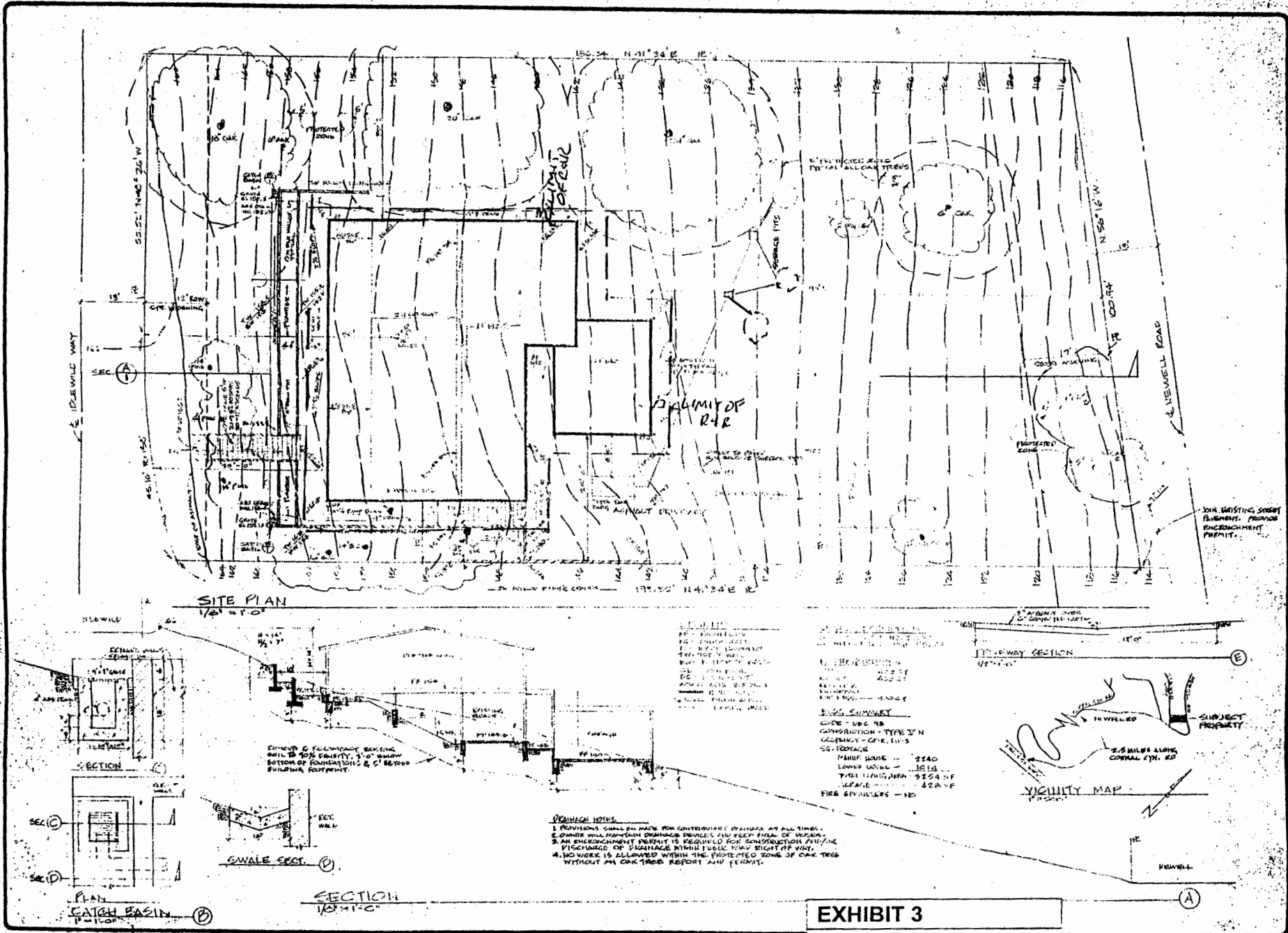


EXHIBIT 3
4-02-186
Site Plan

RICHARD D. STODDARD ARCHITECT
 Architecture & Planning
 1000 MARKET BLVD SUITE 201 LOS ANGELES, CALIFORNIA 90015 (213) 627-1100
 MEMBER AMERICAN INSTITUTE OF ARCHITECTS

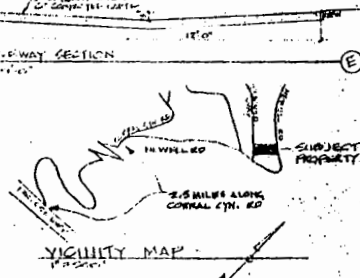
SINGLE-FAMILY RESIDENCE GARAGE
SITE PLAN & GRADING PLAN
1000 MARKET BLVD SUITE 201 LOS ANGELES, CALIFORNIA 90015

DATE: 3-18-81
JOB NO: 186

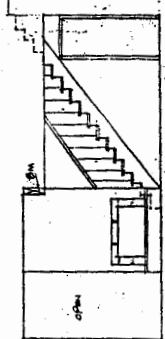
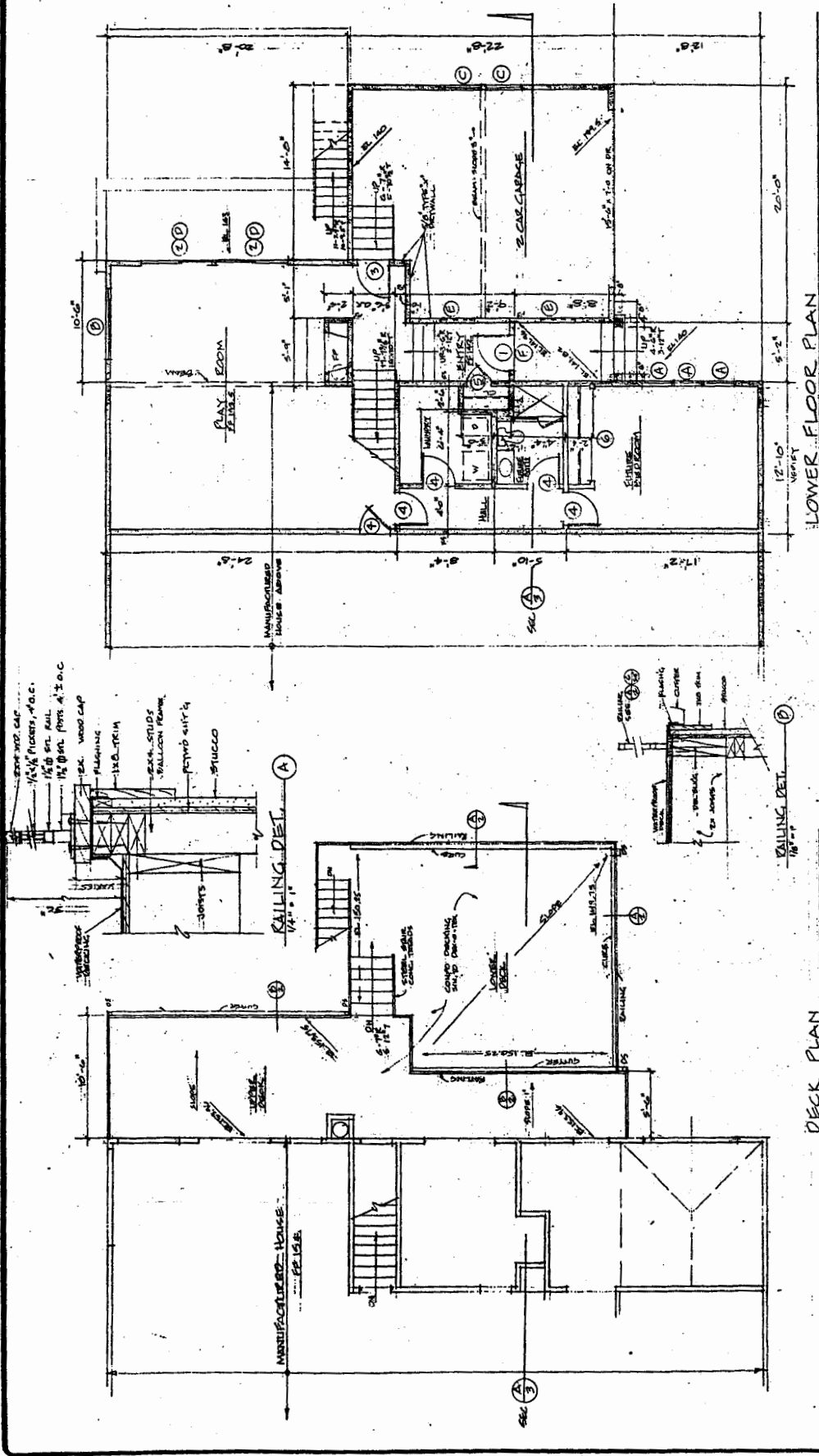
- GENERAL NOTES:**
1. PROVISIONS SHALL BE MADE FOR CONTINGUOUS UTILITY AT ALL TIMES.
 2. OWNER SHALL MAINTAIN DRAINAGE CHANNELS AND KEEP FREE OF OBSTRUCTION.
 3. AN ENCROACHMENT PERMIT IS REQUIRED FOR CONSTRUCTION AND THE PROVISIONS OF DRAINAGE WITHIN PUBLIC HIGHWAY RIGHT-OF-WAY.
 4. NO WORK IS ALLOWED WITHIN THE PROTECTED ZONE OF ONE TREE WITHOUT AN ONE TREE REPORT AND PERMIT.

FINISH ELEVATIONS

FF - FINISH FLOOR	12'-0"
FF - FINISH FLOOR	11'-0"
FF - FINISH FLOOR	10'-0"
FF - FINISH FLOOR	9'-0"
FF - FINISH FLOOR	8'-0"
FF - FINISH FLOOR	7'-0"
FF - FINISH FLOOR	6'-0"
FF - FINISH FLOOR	5'-0"
FF - FINISH FLOOR	4'-0"
FF - FINISH FLOOR	3'-0"
FF - FINISH FLOOR	2'-0"
FF - FINISH FLOOR	1'-0"
FF - FINISH FLOOR	0'-0"
FF - FINISH FLOOR	-1'-0"
FF - FINISH FLOOR	-2'-0"
FF - FINISH FLOOR	-3'-0"
FF - FINISH FLOOR	-4'-0"
FF - FINISH FLOOR	-5'-0"
FF - FINISH FLOOR	-6'-0"
FF - FINISH FLOOR	-7'-0"
FF - FINISH FLOOR	-8'-0"
FF - FINISH FLOOR	-9'-0"
FF - FINISH FLOOR	-10'-0"
FF - FINISH FLOOR	-11'-0"
FF - FINISH FLOOR	-12'-0"



OWNER'S RESPONSIBILITY: OBTAIN PERMIT FROM CITY OF LOS ANGELES FOR CONSTRUCTION AND MAINTENANCE OF DRAINAGE SYSTEMS AND STRUCTURES.



WINDOW SCHEDULE

NO.	TYPE	SIZE	FINISH	GLASS	OPERATION
1	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED
2	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED
3	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED
4	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED
5	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED
6	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED
7	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED
8	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED
9	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED
10	DOUBLE	4'-0\" x 6'-0"	WOOD	ONE	FIXED

DOOR SCHEDULE

NO.	TYPE	SIZE	FINISH	OPERATION
1	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING
2	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING
3	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING
4	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING
5	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING
6	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING
7	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING
8	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING
9	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING
10	DOUBLE	3'-0\" x 7'-0"	WOOD	SWING

DECK PLAN
1/4\"/>

LOWER FLOOR PLAN
1/4\"/>

EXHIBIT 4
4-02-186
Floor Plan

SINGLE FAMILIAR RESIDENCE & GARAGE
 KELLY DESSIS & STEVE BREESE
 ARCHITECTS & PLANNERS
 2007 NEWELL BLVD
 MALDEN, MASSACHUSETTS 02148
 TEL: 617-552-1100
 FAX: 617-552-1101
 WWW: WWW.KELLYDESSIS.COM

ROOF DECK PLAN

RICHARD D. STOODARD
 ARCHITECT
 ARCHITECTURE & PLANNING
 400 BOWEN BLVD., SUITE 200, LOS ANGELES, CALIFORNIA 90010
 MEMBER AMERICAN INSTITUTE OF ARCHITECTS

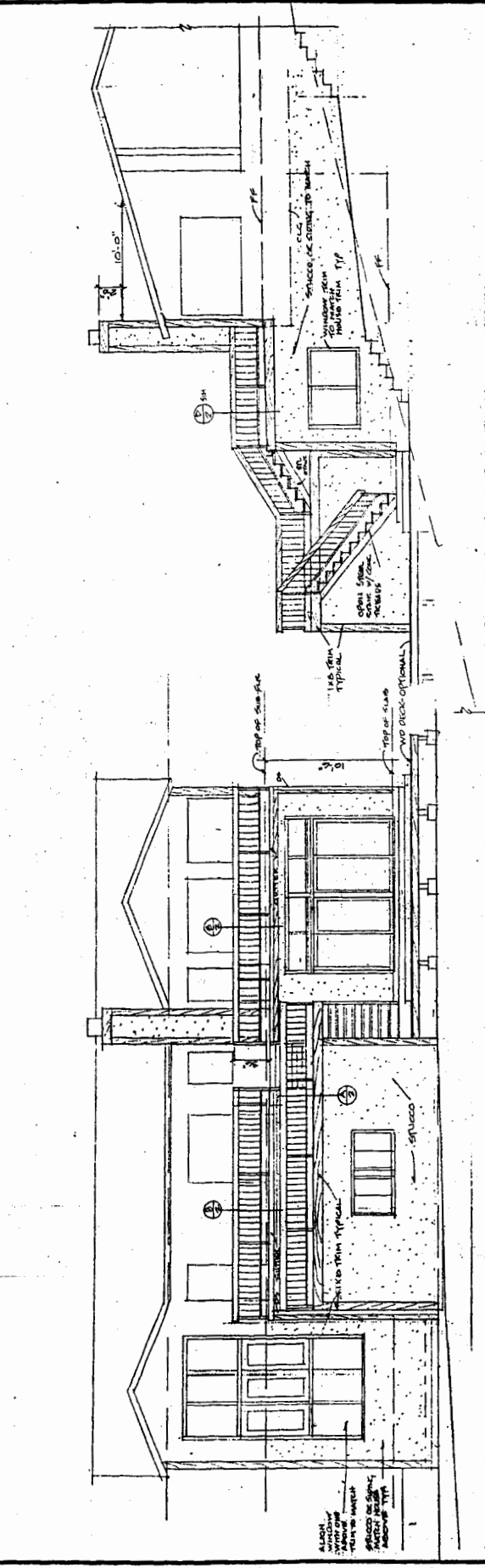
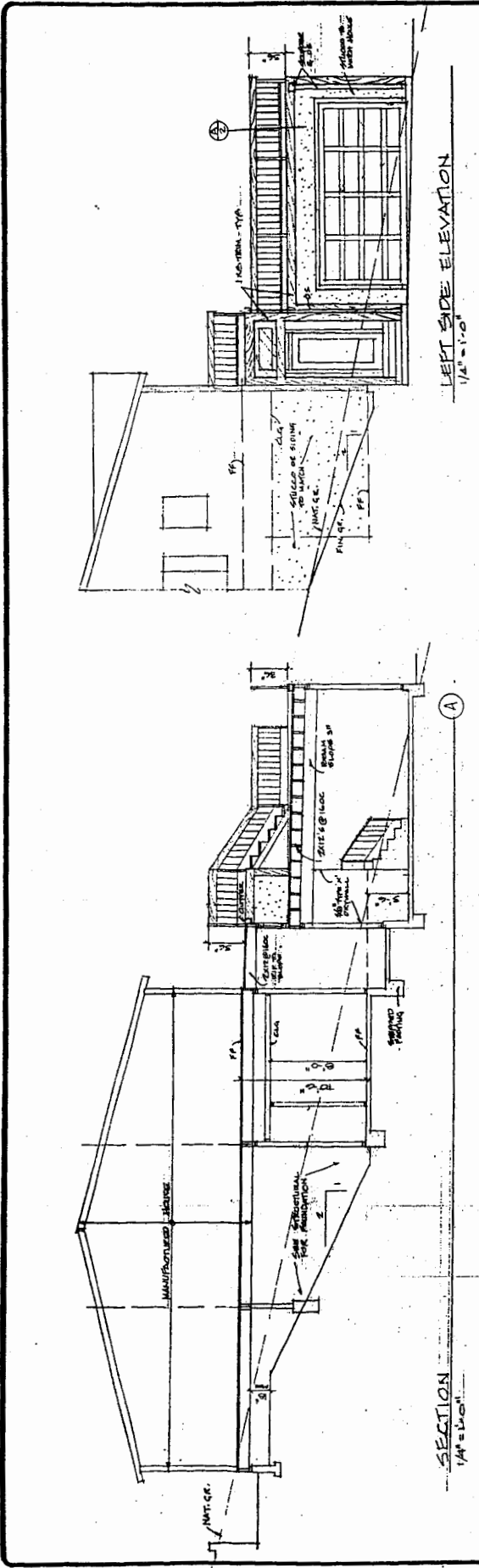


EXHIBIT 5
 4-02-186
 Elevations

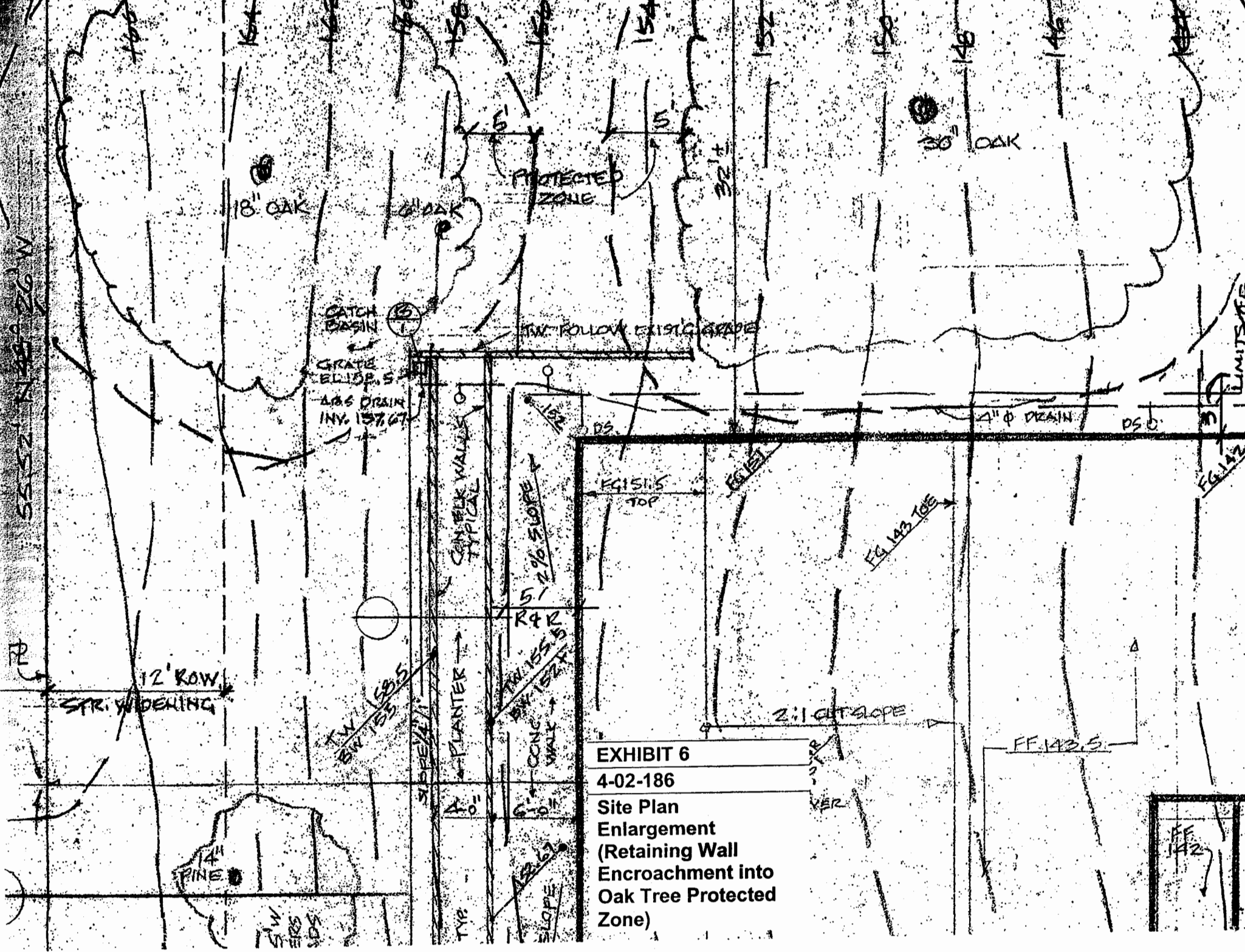


EXHIBIT 6
 4-02-186
 Site Plan
 Enlargement
 (Retaining Wall
 Encroachment into
 Oak Tree Protected
 Zone)

5552' N 99° 26' W

12' ROW
STR. WIDENING

PROTECTED
ZONE

CATCH
BASIN

GRATE
EL. 157.5

ABS DRAIN
INV. 157.67

TW FOLLOW EXISTG GRADE

36" OAK

18" OAK

6" OAK

LIMITS OF

4" Ø DRAIN

CONCRETE WALLS
TYPICAL

5' 2% SLOPE

R & R

TR. 155.5

CONC. SW. 152.5

WALL

FG 151.5
TOP

FG 151

FG 143.105

2:1 CUT SLOPE

FF 143.5

FG 142

FF 142

14" PINE

SW
ERS
ADS

TYE

SLOPE

STR
VER