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Filed:	July 19, 2001
49 th Day:	Opened and Continued
Staff:	Jim Baskin
Staff Report:	August 31, 2001
Hearing Date:	September 13, 2001
Commission Action:	

STAFF REPORT: APPEAL

SUBSTANTIAL ISSUE

LOCAL GOVERNMENT:	County of Mendocino
DECISION:	Approval with Conditions
APPEAL NO.:	A-1-MEN-01-043
APPLICANT:	David and Suzanne Wright
PROJECT LOCATION:	45501 Headlands Drive, Little River, Mendocino County, APN 121-260-10.
PROJECT DESCRIPTION:	Construction of a 2,550-square-foot, 18-foot-high, single-family residence with a 625-square-foot detached garage, onsite sewage disposal system, extension of utilities, and installation of 2,500-square-feet of paving for a driveway.
APPELLANTS:	Wendy Weikel
SUBSTANTIVE FILE: DOCUMENTS	1) Mendocino County CDP No. 17-01; and 2) Mendocino County Local Coastal Program

SUMMARY OF STAFF RECOMMENDATION:

The staff recommends that the Commission, after public hearing, determine that a substantial issue exists with respect to the grounds on which the appeal has been filed, and that the Commission hold a *de novo* hearing, because the appellants have raised a substantial issue with the local government's action and its consistency with the certified LCP.

The Mendocino Coastal Permit Administrator, approved with conditions a coastal development permit for the construction of an 18-foot-high, 2,550-square-foot single-family residence with an attached 625-square-foot garage, installation of a leach field and septic system, paving of a 2,500-square-foot asphalt concrete driveway, and connection to existing utilities on a one-acre lot within the Little River Headlands Subdivision north of Van Damme Beach in Little River, Mendocino County.

The appellants contend that the approved project raises a substantial issue of conformance with the County's LCP policies pertaining to geologic hazards, drainage, and the protection of environmentally sensitive habitat areas.

Staff recommends that the Commission find that the development, as approved by the County, raises a substantial issue of whether the residence, located 32 feet from the bluff edge, would create a bluff retreat hazard or ultimately require the construction of a protective device, inconsistent with the policies of the certified LCP regarding geologic hazards. The geotechnical report submitted for the project lacked specific analysis necessary to base findings of consistency with County LCP geologic stability policies and standards, including: (a) a factual basis for the calculated bluff retreat rate; (b) substantiation of the adequacy of the proposed set back to protect against property and persons from hazards associated with the presence of sea caves; (c) documentation to support how a smaller setback than recommended in a previous geologic report for the site would be appropriate; and (d) discussion of the effects the passage of time since preparation of the 1993 report would have on site stability, especially as relates to whether updated geotechnical analysis is needed without evidence that a recent field investigation having been conducted. In addition, though the geotechnical report was used to substantiate the appropriateness of the current proposed residential structures, the report's recommendations regarding site preparation and building foundations to avoid instigation of blufftop instability were not expressly required as conditions of approval by the County, raising concerns that the house may not be developed with the necessary mitigations to avoid creating a geological hazard.

Commission staff also recommends that that Commission find that the project as approved raises a substantial issue of conformance with the policies of the certified LCP regarding blufftop drainage. The geotechnical report prepared for development at the site also makes specific recommendations regarding site drainage to avoid erosion of the blufftop, however, these recommendations were similarly not included within the

County's permit. In addition, the County's findings for approval do not discuss how the project as approved is consistent with the stormwater runoff provisions of the LCP.

Staff recommends that the Commission find that the other contentions raised in the appeal regarding environmental sensitive habitat area investigations do not raise a substantial issue of conformance of the project as approved with the LCP. The local record indicates that the County conducted a thorough preliminary analysis for the presence of environmentally sensitive areas on or near the project site and finding no evidence of environmentally sensitive habitat areas determined that a wetland boundary delineation or other supplementary detailed biological assessments were not warranted.

Staff also recommends that the Commission continue the *de novo* portion of the appeal hearing to a subsequent meeting because the Commission does not have sufficient information from the applicant to determine if the current project can be found consistent with the geologic hazard and stormwater runoff policies of the certified LCP.

The Motion to adopt the Staff Recommendation of Substantial Issue is found on Page 6.

STAFF NOTES:

1. Appeal Process.

After certification of Local Coastal Programs (LCPs), the Coastal Act provides for limited appeals to the Coastal Commission of certain local government actions on coastal development permits (Coastal Act Section 30603).

Section 30603 states that an action taken by a local government on a coastal development permit application may be appealed to the Commission for certain kinds of developments, including developments located within certain geographic appeal areas, such as those located between the sea and the first public road paralleling the sea or within one hundred feet of a wetland or stream or three hundred feet of the mean high tide line or inland extent of any beach or top of the seaward face of a coastal bluff.

Furthermore, developments approved by counties may be appealed if they are not designated the "principal permitted use" under the certified LCP. Finally, developments constituting major public works or major energy facilities may be appealed whether approved or denied by the city or county. The grounds for an appeal are limited to an allegation that the development does not conform to the standards set forth in the certified local coastal program or the public access and public recreation policies set forth in the Coastal Act.

The subject development is appealable to the Commission because: (1) it is located between the sea and the first public road paralleling the sea; (2) it is within 300 feet of the mean high tide line and top of the seaward face of a coastal bluff; and (3) it is located in a sensitive coastal resource area: the highly scenic area designated in the certified LCP as comprising lands west of Highway One between Russian Gulch and Van Damme State Park.

Section 30625(b) of the Coastal Act requires the Commission to hear an appeal unless the Commission determines that no substantial issue is raised by the appeal. If the Commission decides to hear arguments and vote on the substantial issue question, proponents and opponents will have three minutes per side to address whether the appeal raises a substantial issue. It takes a majority of Commissioners present to find that no substantial issue is raised. Unless it is determined that there is no substantial issue, the Commission would continue with a full public hearing on the merits of the project, which may occur at a subsequent meeting. If the Commission were to conduct a *de novo* hearing on the appeal, the applicable test for the Commission to consider would be whether the development is in conformity with the certified Local Coastal Program.

The only persons qualified to testify before the Commission on the substantial issue question are the applicant, the appellant and persons who made their views known before the local government (or their representatives), and the local government. Testimony from other persons regarding substantial issue must be submitted in writing.

2. Filing of Appeal.

The appellants filed an appeal (see Exhibit No. 6) to the Commission in a timely manner on July 19, 2001, within 10 working days of receipt by the Commission on July 10, 2001 of the County's Notice of Final Action.

3. Hearing Opened and Continued.

Pursuant to Section 30621 of the Coastal Act, an appeal hearing must be set within 49 days from the date an appeal of a locally issued coastal development permit is filed. On July 24, 2001, staff requested all relevant documents and materials regarding the subject permit from the County, to enable staff to analyze the appeal and prepare a recommendation as to whether a substantial issue exists. However, the County permit file information had only just been requested and had not yet been received as of the day of the mailing of staff reports to the Commission and interested parties on July 26, 2001. Thus, the requested information was not received in time for the staff to review the information for completeness or prepare a recommendation on the substantial issue question for the Commission's December meeting agenda. Consistent with Section 13112 of Title 14 of the California Code of Regulations, since the Commission did not timely receive the requested documents and materials, the Commission opened and continued the hearing on August 8, 2001.

I. STAFF RECOMMENDATION ON SUBSTANTIAL ISSUE:

Pursuant to Section 30603(b) of the Coastal Act and as discussed below, the staff recommends that the Commission determine that a substantial issue exists with respect to the grounds on which the appeal has been filed. The proper motion is:

MOTION:

I move that the Commission determine that Appeal No. A-1-MEN-01-043 raises **NO** Substantial Issue with respect to the grounds on which the appeal has been filed under Section 30603 of the Coastal Act.

STAFF RECOMMENDATION:

Staff recommends a **NO** vote. Failure of this motion will result in a *de novo* hearing on the application, and adoption of the following resolution and findings. Passage of this motion will result in a finding of No Substantial Issue and the local action will become final and effective. The motion passes only by an affirmative vote of the majority of the appointed Commissioners present.

RESOLUTION TO FIND SUBSTANTIAL ISSUE:

The Commission hereby finds that Appeal No. A-1-MEN-01-043 presents a substantial issue with respect to the grounds on which the appeal has been filed under Section 30603 of the Coastal Act regarding consistency with the Certified Local Coastal Plan and/or the public access and recreation policies of the Coastal Act.

II. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

A. APPELLANTS' CONTENTIONS

The Commission received an appeal of the County of Mendocino's decision to approve the development. The appeal was received from Wendy Weikel. The project as approved by the County consists of the construction of a 2,550-square-foot, 18-foot-height, one-story residence, a 625-square-foot, 18-foot-height detached garage, installation of an onsite sewage disposal system, extension of utilities to serve the new structures, and paving a 2,500-square-foot asphalt-concrete driveway. The appellants' contentions are summarized below, and the full text of the contentions are included as Exhibit No. 6.

1. Adequacy of Review for Geologic Stability.

The appellants contend that there is a substantial issue of consistency of the County's approval of the project with the policies of the LCP concerning geological hazards from several perspectives. The appeal asserts that the geo-technical analysis did not adequately consider or address: (1) the extent of all geologically unstable areas currently on the property and the rate of shoreline bluff retreat relative to the location and design of the current proposed residential development for the economic life of the structures; (2) the effect the presence of sea caves beneath portions of the blufftop building site would have on site stability; and (3) the project's compliance with the LCP requirement that the post-development erosion rate not exceed the natural or background level before development. In addition, the appeal notes the County approved the project based upon past observations of geologic conditions at the site contained within a geologic report prepared for a generic residential project in 1993. The appellant questions the County's reliance on such a dated report to base its conclusions regarding geologic stability at the site especially in light of previous report prepared for development at the project site and other nearby parcels which recommended greater building setbacks. Therefore, the appellant contends that approval of the project without adequate analysis of geologic stability issues raises a substantial issue of consistency with policies within the Land Use Plan's (LUP) Locating and Planning New Development subchapter, and the requirements of the Hazard Areas chapter of the County's Coastal Zoning Code (CZC).

2. Drainage Impacts.

The appellant also contends that the development of over 5,000-square feet of impervious surfaces would increase the amount of runoff and cause a change in drainage patterns on the subject site that could lead to accelerated erosion of the bluff face or to the instability of the bluff itself. The appellant asserts that the project as approved, raises a substantial issue of conformance with the LUP's Locating and Planning New Development subchapter and the Grading, Erosion and Runoff chapter of CZC, which require that blufftop developments be constructed so as to ensure that surface and subsurface drainage does not contribute to the erosion of the bluff face or to the instability of the bluff itself.

3. Environmentally Sensitive Habitat Areas.

The appellant contends that the project as approved is inconsistent with LCP policies requiring that supplemental investigations as to the presence and extent of environmentally sensitive habitat areas be conducted prior to approval of any proposed development within an area of known or probable environmental sensitivity. The appellant states that environmentally sensitive area or botanical studies study should have been conducted as part of the review of the development and suggests that the area may have wetlands on portions of the project site that might affect the development's consistency with the ESHA policies of the LCP.

B. LOCAL GOVERNMENT ACTION

On February 7, 2001, Bud Kamb, agent-of-record for David and Suzanne Wright, submitted Coastal Development Permit Application No. 17-01 (CDP #17-01 to the Mendocino County Planning and Building Services Department for a coastal development permit seeking authorization to construct a single-family residence, detached garage, onsite sewage disposal system, extension of utilities, and a paved driveway on a parcel.

Following completion of the Planning and Building Services staff's review of the project, on June 28, 2001, the Coastal Permit Administrator for the County of Mendocino approved Coastal Development Permit No. #17-01 (CDP #17-01) for the subject development. The Coastal Permit Administrator attached a number of special conditions, including requirements that: (1) final paint color be submitted, reviewed and approved by the Coastal Permit Administrator prior to issuance of the coastal development permit; (2) building materials and finishes match those specified in the permit application; (3) site landscaping be installed and maintained consistent with the approved landscaping plan; and (4) a deed restriction be recorded stating that the landowner shall not construct shoreline protective devices and shall remove the house and foundation when bluff retreat reaches the point when the structure is threatened. The Coastal Permit Administrator did not attach conditions expressly requiring the house to be built in conformance with the recommendations of the geotechnical report.

The decision of the Coastal Permit Administrator was not appealed at the local level to the County Board of Supervisors. The County then issued a Notice of Final Action on July 9, 2001, which was received by Commission staff on July 10, 2001 (see Exhibit No. 5).

C. SITE AND PROJECT DESCRIPTION

The project site for the approved single-family residential development comprises the Lot 10 of the Little River Headlands Subdivision, created by parcel map in 1965. The site is one of fifteen blufftop lots located west of Highway One on Headlands Drive, a private road located at the western terminus of Peterson Lane, approximately ½ miles northwest of the unincorporated town of Little River and just north of the beach at Van Damme State Park (see Exhibit No. 2). This roughly triangular-shaped property is approximately one acre in size and consists of a generally flat, grass-covered lot with scattered tree cover along its margins. Plant cover on the blufftop portions of the parcel is comprised of upland grasses, forbs, and shrubs, including coyotebrush (Baccharis pilularis) and bracken fern (Pteridium aquilinum). The property is bordered by thickets of shore pine (Pinus contorta ssp. contorta) on its eastern and western sides. The site does not contain any known environmentally sensitive habitat areas.

The project site lies within the LCP's Russian Gulch and Van Damme State Park Planning Area. The subject property is comprised of a vacant, legal non-conforming (to current minimum lot size standards) parcel designated in the Land Use Plan and on the Coastal Zoning Map as Rural Residential – 5-acre Minimum Lot Area (RR:L-5). The subject property is within a highly scenic area as designated on the Land Use Map (see Exhibit No. 3). Due to the property's location within a gated community on a private road, public views to and along the ocean across the property are limited. Additionally, given the distance to the highway and the presence of other bluff headlands lying between the highway and project parcel, views of the site from Highway One and other public recreational areas are limited to a relatively brief gap in the roadside vegetation along northbound Highway One as it descends the slope to the mouth of Little River, and from the beachfront at the southwestern corner of Van Damme State Park.

The proposed development is the construction of a 2,550-square-foot, 18-foot-height, one-story residence and 625-square-foot detached garage with a 2,500-square-foot asphalt driveway and septic system on an approximately one-acre parcel (see Exhibit No. 4). The house and detached garage would be built in the mid-center of the lot with the closest point of the house located 32 feet back from the bluff edge. Water service would be provided to the residence by the Little River Headlands Mutual Water Company. The development would be screened by the presence of existing vegetation and required landscaping such that views to and along the coast from these areas would not be significantly adversely impacted by construction of the house at the approved location and height.

D. SUBSTANTIAL ISSUE ANALYSIS

Section 30603(b)(1) of the Coastal Act states:

The grounds for an appeal pursuant to subdivision (a) shall be limited to an allegation that the development does not conform to the standards set forth in the certified local coastal program or the public access policies set forth in this division.

1. Appellant's Contentions That Are Valid Grounds for Appeal.

All three of the contentions raised in this appeal present potentially valid grounds for appeal in that they allege the project's inconsistency with policies of the certified LCP. These contentions allege that the approval of the project by the County raises substantial issues related to LCP provisions regarding: (1) geologic stability; (2) stormwater runoff; and (3) the protection of environmentally sensitive habitat areas. The Commission finds that two of three of these contentions raise a substantial issue, for the reasons discussed below.

Coastal Act Section 30625(b) states that the Commission shall hear an appeal unless it determines:

With respect to appeals to the commission after certification of a local coastal program, that no substantial issue exists with respect to the grounds on which an appeal has been filed pursuant to Section 30603.

The term "substantial issue" is not defined in the Coastal Act or its implementing regulations. The Commission's regulations indicate simply that the Commission will hear an appeal unless it "finds that the appeal raises no significant question." (Cal. Code Regs., Title 14, Section 13115(b).) In previous decisions on appeals, the Commission has been guided by the following factors:

- The degree of factual and legal support for the local government's decision that the development is consistent or inconsistent with the certified LCP and with the public access policies of the Coastal Act;
- The extent and scope of the development as approved or denied by the local government;
- The significance of the coastal resources affected by the decision;
- The precedential value of the local government's decision for future interpretations of its LCP; and
- Whether the appeal raises only local issues, or those of regional or statewide significance.

Even when the Commission chooses not to hear an appeal, appellants nevertheless may obtain judicial review of the local government's coastal permit decision by filing petition for a writ of mandate pursuant to Code of Civil Procedure, section 1094.5.

In this case, for the reasons discussed further below, the Commission exercises its discretion and determines that with respect to certain allegations (1.a - 1.b below), a substantial issue exists with regard to the approved project's conformance with the certified Mendocino County LCP. As further discussed below, the Commission finds that with respect to the allegation regarding investigation of the presence and extent of environmentally sensitive habitat areas, the development as approved by the County raises no substantial issue with the certified LCP or the access provisions of the Coastal Act.

Allegations Raising Substantial Issue

a. Adequacy of Review for Geologic Stability

The appellant contends that the proposed project and the site have not been adequately assessed to determine if the project will assure the geologic stability of the site for the full economic life of the project as is required under the County's coastal zoning code. In particular, the appeal asserts that the geological investigation prepared for the project did not fully consider or document relevant data in developing its findings and recommendations relative to: (1) building setbacks for blufftop retreat; (2) potential geologic instability associated with the presence of sea caves; and (3) the discrepancies between setbacks currently recommended by the applicant's geologist and larger setbacks previously recommended in a report prepared for the site in 1986. The appellant asserts that because in her opinion the geotechnical information does not provide needed information and analysis about geologic hazards, the project as approved raises a substantial issue of conformance with the substantive geologic hazard policies requiring that new development not contribute to geologic hazards.

LCP Policies:

LUP Policy 3.4-1 states the following in applicable part:

The County shall review all applications for Coastal Development permits to determine threats from and impacts on geologic hazards arising from seismic events, tsunami runup, landslides, beach erosion, expansive soils and subsidence and shall require appropriate mitigation measures to minimize such threats. In areas of known or potential geologic hazards, such as shoreline and bluff top lots and areas delineated on the hazards maps, the County shall require a geologic investigation and report, prior to development to be prepared by a licensed engineering geologist or registered civil engineer with expertise in soils analysis to determine if mitigation measures could stabilize the site...

LUP Policy 3.4-2 states the following:

The County shall specify the content of the geologic site investigation report required above. The specific requirements will be based upon the land use and building type as well as by the type and intensity of potential hazards. These site investigation requirements are detailed in Appendix 3.

LUP Policy 3.4-3 states the following:

The County shall review development proposals for compliance with the Alquist-Priolo Special Studies Zone Act (as amended May 4, 1975)

- (a) *Type 3: Residential (less than 8 attached units), and Manufacturing and Storage/Warehouse...*
- (b) *Type 4: Open Space, Agricultural, Golf Courses, etc.*
- (1) *Required Studies.*
 - (a) *Fault Rupture. Prior to proceedings with any Type 1 development, published geologic information shall be reviewed by an engineering geologist or civil engineer, the site shall be mapped geologically and aerial photographs of the site and vicinity shall be examined for lineaments. Where these methods indicate the possibility of faulting, a thorough investigation is required to determine if the area contains a potential for a fault rupture. App applications for development proposals shall be reviewed for compliance with the Alquist-Priolo Special Studies Zone Act pursuant to Subsection (D) below and shall be deemed incomplete until such time as the reviewing geologist report is accepted by the County.*
 - (b) *Seismic-Related Ground Failure...*
- (2) *Unspecified land uses shall be evaluated and assigned categories of investigation on an individual basis.*
 - (a) *Tsunami...*
 - (b) *Landsliding...*

LUP Policy 3.4-7 states that:

The County shall require that new structures be set back a sufficient distance from the edges of bluffs to ensure their safety from bluff erosion and cliff retreat during their economic life spans (75 years). Setbacks shall be of sufficient distance to eliminate the need for shoreline protective works. Adequate setback distances will be determined from information derived from the required geologic investigation and from the following setback formula:

$$\text{Setback (meters)} = \text{Structure life (years)} \times \text{Retreat rate (meters/year)}$$

The retreat rate shall be determined from historical observation (e.g., aerial photographs) and/or from a complete geotechnical investigation.

All grading specifications and techniques will follow the recommendations cited in the Uniform Building Code or the engineering geologist's report.

Note: This language is reiterated in Zoning Code Section 20.500.020(B).

Zoning Code Section 20.500.010 states that development shall:

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

Zoning Code Section 20.500.015(A) states in applicable part:

- (1) *Preliminary Investigation. The Coastal Permit Administrator shall review all applications for Coastal Development Permits to determine threats from and impacts on geologic hazards.*
- (2) *Geologic Investigation and Report. In areas of known or potential geologic hazards such as shoreline and bluff top lots and areas delineated on the hazards maps, a geologic investigation and report, prior to development approval, shall be required. The report shall be prepared by a licensed engineering geologist or registered civil engineer pursuant to the site investigation requirements in Chapter 20.532.*

Zoning Code Section 20.500.020(B) states that:

Construction landward of the setback shall not contribute to erosion of the bluff face or to instability of the bluff.

Discussion:

LUP Policy No. 3.4-1 and Coastal Zoning Code Section 20.500.015(A) require that the approving authority review all applications for Coastal Development Permits to determine threats from and impacts on geologic hazards, and in areas of known or potential geologic hazards such as shoreline and bluff top lots and areas delineated on the hazards maps, require a geologic investigation and report prior to development approval. Coastal Zoning Code Section 20.532.070 indicates that certain use types or buildings would trigger the need for geologic investigations of varying depths of analysis. For example, only applications for a Type 1 development (public, high occupancy and critical uses) would require an on-site fault rupture study, whereas all applications for development proposals shall be reviewed for compliance with the Alquist-Priolo Special Studies Zone Act. These policies state that all coastal development permit applications must be reviewed for geologic hazards, and in areas of known or potential geologic

hazards, such as shoreline and bluff top lots, a geologic investigation and report shall be required prior to development approval.

The parcel involved in the approved residential development includes approximately 400 lineal feet of shoreline bluff. The bluff overlooking the ocean forms a dramatic cliff that drops roughly 70 feet to the ocean. Due to its blufftop setting, CZC Section 20.500.015(A)(2) requires that a geologic investigation be prepared.

The geotechnical information submitted with the project application (Earth Mechanics, 1993) was prepared as a preliminary assessment of stable building sites for generic residential development at the site (see Exhibit No. 7). The report contains the following statement with respect to the rate of bluff retreat and site stability:

Based on our site reconnaissance, review of data, the character of the bedrock, and the proposed construction, we conclude that a minimum setback of 20 feet from the top of the sea cliff should be maintained. We also conclude that the structure supported on reinforced concrete grade beams and drilled piers extending into bedrock may be constructed above the area of the sea tunnels.

The following data contributed to these conclusions:

- 1) The sandstone observed in the sea cliffs appears to be massive with relatively few fractures or zones of weakness.
- 2) The soil mantle is relatively thin and is situated at a stable angle of repose near the sea cliff.
- 3) Bellarino (1986) reports that no large blocks of rock have slumped into the sea since the subdivision was begun nearly 25 years ago.
- 4) There is approximately 30 feet of sandstone bedrock between the roof of the sea tunnels and the ground surface. [emphasis added]

At the behest of County staff seeking clarification as to whether the 1993 report analyzed bluff retreat relative to the full economic life of the proposed resort structures using the formula within CZC Section 20.500.020(B), in a letter dated March 13, 2001, the report preparer responded:

Based on our work and review of available data, we conclude that a retreat rate of 0.08 meters/year would provide an adequate setback to protect the planned residence from cliff retreat. Using the above referenced formula, 75 years x 0.08 meters/year = 6 meters which is approximately equivalent to the 20 foot setback recommended in the project geotechnical report.

The appellant questions whether the stability assessment within the nearly eight-year-old geotechnical report adequately considered the hazards associated with current conditions on the bluff face or the presence of sea caves below the blufftop. The appellant submitted a photograph of a large rotational slump on the project site bluff face that appears to contradict data (see item no. 3, above) on which the Earth Mechanics report based its conclusions regarding site stability. In addition, the appellant provided copies of other geologic reports, one prepared for the project site (Bellarino, 1986) and another for nearby Lot No. 7 (J.R. Bovyer, 1985), as evidence of the paucity of the setback recommended in the Earth Mechanics report. Both of these earlier reports recommend building setbacks of between 50 to 85 feet from the blufftop edge.

With regard to the datedness of the submitted geotechnical report, it should be noted that Earth Mechanics provided a letter, dated April 14, 1999, to the former property owner for which the 1993 report had been prepared stating their confirmation with the findings, conclusions, and recommendations contained in the 1993 report. However, the letter does not indicate that any current field investigation has been performed and the letter contained no supplementary data or analysis addressing whether the report's findings, conclusions, and recommendations could be applied to the site conditions existing in 1999. Moreover, while the Earth Mechanics report does include the 1986 Bellarino investigation within its list of references, the report does not address why a 20-foot setback would now suffice when the Bellarino report recommended a larger setback of approximately 50 feet. Consequently, although a geologic investigation was prepared for site development, the appellant contends that the 1993 report does not provide sufficient evidence before the County prior to project approval to assure that the proposed development would not cause or contribute to geologic hazards inconsistent with LCP geologic hazard policies with a setback of only 20 feet.

Furthermore, with respect to the geologist's confirmation of having used the setback criteria enumerated in LUP Policy 3.4-7, the geologist states that a geotechnical analysis had been performed. This analysis resulted in the concluded 0.08 meter/year rate, which when extrapolated over a 75-year economic structural life would represent a total retreat of 6 meters (\approx 19.68 feet), approximately equivalent to the 20-foot setback recommended within the report. However, neither in the confirming letter or the original report does the geologist indicate what technical methodologies (e.g., photogrammetric analysis) were employed to derive the 0.08 meter annual retreat rate from which the recommended 20-foot setback was based.

As regards the effects that the presence of sea caves located beneath the blufftop may have on site stability, the geotechnical report bases its recommended 20-foot setback from the sea cliff solely on observed conditions at or near the bluff face or from previous cave explorations rather than assessing the stability of the overburden directly. Such an indirect investigative approach may not fully reveal zones of weakness within the roof of the sea cave that may not be visible from the vantage of the bluff face. For example,

cavitation --- the process by which cavities are formed within a rock body caused by the thrust of highly compressed air forced into the cave by in-coming storm surge --- may not be evident at or near the cave entrance.

Finally, notwithstanding the arguable basis on which the geotechnical report's recommendations were founded, a substantial issue of conformance with the standards of the LCP for assuring that adequate setbacks are provided from unstable areas that bluff instability will be avoided is raised by the County's failure to include conditions of permit approval requiring that the development be constructed consistent with the recommendations of the geotechnical report. At its closest point, the proposed house would be 32 feet from the blufftop edge, in conformance with the recommended 20-foot setback. However, no permit condition was imposed requiring that the other specific recommendations of the geotechnical report regarding site clearing, excavations, foundation design, drainage, and maintenance be followed, potentially resulting in a development that would create or contribute to site instability.

Based on the information in the record before the County, a substantial issue is raised as to whether the project as approved would assure structural integrity and geologic stability. In addition, without geologic evidence prior to approval, it cannot be determined that the proposed 20-ft. setback is sufficient to absolutely ensure the safety of the structures from bluff retreat. Regardless of the County's requirement that rights to construct future shoreline protective structures are conveyed by deed restriction, if the setback is not sufficient the proposed development will be threatened by bluff retreat during its full 75-year economic lifespan contrary to LUP Policy 3.4-7 and CZC Section 20.500.020(B).

Consequently, there is not a high degree of factual or legal support for the County's decision to approve the project as being consistent with the certified LCP. Furthermore, as the site is adjacent to the water of Van Damme Beach, an area that experiences high levels of coastal recreational use, the coastal resources affected by the decision are significant. Therefore, the Commission finds that, as discussed above, the appeal raises a substantial issue with respect to conformance of the approved project with LUP Policy 3.4-7 and Coastal Zoning Ordinance Section 20.500.010 regarding the completeness of geologic investigations for substantiating the adequacy of setbacks from unstable areas and avoiding instigation of instability in the approval of new development.

b. Stormwater Runoff

The appellant contends that the project raises a substantial issue of conformance with Mendocino County LCP because the approved development includes no analysis or development conditions addressing the subject development and its potential to increase and concentrate surface water runoff that might eventually lead to increased bluff erosion.

LCP Policies:

LUP Section 3.4-9 states that:

Any development landward of the blufftop setback shall be constructed so as to ensure that surface and subsurface drainage does not contribute to the erosion of the bluff face or to the instability of the bluff itself.

Coastal Zoning Code Section 20.492.005 states that:

The approving authority shall review all permit applications for coastal developments to determine the extent of project related impacts due to grading, erosion and runoff. The approving authority shall determine the extent to which the following standards should apply to specific projects, and the extent to which additional studies and/or mitigation are required, specifically development projects within Development Limitations Combining Districts.

CZC Section 20.492.010 further states:

- (A) *Grading shall not significantly disrupt natural drainage patterns and shall not significantly increase volumes of surface runoff unless adequate measures are taken to provide for the increase in surface runoff.*
- (B) *Development shall be planned to fit the topography, soils, geology, hydrology, and other conditions existing on the site so that grading is kept to an absolute minimum.*
- (C) *Essential grading shall complement the natural landforms. At the intersection of a manufactured cut or fill slope and a natural slope, a gradual transition or rounding of contours shall be provided.*
- (D) *The cut face of earth excavations and fill shall not be deeper than the safe angle of repose for materials encountered. Where consistent with the recommendations of a soils engineer or engineering geologist, a variety of slope ratios shall be applied to any cut or fill slope in excess of two hundred (200) feet in length or ten (10) feet in height...*

Coastal Zoning Code Section 20.500.020(B)(3) states that:

Construction landward of the setback shall not contribute to erosion of the bluff face or to instability of the bluff.

Discussion:

The proposed development entails the construction of a 2,550-square-foot residence, a 625-square-foot detached garage, and the paving of an approximately 2,500-square-foot asphalt-concrete driveway. A total of over 5,000-square feet of impervious surface area would result from the approved project. Development of the subject residential project could result in surface runoff being concentrated and directed toward the bluff edge, that could eventually lead to increased bluff erosion or the instability of the bluff itself if not mitigated. The geotechnical report states the following with regard to site drainage:

The site should be graded to provide positive drainage away from building areas as well as the sea cliff and finished cut and fill slopes. Roofs should be provided with gutters and down spouts that discharge into closed conduits, or onto concrete slabs or asphalt pavements that drain away from the foundations and into the site storm drain system. Energy dissipators (*sic*), such as riprapped stilling basins, may be required to reduce erosion where drains or culverts discharge into drainage ways.

The development as approved by the County does not identify any stormwater collection and conveyance system designed to attenuate any excess stormwater that could be generated from the new impervious surfaces that will be created by the development. In addition, the County did not include any conditions of permit approval requiring that the recommendations of the geotechnical report regarding drainage be implemented or that a grading and/or drainage plan be prepared, submitted, reviewed, and approved prior to construction. Furthermore, the findings of approval do not discuss consistency of the project with the runoff control policies and standards of the LCP.

Moreover, without drainage controls there is no assurance that the project as approved will be constructed in a manner that will keep drainage from the development from flowing over the bluff edge and contributing to erosion of the bluff. Similarly, without requisite runoff management practices included, or required to be included within the project's design, there is the potential that site grading would significantly disrupt natural drainage patterns, significantly increase volumes of surface runoff, or that construction landward of the setback would contribute to erosion of the bluff face or to instability of the bluff. Therefore, the project as approved raises a substantial issue of conformance with the requirements of LUP Policy 3.4-9 and Coastal Zoning Ordinance Sections 20.492.010(A) and 20.500.020(B)(3) that: (1) the development be constructed so as to ensure that surface and subsurface drainage does not contribute to the erosion of the bluff face or to instability of the bluff itself; (2) site grading would not significantly disrupt natural drainage patterns or significantly increase volumes of surface runoff unless adequate measures are taken to provide for the increase in surface runoff; and (3) construction landward of the setback would not contribute to erosion of the bluff face or to instability of the bluff.

Without any drainage controls having been proposed or required by the County and without any findings discussing the project's consistency with LUP Policy 3.4-9 and Coastal Zoning Ordinance Sections 20.492.010 and 20.500.020(B)(3), there is not a high degree of factual or legal support for the County's decision to approve the project as being consistent with the certified LCP. In addition, given the project's location adjoining the highly productive waters of Van Damme Beach and the Little River, the coastal resources affected by the County's decision are significant. Thus the Commission finds that the project as approved by the county raises a substantial issue with respect to conformance of the approved project with the LCP policies regarding geologic hazards and drainage.

Appellants' Contentions That Do Not Raise a Substantial Issue.

c. Environmentally Sensitive Habitat Areas

The appellant contends that the presence of environmentally sensitive habitat areas (ESHAs), including wetlands, was not considered or surveyed during the County's review of the project. The appellant contends that as a result of not surveying the site, the full extent of any ESHAs and associated buffer areas, and assurance that adequate building sites exist on all parcels resulting from the boundary line adjustment has not been determined as required by the certified LCP.

Summary of LCP Provisions:

LUP Policy 3.1-2 states, in applicable part:

Development proposals in environmentally sensitive habitat areas such as wetlands, riparian zones on streams or sensitive plant or wildlife habitats (all exclusive of buffer zones) including, but not limited to those shown on the Land Use Maps, shall be subject to special review to determine the current extent of the sensitive resource...

LUP Policy 3.1-29 states:

The California Department of Fish and Game, the California Native Plant Society, and the U.S. Fish and Wildlife Service shall be requested to maintain and augment mapped inventory of all rare, endangered, threatened and protected plant and wildlife habitats on the Mendocino Coast based on up-to-date survey information. Symbols indicating rare or endangered plants and wildlife are placed on the Land Use Maps to generally locate listed species and will be pinpointed as necessary to prevent degradation prior to issuing any development permit. Furthermore, the Department of Fish and Game is requested to work with the county during the planning and permit process to evaluate the

significance of mapped sites as they apply to individual development applications.

Section 20.496.005 of the Coastal Zoning Code states, in applicable part:

This Chapter shall apply to all development proposed in the Coastal Zone unless and until it can be demonstrated to the approving authority that the projects will not degrade an environmentally sensitive habitat or resources area and shall be compatible with the continuance of such areas. While symbols denoting habitat and resource areas appear on the Land Use Maps, field investigations and review of the Department of Fish and Game Data Base may be required prior to a determination of the applicability of this Chapter... [emphasis added]

Section 20.496.015 of the Coastal Zoning Code states, in applicable part:

(A) Determining Extent of ESHA. The Coastal Permit Administrator shall review, with the assistance of land use maps, all permit applications for coastal developments to determine whether the project has the potential to impact an ESHA. A project has the potential to impact an ESHA if:

- (1) The development is proposed to be located on a parcel or proximate to a parcel identified on the land use plan map with a rare and/or endangered species symbol;*
- (2) The development is proposed to be located within an ESHA, according to an on-site investigation, or documented resource information;*
- (3) The development is proposed to be located within one hundred (100) feet of an environmentally sensitive habitat and/or has potential to negatively impact the long-term maintenance of the habitat, as determined through the project review.*

Development proposals in ESHA's including but not limited to those shown on the coastal land use maps, or which have the potential to impact an ESHA, shall be subject to a biological survey, prepared by a qualified biologist, to determine the extent of the sensitive resource, to document potential negative impacts, and to recommend appropriate mitigation measures. The biological survey shall be submitted for the review and approval of the Coastal Permit Administrator prior to a determination that the project application is complete. The biological survey shall be prepared as described in Section 20.532.060, "Environmentally Sensitive Habitat Area – Supplemental Application Procedures..." [emphasis added]

Discussion:

The above LCP policies and standards provide for the regulation of new development to protect Environmentally Sensitive Habitat Areas (ESHA). The Mendocino County Coastal Zoning Code Section 20.496.010 defines ESHA's as including wetlands and riparian areas and establishes buffers to protect them. Zoning Code Section 20.496.015(A) states that if a development has been found to have the potential to impact an ESHA, a biological survey shall be prepared by a qualified biologist, to determine the extent of the sensitive resource, to document potential negative impacts, and to recommend appropriate mitigation measures. A development has the potential to impact an ESHA if it is located or in proximity to site known to contain ESHA resources as disclosed on the County's Land Use Maps, information provided by resource trustee agencies, or from site-specific analyses.

However, while the Coastal Permit Administrator (CPA) has the responsibility to review all coastal development applications and consult with the enumerated resource agencies and interested organizations for potential ESHA impacts, the LCP grants discretion to the CPA for determining when supplemental biological investigations will be required of a development applicant. This discretion allows the CPA to make determinations regarding a project's ESHA impact potential based upon preliminary analysis and consultations. If a site visit, review of the land use plan map, or consultation with the various resource agencies and organizations reveals that ESHA may be present either on or near the project, a biological survey must be prepared. Conversely, if the CPA finds, based upon a review of planning documents, site visits, and consultations that ESHAs do not exist on or within 100 feet of the proposed development, the project can be concluded to have no potential impact on ESHAs and no further study would be warranted. Accordingly, not all coastal development permit applicants are required to prepare biological surveys for their proposal.

During the review of the development proposal, County staff conducted a preliminary assessment for the presence of ESHAs on or near the project. This assessment included: (1) a review of the Land Use Plan Map for symbols indicating the presence of ESHA on or in proximity to the subject parcel (see Exhibit No. 3); (2) a review of the California Department of Fish and Game's Natural Diversity Database for the presence of threatened, endangered, and special concern plant and animal species on or near the project site; (3) referral of the application to the California Native Plants Society for comment; (4) a site visit to the project location and surroundings; (5) photo-documentation the plant cover on the blufftop. Based on this assessment, the CPA determined that no ESHAs were located either on or within 100 feet of the project site.

Section 20.496.015 of the Coastal Zoning Code states that any development within 100 feet of an ESHA has the potential to impact an ESHA. The section also states that a development proposal that has the potential to impact an ESHA shall be subject to a biological survey. Therefore, given the County's earnest examination of biological

records, the project site, and consultations, the Commission finds that there is sufficient factual and legal support for the County's decision that the development is consistent with ESHA protection policies of the certified LCP. Therefore, no substantial issue is raised of the conformance of the project as approved with Coastal Zoning Code Section 20.496.015.

d. Conclusion

The Commission finds that, as discussed above, the appeal raises a substantial issue with respect to the conformance of the approved project with the policies of the LCP concerned with geologic hazards and drainage.

E. INFORMATION NEEDED FOR *DE NOVO* REVIEW OF APPLICATION

As stated above, Section 30625(b) of the Coastal Act requires the Commission to hear an appeal unless the Commission determines that no substantial issue exists with respect to the grounds on which an appeal has been filed. Section 30621 of the Coastal Act instructs the Commission to provide for a *de novo* hearing on all appeals where it has determined that a substantial issue exists with respect to the grounds on which an appeal has been filed. If the Commission finds substantial issue as recommended above, staff also recommends that the Commission continue the *de novo* hearing to a subsequent date. The *de novo* portion of the appeal must be continued because the Commission does not have sufficient information to determine what, if any, development can be approved, consistent with the certified LCP and the public access and public recreation policies set forth in the Coastal Act.

Given that the project the Commission will be considering *de novo* has come to the Commission after an appeal of a local government action, the Commission has not previously been in the position to request information from the applicant needed to determine if the project can be found to be consistent with the certified LCP and the public access and public recreation policies set forth in the Coastal Act. Following is a discussion of the information needed to evaluate the development.

Geotechnical Analysis

Coastal Zoning Ordinance Section 17.82.010 instructs that a coastal permit shall assure that a project site is suitable and adequate for the proposed use. Given the above findings, *de novo* analysis of the coastal development permit application by the Commission would involve consideration of geologic hazard issues and associated policies and standards of the certified LCP. Accordingly, the following additional information is needed:

- 1) An updated assessment of the estimated bluff retreat rate for the project site based upon a review of the most currently available scientific data (e.g., recent aerial photo-grammetry, other contemporary coastal erosion studies) projected for a minimum of a 75-year useful economic life for the proposed structures at the currently selected building site locations; and
- 2) An updated assessment of the effects that sea caves beneath the blufftop would have on the site stability projected for a minimum of a 75-year useful economic life for the proposed structures at the currently selected building site locations;

Drainage Plan

As discussed previously, the project raises a substantial issue of conformance with the policies of the LCP regarding the need to include runoff controls to avoid adverse bluff erosion. The Commission finds that the adverse impacts of runoff from the development on bluff erosion cannot be properly assessed because the project as approved did not identify or require erosion and runoff control methods to be used during and after the construction phase. A description of the site-specific erosion and runoff control methods proposed for building construction and on-going stormwater management needs to be submitted. This information would identify the best management practices (BMPs) to be employed at site-specific locations on the parcel. The description and analysis should include a description of the BMPs to be employed during construction at the site, provide hydrological calculations as to the sizing of the facilities, and illustrate the location of drainage facilities.

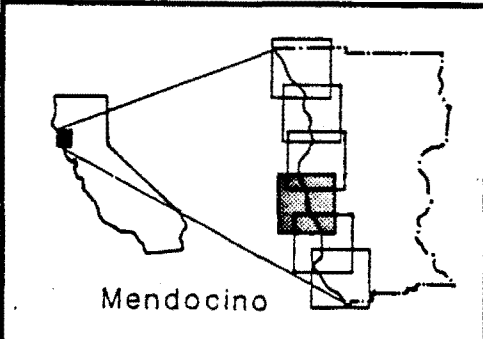
Without the above information, the Commission cannot reach a final determination concerning the project's consistency of the project with the geologic hazard and drainage policies of the LCP. Therefore, before the Commission can act on the proposed project *de novo*, the applicant must submit all of the above-identified information.

III. EXHIBITS:

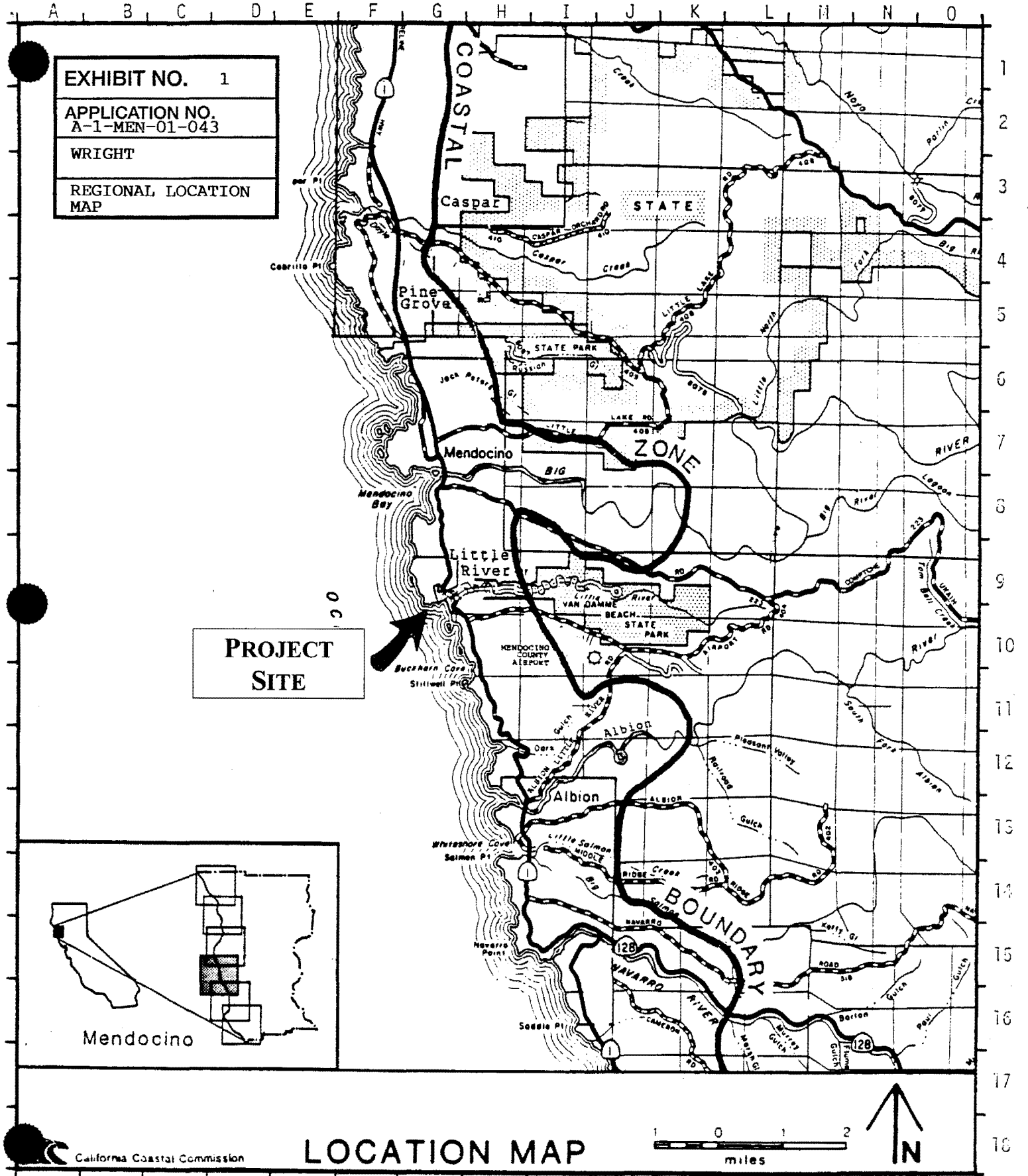
1. Regional Location Map
2. Vicinity Map
3. Portion, Land Use Plan Map No. 17 – *Mendocino*
4. Site Plan, House and Garage Elevations, Floor Plans, Landscaping Plan
5. Notice of Final Local Action
6. Appeal, filed July 19, 2001 (Weikel)
7. Geotechnical Reports

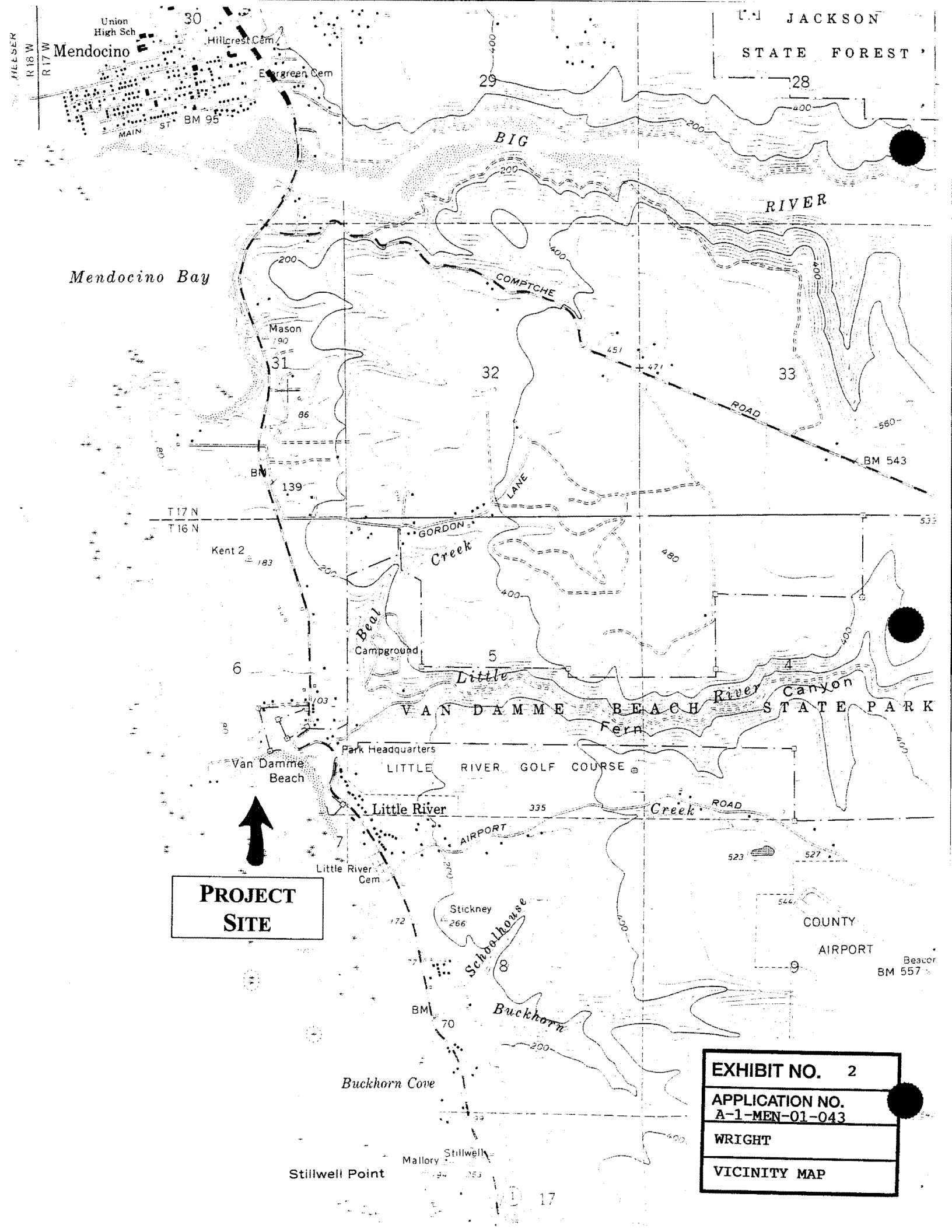
EXHIBIT NO. 1
 APPLICATION NO. A-1-MEN-01-043
 WRIGHT
 REGIONAL LOCATION MAP

PROJECT SITE



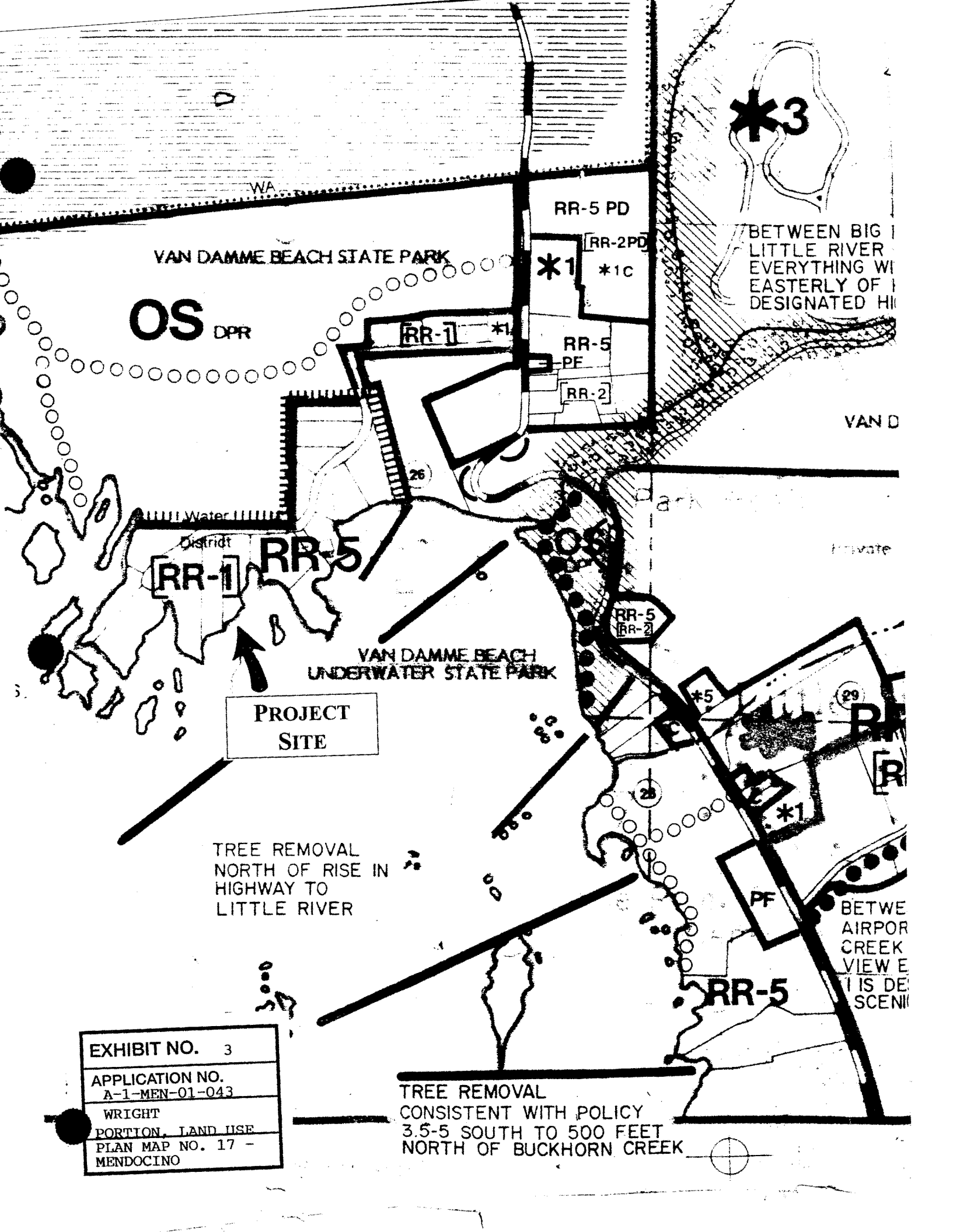
LOCATION MAP





PROJECT SITE

EXHIBIT NO. 2
APPLICATION NO.
 A-1-MEN-01-043
WRIGHT
VICINITY MAP



OS DPR

VAN DAMME BEACH STATE PARK

RR-5 PD

RR-2 PD

*1

*1C

***3**

BETWEEN BIG LITTLE RIVER EVERYTHING WESTERLY OF DESIGNATED HI

RR-1 *1

RR-5 PF

RR-2

VAN D

Water District

RR-1

RR-5

PROJECT SITE

VAN DAMME BEACH UNDERWATER STATE PARK

RR-5 RR-2

*5

29

RR-1

TREE REMOVAL NORTH OF RISE IN HIGHWAY TO LITTLE RIVER

*1

PF

BETWEEN AIRPOR CREEK VIEW EAST IS DESIGNATED SCENIC

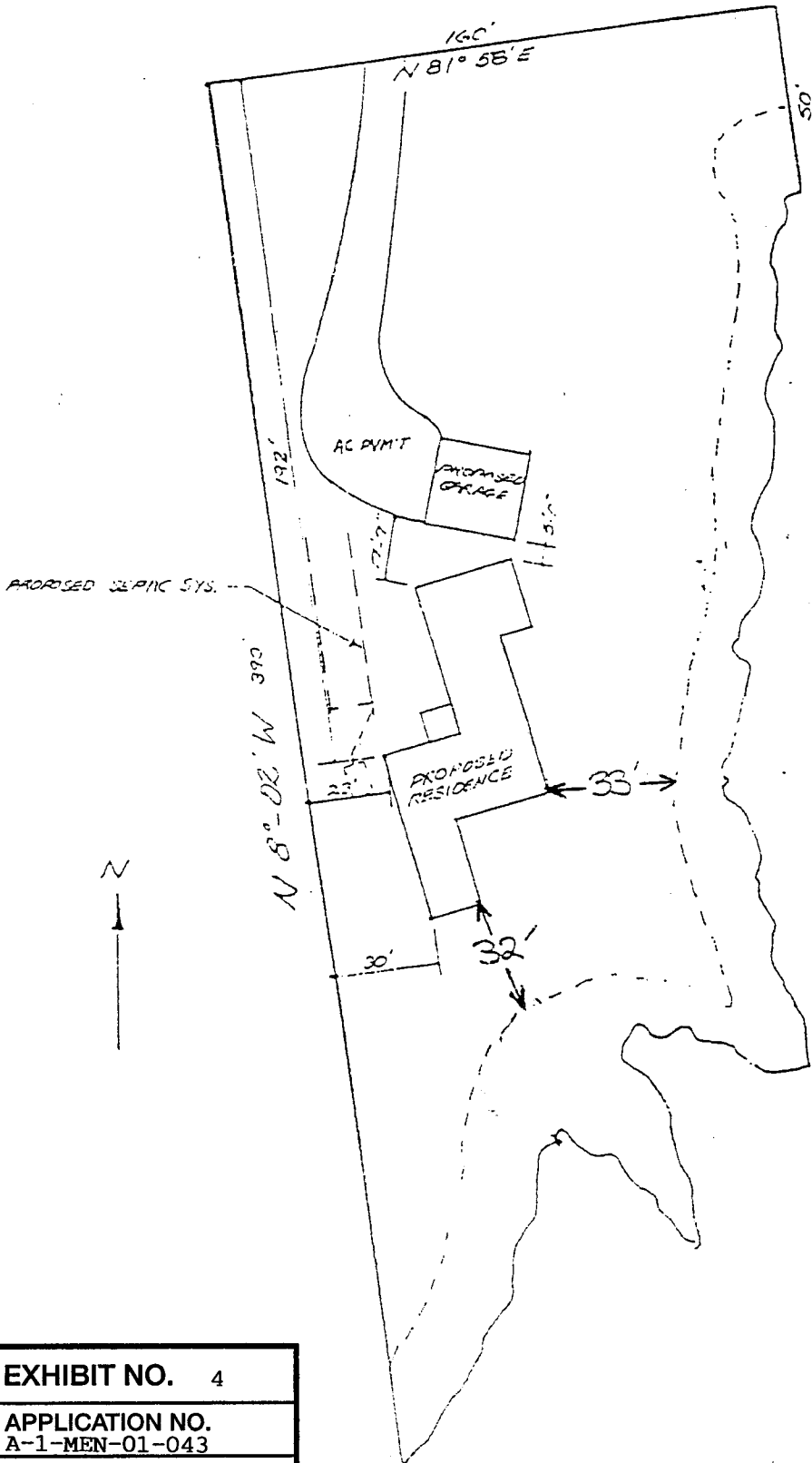
RR-5

EXHIBIT NO.	3
APPLICATION NO.	A-1-MEN-01-043
WRIGHT	
PORTION, LAND USE	
PLAN MAP NO. 17 -	MENDOCINO

TREE REMOVAL CONSISTENT WITH POLICY 3.5-5 SOUTH TO 500 FEET NORTH OF BUCKHORN CREEK



HEADLANDS DRIVE



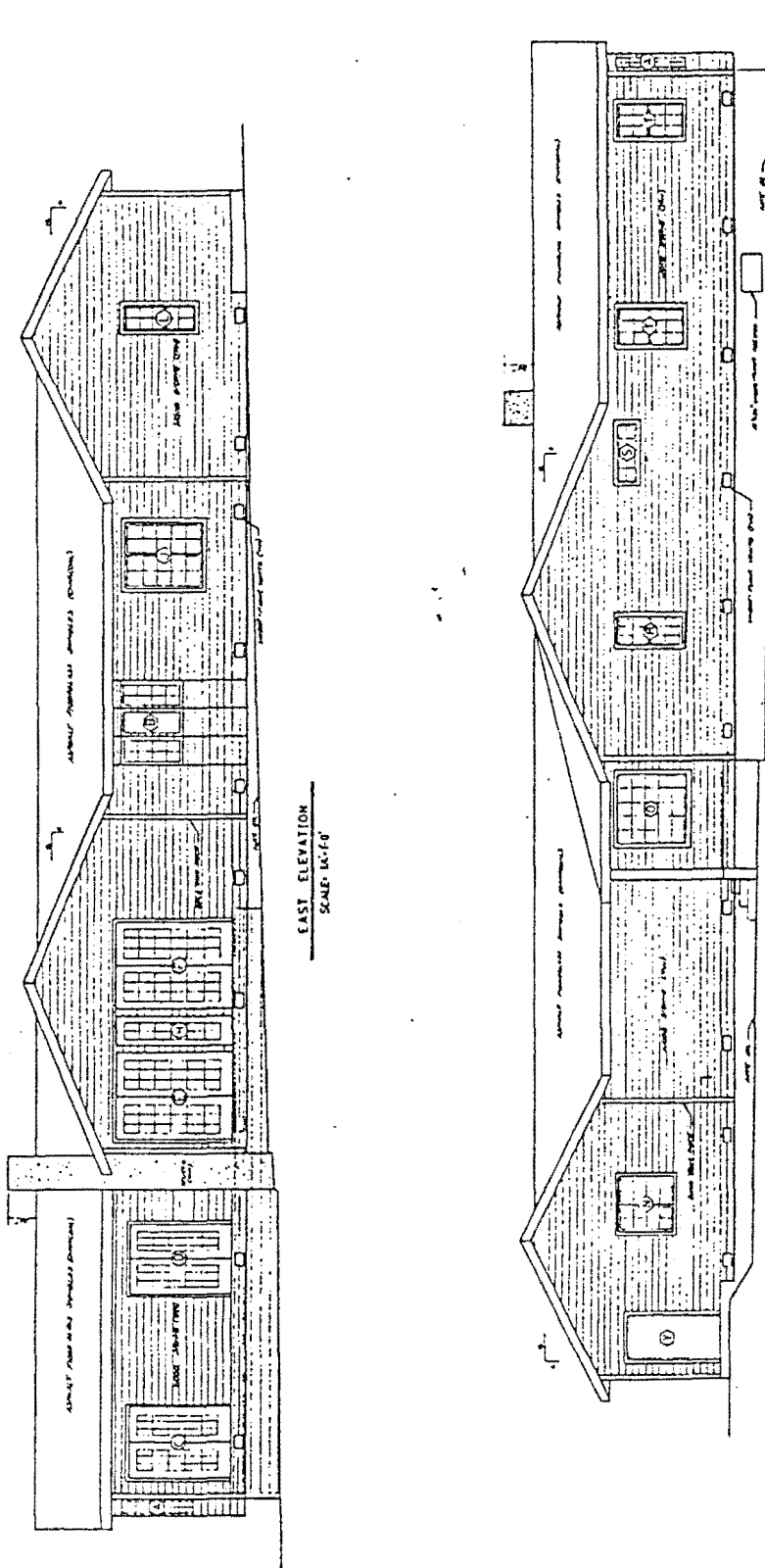
PLOT PLAN

+5501 HEADLANDS DR. LITTLE RIVER
APN 121-260-10

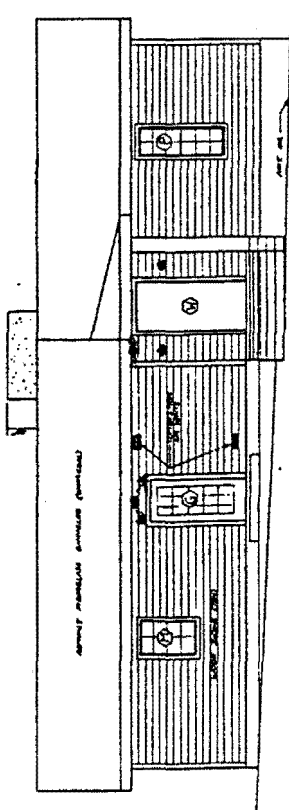
SCALE: 1" = 50'

EXHIBIT NO. 4
APPLICATION NO. A-1-MEN-01-043
SITE PLAN, HOUSE & GARAGE ELEVATIONS,
FLOOR PLANS, LAND- SCAPING PLAN (1 of 9)

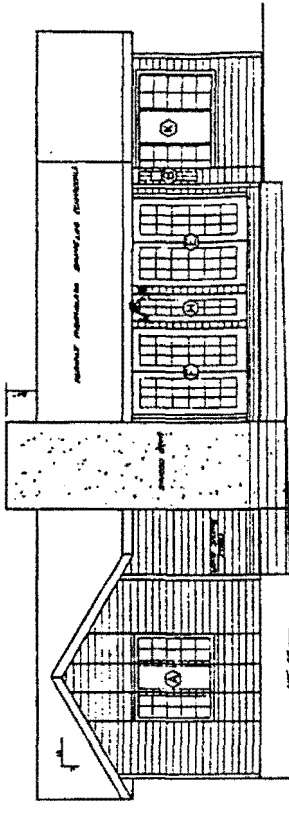
SITE PLAN



2 of 9



NORTH ELEVATION
SCALE: 1/4\"/>



SOUTH ELEVATION
SCALE: 1/4\"/>

3 of 9

SEE FINISHES & CONSTRUCTION SPECIFICATIONS

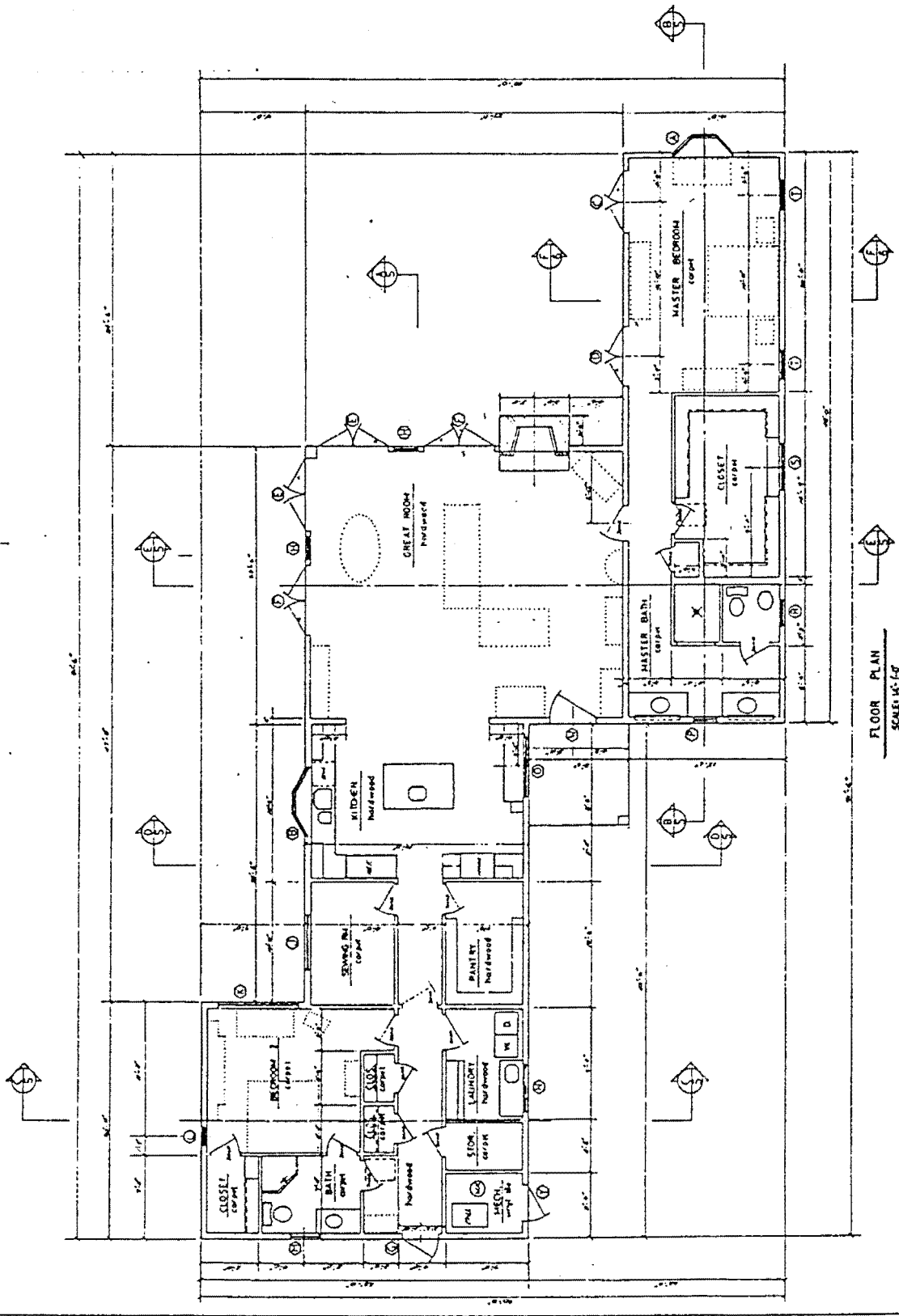
All buildings shall have a minimum finished floor of 20 feet from the top of the sea wall. Proposed structures shall be placed at or near existing public structures, and shall not be placed in any way that would be detrimental to the public health, safety or interest.

The work shall be completed within the time specified in the contract. The contractor shall be responsible for obtaining all necessary permits and for securing all necessary approvals from the appropriate authorities. The contractor shall be responsible for obtaining all necessary approvals from the appropriate authorities. The contractor shall be responsible for obtaining all necessary approvals from the appropriate authorities.

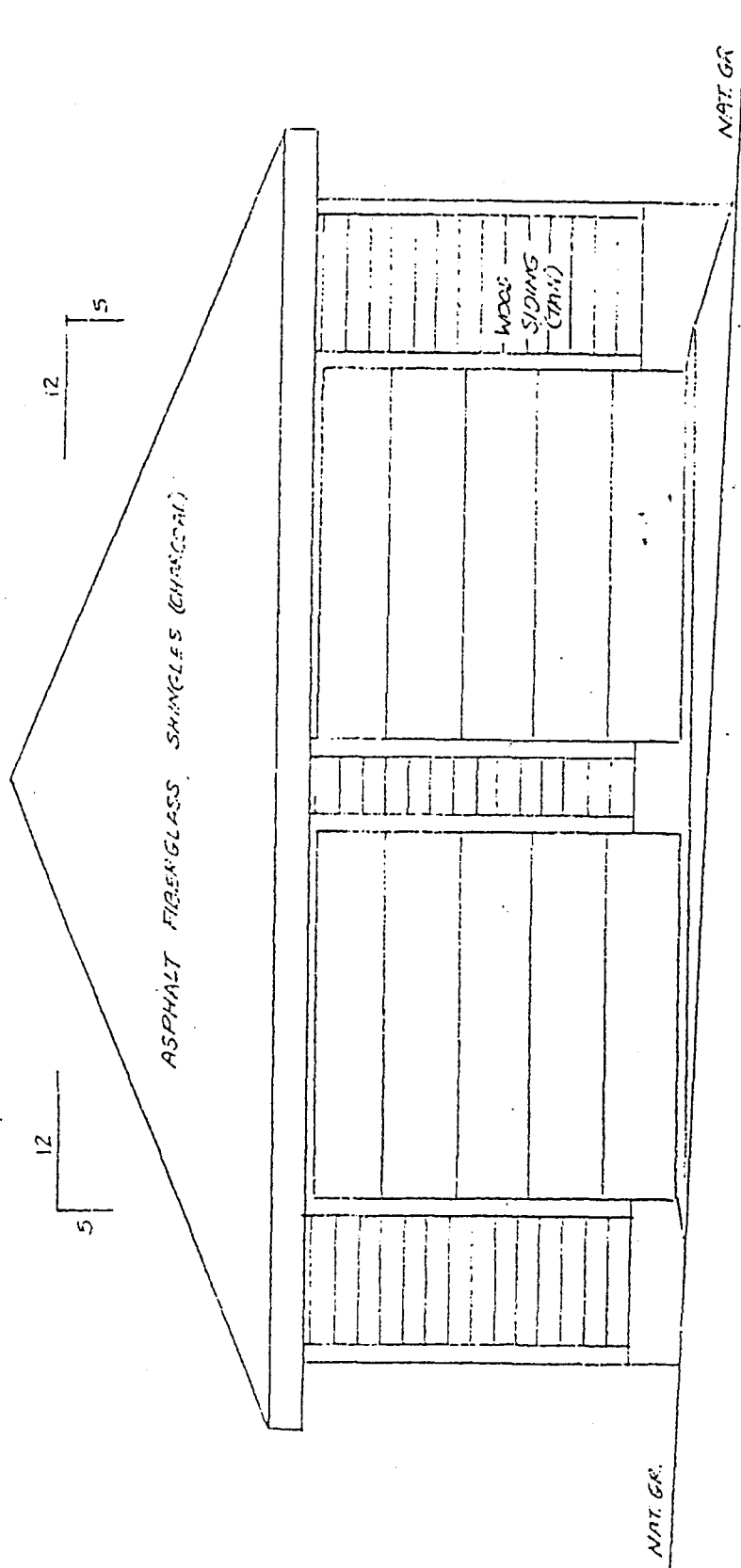
Changes shall be indicated by a legend of all kind (written and commented on) to the original drawings and specifications. All changes shall be approved by the architect and the owner before construction begins.

The drawings shall be prepared by the architect, and shall be subject to the approval of the owner. The drawings shall be prepared by the architect, and shall be subject to the approval of the owner. The drawings shall be prepared by the architect, and shall be subject to the approval of the owner.

- WRIGHT RESIDENCE 1504 HEADLANDS DRIVE, LITTLE RIVER, CA	
PREP'D BY: DAVID WRIGHT GEN. CONTR. NO. 474730, A/B DATE: 10/15/53 PHONE: (415) 338-1581	4



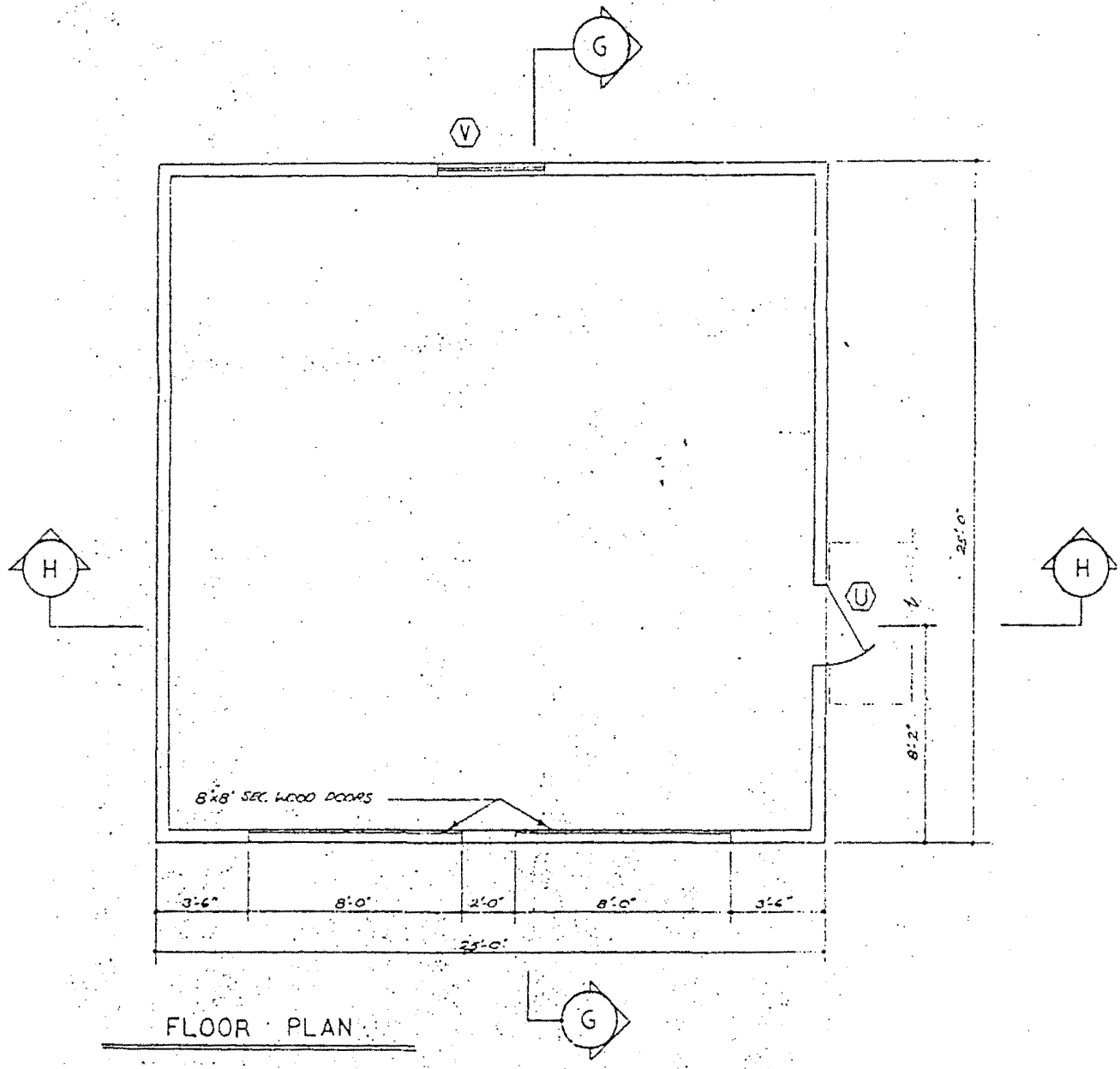
4 of 9



WEST ELEVATION

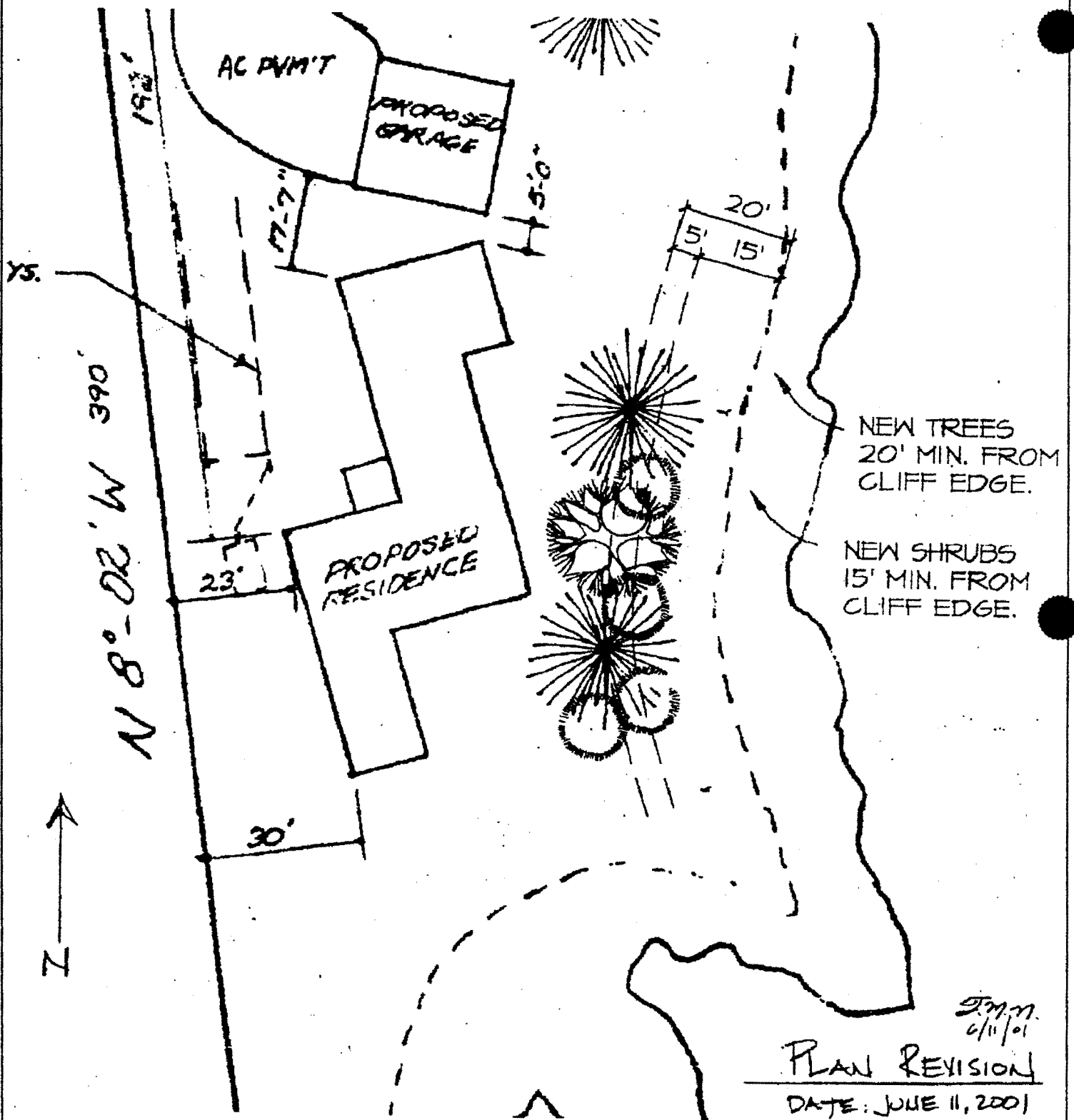
GARAGE PLAN & SECTIONS

SCALE: 1/4" = 1' 0"



FLOOR PLAN

6 of 9



NEW TREES
20' MIN. FROM
CLIFF EDGE.

NEW SHRUBS
15' MIN. FROM
CLIFF EDGE.

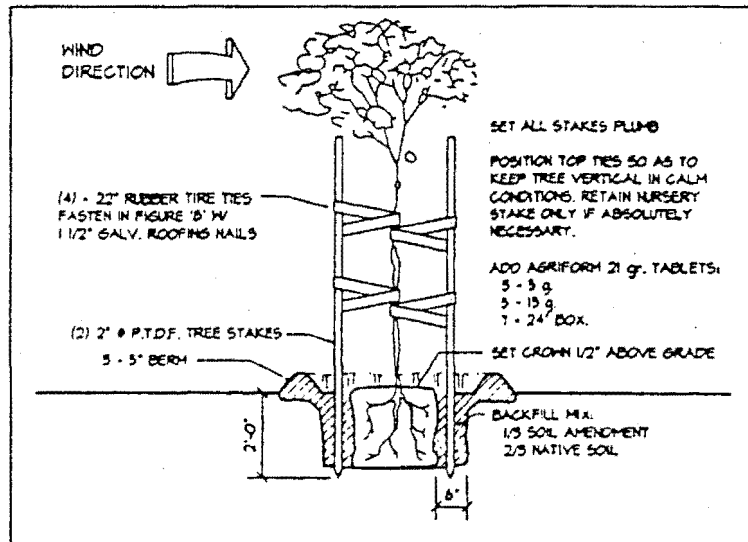
JMM
6/11/01

PLAN REVISION

DATE: JUNE 11, 2001

SCALE: 1" = 25'-0"

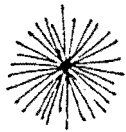
7 of 9



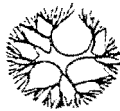
3
 LI

TREE PLANTING DETAIL

SCALE: 3/8" = 1'-0"



PINUS CONTORTA (SHORE PINE)
 15' TO 30' HEIGHT AND WIDTH
 5 OR 15 GALLON SIZES



PINUS THUNBERGIANA (JAPANESE BLACK PINE)
 50' HEIGHT, 25' WIDTH - 5 OR 15 GALLON SIZES
 5 OR 15 GALLON SIZES



GARRYA ELLIPTICA (COAST SILK TASSEL)
 SHRUB OR SMALL TREE: 8' TO 20' HEIGHT & WIDTH
 5 OR 15 GALLON SIZES

2
 LI

LANDSCAPE LEGEND

899

LANDSCAPE NOTES:

1. GENERAL CONDITIONS: ALL WORK SHALL BE DONE IN A PROFESSIONAL MANNER AND BE OF THE HIGHEST QUALITY STANDARDS.
2. PLANT MATERIAL:
 - A. ALL PLANTS SHALL BE TOP QUALITY NURSERY STOCK, FREE OF DISEASE AND PESTS.
 - B. ALL PLANTS SHALL BE NORMAL SIZE FOR CONTAINER, VIGOROUS, AND TRUE TO NAME AND VARIETY.
 - C. TREES AND SHRUBS SPECIFIED ON THIS PLAN SHALL BE OBTAINED FROM LOCAL TREE NURSERIES THAT GROW SPECIFIC NATIVE SPECIES.
 - D. PLANT STOCK TO BE USED:

(2)	PINUS CONTORTA	5 GALLON OR 15 GALLON SIZE.
(1)	PINUS THUNBERGIANA	5 GALLON OR 15 GALLON SIZE.
(4)	GARRYA ELUPTICA	5 GALLON SIZE.
3. SOIL PREPARATION:
 - A. NO ADDITIONAL TOP SOIL NEEDS TO BE IMPORTED INTO THE SITE. THE EXISTING TOPSOIL HORIZON IS SANDY LOAM WITH AN APPROXIMATE DEPTH OF THREE (3) FEET.
 - B. PLANT HOLES SHALL BE TWICE THE DIAMETER AND DEPTH OF THE ROOT BALL. SEE DETAIL 3 / L1 FOR PLANTING INSTRUCTIONS.
 - C. EACH TREE SHALL HAVE 7.5 GALLONS OR 1 CU. FT. OF HUMUS BUILDER OR EQUAL AND 2 TABLESPOONS (2 TBSP.) WATER CRYSTALS ADDED AND MIXED WELL INTO THE BACKFILL MIX TO GIVE THE TREES A BOOST OF NUTRIENTS AND THE SOIL WATER RETENTION. BACKFILL MIX IS 1/3 HUMUS BUILDER, 2/3 NATIVE TOP SOIL.
 - D. AGRIFORM (20-10-5) SLOW RELEASE 21 GRAM FERTILIZER TABLETS OR EQUAL SHALL BE PLACED EVENLY AROUND THE PLANT CIRCUMFERENCE, HALF WAY DOWN ROOT BALL AND 4" AWAY. USE 3 TABLETS PER 5 GALLON TREE AND 5 PER 15 GALLON TREE.
4. PLANTING:
 - A. WHEN PLANTED, CROWN OF PLANT SHALL BE 1 1/2" ABOVE GRADE. PREPARE A WATER BASIN BY FORMING A SOIL RING AT LEAST 3" HIGH AND WIDE AROUND THE OUTER EDGE OF THE NEW PLANT HOLE. WATER PLANTS IN CONTAINER THOROUGHLY PRIOR TO PLANTING AND DIRECTLY AFTER TO ELIMINATE AIR POCKETS AND REDUCE PLANT STRESS.
 - B. ALL PLANTS SHALL RECEIVE 3" MINIMUM OF 3/4" WALK ON FIR BARK MULCH OR EQUAL. EXISTING VEGETATION IN A 3' RADIUS FROM TREE CROWN SHALL BE REMOVED AND MULCH APPLIED.
 - C. PLANTS SHALL BE KEPT MOIST FOR TWO WEEKS FOLLOWING PLANTING AND THEN WATERED WELL, ONCE PER WEEK UNTIL RAINY SEASON BEGINS.
5. STAKING AND WIND PROTECTION:
 - A. SET THREE (3) 2" DIAMETER X 8' TALL PRESSURE TREATED DOUGLAS FIR (P.T.D.F.), REDWOOD OR LODGEPOLE TREE STAKES FORMING A 90 DEGREE ANGLE ON THE WINDWARD SIDE OF THE TREE, OPENING AWAY FROM THE DIRECTION OF PREVAILING WINDS. SET ALL STAKES 20" FROM THE ROOT CROWN, PLUMB AND 1/2" MIN. SECURELY INTO UNDISTURBED GRADE BELOW THE TREE ROOT BALL.
 - B. HIGH QUALITY WOVEN LANDSCAPE FABRIC, 4' TALL, SHALL BE STAPLED SECURELY TO THE POLES IN ANTICIPATION OF HEAVY WINDS.
 - C. SECURE FOUR (4) RUBBER OR POLY. TREE TIES FASTENED IN A FIGURE "8" AROUND TREE PER DETAIL 3 / L1. TIES SHALL BE PLACED ON THE TWO STAKES THAT ARE PERPENDICULAR TO THE DIRECTION OF THE PREVAILING WINDS. SECURE TIES TO TREE STAKES WITH 1 1/2" GALV. ROOFING NAILS.
 - D. STAKING AND WIND PROTECTION SHALL REMAIN FOR A MINIMUM OF TWO YEARS OR UNTIL TREE IS WELL ESTABLISHED.
6. IRRIGATION:
 - A. AN AUTOMATED IRRIGATION SYSTEM SHALL BE PROFESSIONALLY INSTALLED AND FUNCTION FOR A MINIMUM OF TWO YEARS. IT SHALL BE MAINTAINED AND RETAINED TO IRRIGATE REPLACEMENT TREES, AS NEEDED, FOR THE LIFE OF THE STRUCTURE.
 - B. SYSTEM SHALL BE INSTALLED IN THE FOLLOWING MANNER:
 1. WATER WILL FLOW FROM A STORAGE TANK THROUGH A 1 1/4" BALL VALVE, 1 1/4" COMMERCIAL AGRICULTURAL FILTER, AND A 1 1/4" WILKINS 950 XL DOUBLE CHECK VALVE ASSEMBLY FOR BACK FLOW PREVENTION OR EQUAL.
 2. A HARDIE RAINDIAL 6 STATION CONTROLLER AND IRRITROL 1" ULTRA FLOW 700 SERIES AUTOMATIC IN LINE VALVES OR EQUAL SHALL BE USED IN CONJUNCTION WITH 3/4" POLY. DRIP TUBING LAID NEXT TO EACH TREE CROWN. A ONE GALLON PER HOUR PRESSURE COMPENSATING DRIP EMITTER WILL BE PLACED AT THE CROWN OF EACH TREE AND (2) ONE GALLON PER HOUR PRESSURE COMPENSATING DRIP EMITTERS WILL BE PLACED 14" FROM CROWN EACH SIDE ALONG DRIP LINE TO ENSURE BALANCED WATERING.
 3. THIS SYSTEM WILL PROVIDE 12 TO 15 YEARS OF SERVICE.
7. MAINTENANCE AND REPLACEMENT:
 - A. PROVIDE A MONTHLY MAINTENANCE CHECK ON IRRIGATION AND TREE CONDITIONS TO ENSURE SUCCESS OF THE PLANTING AND IRRIGATION SYSTEM.
 - B. TREES AND SHRUBS SHALL BE REPLACED IN-KIND PER THE LANDSCAPE PLAN AND WRITTEN INSTRUCTIONS AS THEY DIE OR ARE SUBSTANTIALLY DECLINING. THESE CONDITIONS APPLY TO THE LIFE OF THE STRUCTURE.
8. PROTECTION OF EXISTING VEGETATION:
 - A. PRIOR TO ANY SITE DEVELOPMENT ACTIVITIES, TEMPORARY 3 FEET TALL NYLON 1" 50 MESH FENCING SHALL BE PLACED 1 FT. OUTSIDE OF THE DRIP LINE OF ALL VEGETATION WHICH IS IDENTIFIED FOR RETENTION.
 - B. SPECIFICALLY THE SHORE PINES TO THE IMMEDIATE SOUTH-WEST OF THE PROPOSED RESIDENCE WHICH ACT AS VISUAL SCREENING FROM VIEWPOINTS ALONG HIGHWAY ONE.
 - C. NO CONSTRUCTION ACTIVITIES, VEGETATION REMOVAL, EXCAVATION, MATERIALS OR EQUIPMENT STORAGE SHALL BE PERMITTED WITHIN THE DRIFLINE OF THESE TREES.



RAYMOND HALL
DIRECTOR

TELEPHONE
(707) 964-5379

COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES

MAILING ADDRESS:
790 SO. FRANKLIN
FORT BRAGG, CA 95437

RECEIVED
JUL 10 2001

July 9, 2001

NOTICE OF FINAL ACTION

CALIFORNIA
COASTAL COMMISSION

Action has been completed by the County of Mendocino on the below described project located within the Coastal Zone.

CASE#: CDP #17-01
OWNER: David & Suzanne Wright
AGENT: Bud Kamb
REQUEST: Construct a 2,550 square foot, 18' high single-family residence with a 625 square foot detached garage. Install septic system, underground utilities; install approximately 2,500 square feet of asphalt paving for the driveway.
LOCATION: W side of Highway One approximately 1/2 mile SW of its intersection with Peterson Lane at 45501 Headlands Drive (APN 121-260-10).
PROJECT COORDINATOR: Robert Dostalek

HEARING DATE: June 28, 2001

APPROVING AUTHORITY: Coastal Permit Administrator

ACTION: Approved with Conditions.

See staff report for the findings and conditions in support of this decision.

The project was not appealed at the local level.

The project is appealable to the Coastal Commission pursuant to Public Resources Code, Section 30603. An aggrieved person may appeal this decision to the Coastal Commission within 10 working days following Coastal Commission receipt of this notice. Appeals must be in writing to the appropriate Coastal Commission district office.

EXHIBIT NO.	5
APPLICATION NO.	A-1-MEN-01-043
NOTICE OF FINAL LOCAL ACTION	(1 of 10)

COASTAL PERMIT ADMINISTRATOR ACTION SHEET

CASE#: CDP 17-01 HEARING DATE: 6/28/01

OWNER: Wright

ENVIRONMENTAL CONSIDERATIONS:

- Categorically Exempt
- Negative Declaration
- EIR

FINDINGS:

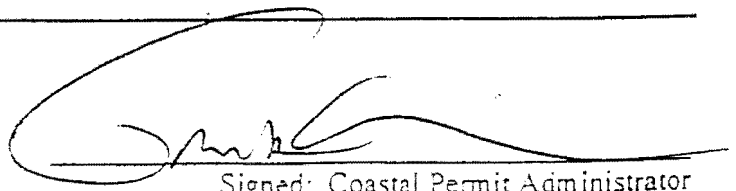
- Per staff report
- Modifications and/or additions

ACTION:

- Approved
- Denied
- Continued

CONDITIONS:

- Per staff report
- Modifications and/or additions



Signed: Coastal Permit Administrator

6-28-01

2910

OWNER: David & Suzanne Wright
1483 Sutter Street #1501
San Francisco, CA 94109

AGENT: Bud Kamb
P.O. Box 616
Little River, CA 95456

REQUEST: Construct a 2,550 square foot, 18' high single family residence with a 625 square foot detached garage. Install septic system, underground utilities (propane, water, electric, telephone and cable TV) and approximately 2,500 square feet of asphalt paving for the driveway.

LOCATION: On the west side of Highway One, approximately ½ mile southwest of its intersection with Peterson Lane at 45501 Headlands Drive (APN: 121-260-10).

APPEALABLE AREA: Yes (Highly Scenic Area)

PERMIT TYPE: Standard

TOTAL ACREAGE: 0.99 acres

ZONING: RR: L-5 [RR]

GENERAL PLAN: RR5(1)

EXISTING USES: Vacant

SUPERVISORIAL DISTRICT: 5

ENVIRONMENTAL DETERMINATION: Categorically Exempt, Class 3(a)

OTHER RELATED APPLICATIONS: 1242-F Septic

PROJECT DESCRIPTION: The applicant proposes to construct a 2,550 square foot, 18' high (measured from natural grade) single family residence with a 625 square foot detached garage. The project also includes the installation of a septic system, underground utilities (propane, water, electric, telephone and cable TV) and approximately 2,500 square feet of asphalt paving for the driveway.

LOCAL COASTAL PROGRAM CONSISTENCY RECOMMENDATION: The proposed project is consistent with the applicable goals and policies of the Local Coastal Program as described below. A indicates that the statement regarding policy consistency applies to the proposed project.

Land Use

The proposed residence is compatible with the Rural Residential zoning district and is designated as a principal permitted use. The proposed detached garage is a permitted accessory use pursuant to Section 20.456.015 of the Coastal Zoning Code.

The proposed structures comply with the 20-foot front and rear yard and 6-foot side yard setback required in the Rural Residential zoning district. The proposed structures also comply with the 18' maximum height limit for development in "highly scenic areas" west of Highway One.

Public Access

- The project site is located west of Highway 1 and is a blufftop site. However, the parcel is not designated as a potential public access trail location on the LUP maps. There is no evidence of prescriptive access on the site.

Hazards

- The project site is less than one acre in size and is exempt from CDF's fire safety regulations. Fire safety issues are addressed as part of the building permit process.

The proposed development is within 100' of a coastal bluff which requires a geotechnical investigation in accordance with Section 20.500.020(B) of the Coastal Zoning Code to determine the rate at which the blufftop is retreating. A geologic reconnaissance report, dated August 23, 1993, was prepared by Earth Mechanics to determine a blufftop setback for the subject parcel. A follow-up letter dated April 14, 1999 confirmed the conclusions contained in the original report.

On February 27, 2001, staff requested an additional letter to clarify the method or formula in which they derived their recommended blufftop setback. Section 20.500.020(B) of the Coastal Zoning Code states:

"New structures shall be setback a sufficient distance from the edges of bluffs to ensure their safety from bluff erosion and cliff retreat during their economic life spans (seventy-five (75) years). New development shall be setback from the edge of bluffs a distance determined from information derived from the required geologic investigation and the setback formula as follows:

Setback (meters) = structure life (75 years) x retreat rate (meters/year)."

A letter dated March 13, 2001 from Earth Mechanics states:

"Based on our work and review of available data, we conclude that a retreat rate of 0.08 meters/year would provide an adequate setback to protect the planned residence from cliff retreat. Using the above referenced formula, 75 years x 0.08 meters/years = 6 meters which is approximately equivalent to the 20 foot setback recommended in the project geotechnical report."

The proposed blufftop setback for the residence is 32 feet at its closest point. Therefore, the project complies with Section 20.500.020(B) of the Zoning Code.

The Coastal Commission and Mendocino County have been applying a deed restriction for blufftop parcels where the development is within 100 feet of the bluff prohibiting the construction of seawalls with the requirement that the structures be removed from the property if threatened by bluff retreat. The restriction also requires that the landowner be responsible for any clean up associated with portions of the development, which might fall onto a beach. It is anticipated that the Coastal Commission will continue to apply this deed restriction for any blufftop development. Staff recommends Special Condition #1 to require, prior to issuance of a Coastal Development Permit, the recordation of a deed restriction on the subject parcel.

Visual Resources

Coastal Element Policy 3.5-1 provides general guidelines for all development in the coastal zone, requiring that:

"The scenic and visual qualities 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 of surrounding areas and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas designated by the County of Mendocino Coastal Element shall be subordinate to the character of its setting."

Policy 3.5-3 of the Coastal Element states:

"Any development permitted in [highly scenic] areas shall provide for the protection of ocean and coastal views from public areas including highways, roads, coastal trails, vista points, beaches, parks, coastal streams, and waters used for recreational purposes."

Section 20.504.015(C)(2) of the Coastal Zoning Code requires:

"In highly scenic areas west of Highway 1 as identified on the Coastal Element land use plan maps, new development shall be limited to eighteen (18) feet above natural grade unless an increase in height would not affect public views to the ocean or be out of character with surrounding structures."

Section 20.504.015(C)(3) also requires:

"New development shall be subordinate to the natural setting and minimize reflective surfaces. In highly scenic areas, building materials including siding and roof material shall be selected to blend in hue and brightness with their surroundings."

The subject parcel is located in a designated "highly scenic area" west of Highway One. When viewed from Highway One, it appears a majority of the structure would be screened by existing vegetation on the adjacent parcel to the east. A portion of the residence would be visible briefly to northbound motorists on Highway One through a gap in the trees at 7700 N. Highway One and also near the Little River Market at 7746 N. Highway One.

The proposed exterior materials and colors consist of horizontal wood painted dark tan (Sherwin Williams color A-sw2043 "canoe") for the main portion of the structure. The roofing material would be charcoal colored asphalt fiberglass shingles and the chimney would be tan colored stucco. The "canoe" color proposed for the exterior of the residence appears too light to sufficiently blend with the backdrop of the natural landscape (dark green evergreens) and existing development. Additionally, although a color sample was not submitted for the stucco chimney, tan hues are typically too light to blend well with the landscape. Further, the existing development in the vicinity is mostly dark brown which substantially reduces visibility and softens linear silhouettes. Special Condition #2 is recommended to require the applicant to submit, prior to issuance of the Coastal Development Permit, revised color samples for the exterior of the residence and the stucco for the chimney. The revised samples shall be selected to blend in hue and brightness with the surroundings (i.e. dark brown or dark green) and shall be subject to the review and approval of the Coastal Permit Administrator. Special Condition #3 is recommended to ensure the colors/materials are not changed without further review.

Section 20.504.015(C)(10) states:

"Tree planting to screen buildings shall be encouraged, however, new development shall not allow trees to interfere with coastal/ocean views from public areas."

A revised landscape plan was submitted on June 14, 2001. It appears as though it would provide sufficient screening of the visible portion (from Highway One) of the residence. The landscape plan does not specifically identify the location of an irrigation system, but does provide detailed specifications in #6 of the landscaping notes. Special Condition #4 is recommended to require the applicant to adhere to the specifications contained on the landscape plan to ensure the plantings will be established and maintained in perpetuity. The landscape plan recommends the trees be planted a minimum of 20 feet from the bluff edge and the shrubs be planted a minimum of 15 feet from the bluff edge. The geotechnical investigation discussed in the "Hazards" section of this report concludes that the bluff should retreat approximately 20 feet over the course of 75 years. Therefore, the required landscape trees should provide screening of the residence from public view over its required minimum 75-year economic lifespan.

The lighting details received on March 18, 2001 comply with the exterior lighting regulations contained in Section 20.504.035 of the Zoning Code.

Natural Resources

- There are no known rare or endangered plant or animal species located on or in close proximity to the project site.
- There are no environmentally sensitive habitat areas located within 100' of the proposed development.

Archaeological/Cultural Resources

On March 30, 2001, the project was referred to the Northwest Information Center of the California Historical Resources Inventory at Sonoma State University (SSU) for an archaeological records search. On April 9, 2001, SSU responded that the site has the possibility of containing unrecorded archaeological resources and further investigation was recommended. The development proposal and SSU recommendation were reviewed by the Mendocino County Archaeological Commission at the May 9, 2001 hearing where it was determined that a survey of the subject parcel would be required. A survey was conducted and a report was prepared by Max A. Neri (consulting archaeologist with North Coast Resource Management) dated May 7, 2001 in which no evidence of any cultural resources were found within the subject parcel. The survey was reviewed and accepted at the June 13, 2001 Mendocino County Archaeological Commission Hearing.

The applicant is advised by Standard Condition #8 of the County's "discovery clause" which establishes procedures to follow should archaeological materials be unearthed during project construction.

Groundwater Resources

- The proposed development would be served by the Little River Headlands Association community water system and would not adversely affect groundwater resources.
- The proposed development would be served by a proposed septic system and would not adversely affect groundwater resources.

Transportation/Circulation

- The project would contribute incrementally to traffic on local and regional roadways. The cumulative effects of traffic due to development on this site were considered when the Coastal Element land use designations were assigned. No adverse impacts would occur.

Zoning Requirements

- The project complies with all of the zoning requirements of Division II of Title 20 of the Mendocino County Code.

PROJECT FINDINGS AND CONDITIONS: Pursuant to the provisions of Chapter 20.532 and Chapter 20.536 of the Mendocino County Code, staff recommends that the Coastal Permit Administrator approve the proposed project, and adopt the following findings and conditions.

FINDINGS:

1. The proposed development is in conformity with the certified Local Coastal Program; and
2. The proposed development will be provided with adequate utilities, access roads, drainage and other necessary facilities; and
3. The proposed development is consistent with the purpose and intent of the applicable zoning district, as well as all other provisions of Division II, and preserves the integrity of the zoning district; and
4. The proposed development, if constructed in compliance with the conditions of approval, will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act; and
5. The proposed development will not have any adverse impacts on any known archaeological or paleontological resource; and
6. Other public services, including but not limited to, solid waste and public roadway capacity have been considered and are adequate to serve the proposed development; and
7. The proposed development is in conformity with the public access and public recreation policies of Chapter 3 of the California Coastal Act and Coastal Element of the General Plan.

STANDARD CONDITIONS:

1. This action shall become final on the 11th day following the decision unless an appeal is filed pursuant to Section 20.544.015 of the Mendocino County Code. The permit shall become effective after the ten (10) working day appeal period to the Coastal Commission has expired and no appeal has been filed with the Coastal Commission. The permit shall expire and become null and void at the expiration of two years after the effective date except where construction and use of the property in reliance on such permit has been initiated prior to its expiration.

To remain valid, progress towards completion of the project must be continuous. The applicant has sole responsibility for renewing this application before the expiration date. The County will not provide a notice prior to the expiration date.

2. The use and occupancy of the premises shall be established and maintained in conformance with the provisions of Division II of Title 20 of the Mendocino County Code.
3. The application, along with supplemental exhibits and related material, shall be considered elements of this permit, and that compliance therewith is mandatory, unless an amendment has been approved by the Coastal Permit Administrator.
4. That this permit be subject to the securing of all necessary permits for the proposed development from County, State and Federal agencies having jurisdiction.
5. The applicant shall secure all required building permits for the proposed project as required by the Building Inspection Division of the Department of Planning and Building Services.
6. This permit shall be subject to revocation or modification upon a finding of any one (1) or more of the following:
 - a. That such permit was obtained or extended by fraud.
 - b. That one or more of the conditions upon which such permit was granted have been violated.
 - c. That the use for which the permit was granted is so conducted as to be detrimental to the public health, welfare or safety or as to be a nuisance.
 - d. A final judgment of a court of competent jurisdiction has declared one (1) or more conditions to be void or ineffective, or has enjoined or otherwise prohibited the enforcement or operation of one (1) or more such conditions.
7. This permit is issued without a legal determination having been made upon the number, size or shape of parcels encompassed within the permit described boundaries. Should, at any time, a legal determination be made that the number, size or shape of parcels within the permit described boundaries are different than that which is legally required by this permit, this permit shall become null and void.
8. If any archaeological sites or artifacts are discovered during site excavation or construction activities, the applicant shall cease and desist from all further excavation and disturbances within one hundred (100) feet of the discovery, and make notification of the discovery to the Director of the Department of Planning and Building Services. The Director will coordinate further actions for the protection of the archaeological resources in accordance with Section 22.12.090 of the Mendocino County Code.

SPECIAL CONDITIONS:

1. Prior to the issuance of the Coastal Development Permit, the applicant as landowner shall execute and record a deed restriction, in a form and content acceptable to the Coastal Permit Administrator which shall provide that:
 - a) The landowner understands that the site may be subject to extraordinary geologic and erosion hazard and landowner assumes the risk from such hazards;
 - b) The landowner agrees to indemnify and hold harmless the County of Mendocino, its successors in interest, advisors, officers, agents and employees against any and all claims, demands, damages, costs, and expenses of liability (including without limitation attorneys' fees and costs of the suit) arising out of the design, construction, operation, maintenance, existence or failure of the permitted project. Including, without limitation, all claims made by any individual or entity or arising out of any work performed in connection with the permitted project;
 - c) The landowner agrees that any adverse impacts to the property caused by the permitted project shall be fully the responsibility of the applicant;
 - d) The landowner shall not construct any bluff or shoreline protective devices to protect the subject single-family residence, garage, septic system, or other improvements in the event that these structures are subject to damage, or other erosional hazards in the future;
 - e) The landowner shall remove the house and its foundation when bluff retreat reaches the point where the structure is threatened. In the event that portions of the house, garage, foundations, leach field, septic tank, or other improvements associated with the residence fall to the beach before they can be removed from the blufftop, the landowner shall remove all recoverable debris associated with these structures from the beach and ocean and lawfully dispose of the material in an approved disposal site. The landowners shall bear all costs associated with such removal;
 - f) The document shall run with the land, bind all successors and assigns, and shall be recorded free of all prior liens and encumbrances, except for tax liens.
2. Prior to issuance of a Coastal Development Permit, the applicant shall submit, for the review and approval of the Coastal Permit Administrator, exterior color samples for the residence and chimney stucco selected to blend in hue and brightness with the surroundings (i.e. dark brown or dark green).
3. All exterior building materials and finishes shall match those specified in the coastal development permit application. Windows shall be made of non-reflective glass. Any change in approved colors or materials shall be subject to the review and approval of the Coastal Permit Administrator for the life of the project.
4. The revised landscaping plan submitted June 14, 2001 shall be implemented and maintained in full accordance with the notes/specifications provided with the plan (i.e. soil preparation, planting, staking and wind protection, irrigation, maintenance and replacement and protection of existing vegetation). The new trees shall be planted prior to

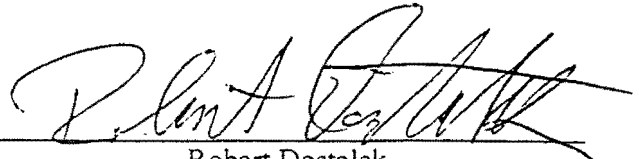
STAFF REPORT FOR
STANDARD COASTAL DEVELOPMENT PERMIT

CDP# 17-01
June 28, 2001
CPA-8

the final building inspection. All required landscaping shall be replaced, as necessary, to ensure the screening of the residence shall be maintained in perpetuity.

Staff Report Prepared By:

6/14/01
Date

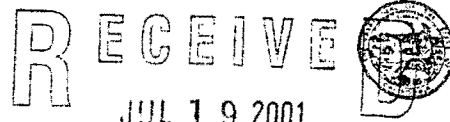

Robert Dostalek
Coastal Planner

- Attachments:
- Exhibit A: Location Map
 - Exhibit B: Site Plan
 - Exhibit C: East & West Elevation (Residence)
 - Exhibit D: North & South Elevation (Residence)
 - Exhibit E: Floor Plan (Residence)
 - Exhibit F: West Elevation (Garage)
 - Exhibit G: Floor Plan (Garage)
 - Exhibit H: Landscaping Site Plan
 - Exhibit I: Landscape Legend & Tree Planting Detail
 - Exhibit J: Landscaping Specifications

Appeal Period: 10 days
Appeal Fee: \$555

CALIFORNIA COASTAL COMMISSION

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



APPEAL FROM COASTAL PERMIT
DECISION OF LOCAL GOVERNMENT

CALIFORNIA
COASTAL COMMISSION

Please Review Attached Appeal Information Sheet Prior To Completing
This Form.

SECTION I. Appellant(s)

Name, mailing address and telephone number of appellant(s):

Wendy Weikel
1015 Sierra St.
Berkeley, CA 94707-2526 (510) 526-2301
Zip Area Code Phone No.

SECTION II. Decision Being Appealed

1. Name of local/port government: Fort Bragg, Ca.

2. Brief description of development being appealed: 2550 square foot residence with 625 square feet for detached garage and 2500 square feet of asphalt driveway + septic system and underground utilities

3. Development's location (street address, assessor's parcel no., cross street, etc.): 45501 Headlands Drive, Little River, CA
APN 121-260-10; CDP17-01

- 4. Description of decision being appealed:
 - a. Approval; no special conditions: _____
 - b. Approval with special conditions: _____
 - c. Denial: _____

Note: For jurisdictions with a total LCP, denial decisions by a local government cannot be appealed unless the development is a major energy or public works project. Denial decisions by port governments are not appealable.

TO BE COMPLETED BY COMMISSION:

APPEAL NO: A-1-MEN-01-043

DATE FILED: 7/19/01

DISTRICT: _____

H5: 4/88

EXHIBIT NO. 6
APPLICATION NO. A-1-MEN-01-043
APPEAL, FILED JULY 19, 2001 (WEIKEL)
(1 of 17)

APPEAL FROM COASTAL PERMIT DECISION OF LOCAL GOVERNMENT (Page 2)

5. Decision being appealed was made by (check one):

- a. Planning Director/Zoning Administrator c. Planning Commission
b. City Council/Board of Supervisors d. Other _____

6. Date of local government's decision: 7/9/01

7. Local government's file number (if any): CDP 17-01
APN 121-260-10

SECTION III. Identification of Other Interested Persons

Give the names and addresses of the following parties. (Use additional paper as necessary.)

a. Name and mailing address of permit applicant:

David and Suzanne Wright
1483 Sutter St #1501J
San Francisco, CA 94109

b. Names and mailing addresses as available of those who testified (either verbally or in writing) at the city/county/port hearing(s). Include other parties which you know to be interested and should receive notice of this appeal.

- (1) _____

(2) _____

(3) _____

(4) _____

SECTION IV. Reasons Supporting This Appeal

Note: Appeals of local government coastal permit decisions are limited by a variety of factors and requirements of the Coastal Act. Please review the appeal information sheet for assistance in completing this section, which continues on the next page.

2 of 17

State briefly your reasons for this appeal. Include a summary description of Local Coastal Program, Land Use Plan, or Port Master Plan policies and requirements in which you believe the project is inconsistent and the reasons the decision warrants a new hearing. (Use additional paper as necessary.)

See attached

Note: The above description need not be a complete or exhaustive statement of your reasons of appeal; however, there must be sufficient discussion for staff to determine that the appeal is allowed by law. The appellant, subsequent to filing the appeal, may submit additional information to the staff and/or Commission to support the appeal request.

SECTION V. Certification

The information and facts stated above are correct to the best of my/our knowledge.

Wendy M. Calkel

Signature of Appellant(s) or
Authorized Agent

Date 7/19/01

NOTE: If signed by agent, appellant(s) must also sign below.

Section VI. Agent Authorization

I/We hereby authorize _____ to act as my/our representative and to bind me/us in all matters concerning this appeal.

Signature of Appellant(s)

Date _____
3/17

31

I am appealing this coastal project primarily because it has 2 negative impacts which have not been adequately considered. **Accelerated bluff retreat** from 5,675 square feet of impermeable surfaces is one. **Caves below the property (a geological hazard)** is the other. According to the Local Coastal Plan they are supposed to be considered.

Of the 6 existing bluff residences in this development of 10 homes so far, 3 have had serious recent bluff retreat problems that I know about (Glen Ricard's, Ted and Marsha Graves' and Richard Towers' bluffs).

In the Land Use Element of the County Plan Chapter 3.9 Section 32253 states, "New development shall: **minimize risks** to life and property in areas of high **geologic**, flood and fire **hazard**; assure **stability** and structural integrity, and neither create nor contribute significantly to **erosion, geologic instability** or destruction of the **site or surrounding area...along bluffs and cliffs....**"

Under "issues" the county plan states that the Coastal Act mandates that new development emphasize: **"avoidance of adverse cumulative impacts on coastal resources..."**

In chapter 3, Section 30231, coastal requirements include, **"minimizing adverse effects of waste water, controlling run-off..."**

Section 30231 states, "...biological productivity and the quality of coastal waters,...wetlands...appropriate to maintain optimum populations of marine organisms...shall be maintained...through minimizing adverse effects of...discharges and entrainment, **controlling runoff...**"

In the Policies portion of Chapter 3 it is stated that the LCP shall maintain performance standards, that, "these

4 of 17

7/10/01 Weikel

standards and measures shall **minimize** potential development **impacts** such as increased **run-off**, sedimentation, biochemical degradation...."

In Appendix 3 the issue of landsliding is addressed. "Because of the **high potential for landsliding in almost all of the coastal zone**, all development plans should undergo a preliminary evaluation of landsliding potential. The effect of development on the landslide potential **must be taken into account**, because **slides can result from excavation, drainage changes**, and deforestation. If landslide conditions exist and cannot be avoided **positive stabilization measures should be taken to mitigate the hazard.**"

*None of the properties on Headlands Drive has an **asphalt driveway**, except **the recently built** one which has **caused landslides** on 2 other downhill properties.*

*The **perimeter** of 45501 Headlands Drive has a high ratio of bluff. **Perhaps 50% is bluff**. Some of this bluff property also **wraps around the Weikel property**. **2,500 square feet of impermeable asphalt will accelerate bluff retreat and /or a landslide.***

Chapter 3 also states the "Local Coastal Plan represents commitment of the County of Mendocino to provide continuing **protection** and **enhancement** of its coastal resources. It is recognized that certain resource areas in this jurisdiction will require public **attention** to ensure their protection and enhancement, such as;...sensitive coastal resource areas which are suffering some form of deterioration or **development pressures....** "

45501 Headlands Drive land has changed hands recently in this development process. At this moment the property is in escrow, being sold again. Developers want to put 2550 square feet of asphalt on this bluff side area which will accelerate run-off over the abundant bluff periphery.

5917

7/10/01 Weikel

*It was developers who made the same mistake on Headlands Drive hill with a large curving asphalt driveway. These cement contractors lavished asphalt on a hill which harbored large migrant cranes last winter (I have pictures) and then moved away leaving their 2 downhill neighbors to grumble about the bluff disappearing due to the new asphalt waterfall. To deter bluff retreat the downhill neighbors put curbs (**more asphalt**) on the street to keep the water flow out of their backyard bluffs.*

In this Wright development **permit** at 45501 Headlands Drive **deflecting their accelerated run-off is forbidden by the Permit.** "Special Conditions": "The landowner shall not construct any bluff...protective devices ...in the event that these structures are subject to damage, or other erosional hazards in the future..." And yet 2500 square feet of disastrous asphalt driveway paving was approved to cause a run-off problem. This is not wise planning for an naturally eroding bluff top. **This endangers** this property and the **next door property** of my parents.

The Coastal Zoning Code Sec. 20.492.005 states the approving authority shall review all permit applications for coastal developments, **"to determine the extent of project related impacts due to grading, erosion and runoff"** This does **not** appear to have been **done.** I saw nothing about the adequacy of run-off or grading in the permit. Only disclaimers for the imminent run-off damage were put into the permit!

The permit report also **did not consider or mention the hazard of the caves below the property.** Since these are a **potential hazard** I think they must be mentioned in the **Development Permit** as **evidence** for making the **findings** which approve this project.

6 of 17

7/10/01 Wexel

Section 20.492.010 states of the Coastal Zoning Code states, "Grading shall not significantly disrupt natural drainage patterns and **shall not significantly increase volumes of surface runoff...**"

*The proposed **driveway shall do** precisely what the Mendocino Zoning **Code says it shall not do.***

The same section states, "**Adjoining property shall be protected from...potential soil erosion.**"

Section 20.492.015 states, "The **Erosion rate shall not exceed the natural or existing level before development.**"

This section says, "**where possible, use natural topography and natural vegetation.**"

A well designed gravel driveway seems sensible. All other homes on Headlands Drive have gravel or dirt driveways except for the new asphalt waterfall driveway on the hill that causes heavy run-off each rainy season.

*I am very concerned about development in this beautiful and fragile area that is being developed and damaged with seeming abandon. I am attaching the letter I sent to the County permit hearing expressing further concerns. None of these were addressed. They are still concerns. The property has not had a **botanical survey**, nor a **hydric soil test** by qualified persons at the proper time of year. The adjacent state park property across the Headlands Drive is wet and impassible in the winter. The wetlands issue is in question. A wetlands delineation was not done for this project.*

70817

7/16/01 Weikel

Rushing this approval through in the driest time of year with a cursory look at the area seems to ignore the intent of the Coastal Act. Frogs are very much active in the area and have been since 1979 when I became acquainted with it. In the driveway next to 45501 Headlands they used to jump into my car! The frogs still sing much of the year next to 45501 Headlands Drive.

My main concern is the **accelerated bluff run-off** from a total of 5,675 square feet of impermeable surface, almost half of which comes from this **asphalt driveway**. I would also like assurance by a qualified geologist that is referenced by the permit findings that the **caves** underneath 45501 Headlands and construction grading and proposed surface run-off and septic leaching pose no geological danger to the proposed construction and subsequently to neighboring property. These issues appear to pose a danger to both my parents and to the unsuspecting buyers of this development.

The **purpose for making findings** is to provide evidence to support such findings and thus make a rational decision. I see an **analytical gap**. The staff permit report has not given reasoning to justify the permitted setback distance. The report contains **no data** for (or mention of) the effects of water run-off and drainage as it affects the cliff/bluff of this property and neighboring property. There is lack of findings and data to support the approval of the 32 to 33 foot bluff setback.

The staff report for the permit lists the following as **findings** and yet does not give **evidence** as to how these findings were arrived at:

"There are no known rare or endangered plant or animal species located in or in close proximity to the project site."

"There are no environmentally sensitive habitat areas

located within 100' of the proposed development." and

"The proposed development will be provided with adequate utilities, access roads, **drainage**, and other..."

Attached are more **Coastal Commission Guidelines** (p. 7 and 8) applied to the **most recently constructed house on the bluffs** of this Headlands Drive are. The **"adequate" setback** recommended is **50 to 85 feet**.

3 attachments:

- 1-Questions re discrepancies of 2 geological reports and Coastal Land Planning Guidelines and findings on this bluff area.(p. 7 and 8)
- 2-Documents (partial) pertaining to setback and drainage on Headlands Drive's most recently built bluff residence.
- 3-my letter for the Mendocino County Planning hearing.

9/9/17

7/10/01 Weikel

Information received July 11, 2001

Graves' lot #7 at 455365 Headlands , Little River, CA- most recently built home (1986) on Headlands Drive bluffs.

Geologist was J. R. Bovyer, registered geologist #1463, professional engineer #0412

then at PO Box Mendocino, CA 95460

He found:

"The closest to the approximate residence area to the edge is 50 feet to 85 feet which is considered an adequate setback."

The California Coastal Commission statewide Interpretive Guideline of Dec. 16, 1981, superseding the one of May 5, 1981, p. 2 says, "The report should indicate the **location of the cliff or bluff edge, the toe of the cliff or bluff and other significant geologic features by distance from readily identified fixed monuments such as the centerline of the road** nearest the bluff or cliff."

It continues, "The applicant for a permit for a blufftop development should be required to **demonstrate that the area of demonstration is stable for the development and that the development will not create a geologic hazard or diminish the stability of the area.**"

The Coastal Commission staff report to the Coastal Commission for the meeting of the Coastal Commission (then located in San Francisco) to approve the Graves' permit stated under Geological Hazards Section 30253 affirmed the above registered geologists findings and states that the development, "**assure stability and not contribute to significant erosion**". The Coastal Commission report states, "the proposed building setback of **50 feet to 85 feet** (an irregular bluff line) is **adequate since the rock bluff is stable**, eroding less than one foot per year."

Furthermore the Coastal Guidelines stated concerns about

10 of 17

Winkal

J. R. BOVYER

Consultant

Registered Geologist
#1463
Professional Engineer
#0412

P. O. Box 56
Mendocino, CA 95460
18 April 1985

GEOLOGIC REPORT

Mr. & Mrs. T. Graves

Lot #7, Little River Highlands Subdivision

Mendocino County (A.P. # 121-260-07)

SE $\frac{1}{4}$; Sec. 6; T16N; R17W; M.D.B. & M.

11417

with wild grasses, weeds, flowers, vines and bushes under several pine trees. There is no gullying even though the lot is generally flat and slopes easterly at four percent toward the bluff. (Please refer to topo and plot plan map.)

GEOLOGIC FACTORS

The bluffs on this property have a slope angle, from the horizontal, as high as 75° . The steep part of the cliffs is composed of the Franciscan complex which is up to 70' above sea level on top of which lies the flat marine terrace. It is unconformable so can vary widely in thickness having been deposited on and around islands, hills, washes, etc. of the old bedrock surface. The edge of the bluffs is the most fragile part of the environment as can be seen in the slumping observed all along the cliffs. The part of the site wherein the residence is wished to be located is fairly flat with an easterly drainage slope of about four percent and has no erosional features.

Since the Franciscan is so highly-indurated, it is thought erosion will be minimal. The cliffs here show high angles of formation dips because of the usual contortions and shears due to the metamorphism. Numerous small islands, peninsulas and reefs afford considerable protection. An article in California Geology (October, 1975) states that bluffline retreat may average one foot per year, but it is thought that this varies widely within short distances and in this particular case, is less. The closest to the approximate

CALIFORNIA

COASTAL COMMISSION

STATEWIDE INTERPRETIVE GUIDELINES

These Statewide Interpretive Guidelines were adopted by the California Coastal Commission pursuant to Public Resources Code Section 30620 (b) and are "designed to assist local governments, the commission, and persons subject to the provisions of this chapter in determining how the policies of this division shall be applied in the coastal zone prior to certification of local coastal programs."

The guidelines should assist in applying various Coastal Act policies to permit decisions; they in no case supersede the provisions of the Coastal Act nor enlarge or diminish the powers or authority of the Commission or other public agencies.

Interpretive guidelines for the six districts are published separately.

AS OF DECEMBER 16, 1981

(SUPERSEDES MAY 5, 1981 EDITION)

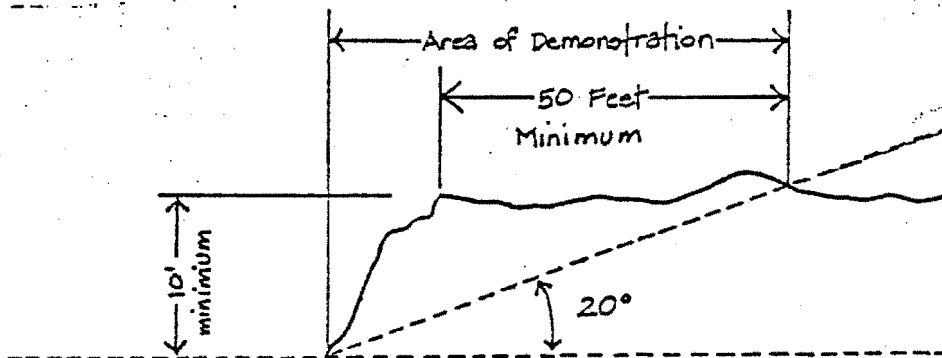
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- (2) to protect principle structures in existing developments that are in danger from erosion; or
- (3) in Los Angeles, Orange, and San Diego Counties, to infill small sections of wall in subdivisions where a predominant portion of a wall is already in place, provided that such infilling would have no substantial adverse environmental effects.

A geologic investigation and report will be required when a development is proposed to be sited within the area of demonstration as defined below.

As a general rule, the area of demonstration of stability (Illustration A) includes the base, face and top of all bluffs and cliffs. The extent of the bluff top considered should include the area between the face of the bluff and a line described on the bluff top by the intersection of a plane inclined at a 20° angle from horizontal passing through the toe of the bluff or cliff, or 50 feet inland from the edge of the cliff or bluff, whichever is greater. However, the Commission may designate a lesser area of demonstration in specific areas of known geologic stability (as determined by adequate geologic evaluation and historic evidence) or where adequate protective works already exist. The Commission may designate a greater area of demonstration or exclude development entirely in areas of known high instability.

The report should indicate the location of the cliff or bluff edge, the toe of the cliff or bluff and other significant geologic features by distance from readily identified fixed monuments such as the centerline of the road nearest the bluff or cliff.



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The report should evaluate the off-site impacts of development (e.g. development contributing to geological instability on access roads) and the additional impacts that might occur due to the proposed development (e.g. increased erosion along a footpath). The report should also detail mitigation measures for any potential impacts and should outline alternative solutions. The report should express a professional opinion as to whether the project can be designed so that it will neither be subject to nor contribute to significant geologic instability throughout the lifespan of the project. The report should use a currently acceptable engineering stability analysis method and should also describe the degree of uncertainty of analytical results due to assumptions and unknowns. The degree of analysis required should be appropriate to the degree of potential risk presented by the site and the proposed project.

In areas of geologic hazard, the Commission may require that a development permit not be issued until an applicant has signed a waiver of all claim against the public for future liability or damage resulting from permission to build. All such waivers should be recorded with the County Recorder's Office.

Adopted May 3, 1977

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1015 Sierra St.
Berkeley, CA 94707

June 18, 2001

Project Coordinator
Department of Planning and Building Services
790 South Franklin
Fort Bragg, CA 95437

Dear Robert Dostalek;

I wish to express my concern about the development plans for David and Suzanne Wright at 45501 Headlands Drive (APN 121-260-10), case # 17-01. Since I cannot be present at the hearing on June 28th this letter is my comment for the hearing.

My biggest concern is that the planned asphalt **paving** will cover too much of the coastal property .

This headlands neighborhood recently had another developer build a home on the hill by the water tank which caused bluff landslides on the two downhill properties. Asphalt curbs and mounds had to be added to compensate for the thoughtless and bad design of this developer's **asphalt driveway**.

Another occasional resident manages the area's water while residing in Ohio and remains unaware of California land and weather patterns. Last winter he emptied one of the 2 water tanks in the heaviest of winter rains and precipitated a **landslide** on state park property.

Again, the proposed 5,675 square feet of paving will drastically **accelerate run-off and ocean bluff collapse**. The 20 foot bluff set-back will be gone more quickly than in 75 years, cited by **Earth Mechanics** for this delicate area. Across the road (Headlands Drive) is a **seasonal wetlands (wet and mushy in winter)** and possibly habitat for **endangered species**. The next door Weikel property has had tree frogs croaking into Summer for the last 22 years. This delicate land and soil needs proper assessment which has not been done. The current proposal states "**There are no environmentally sensitive habitat areas located within 100' of the proposed development.**" This is **not true**.

The roof area and pavement will accelerate and funnel water run-off while eliminating probable frog habitat. Ideal **grading** would funnel

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water back into across the street seasonal wetlands instead of onto the bluff of this property and neighboring property(my parents' property). The driveway should not be asphalt, an impermeable surface, but perhaps gravel.

I know of no **hydric soil test** having been done on the proposed development. Besides a hydric soil test I would like a **botannical survey** done of the property and **I would like to receive a copy of the report.**

Furthermore there are caves which friends and kayakers have explored under the proposed development. **I want to see the geotechnical report to ascertain how they evaluate these caves.**

Sincerely,



Wendy Weikel

Earth Mechanics

Consulting Engineers

1727 Martin Luther King Jr. Way • Suite 213
Oakland, CA 94612
Phone/Fax (510) 839-0765

P.O. Box 4745
Petaluma, CA 94955
Phone/Fax (707) 769-9235

March 13, 2001
Project Number: 93-127

Mr. David Wright
David Wright Company
1483 Sutter Street #1501
San Francisco, CA 94109

Subject: Geotechnical Consultation
Proposed Residence at
45501 Headlands Drive
APN 121-260-10
Little River, California

Dear Mr. Wright:

This letter responds to questions raised regarding required bluff setback in the letter dated February 27, 2001, by the County of Mendocino Department of Planning and Building Services. Earth Mechanics Consulting Engineers performed a geotechnical investigation for the project and presented results in the report dated August 23, 1993.

The letter from the County of Mendocino references Section 20.500.020(C) of the Coastal Zoning Code where "*New development shall be setback from the edge of bluffs a distance determined from information derived from the required geologic investigations and the setback formula as follows:*

$$\text{Setback (meters)} = \text{structure life (75 years)} \times \text{retreat rate (meters/year)}"$$

Based on our work and review of available data, we conclude that a retreat rate of 0.08 meters/year would provide an adequate setback to protect the planned residence from cliff retreat. Using the above referenced formula, 75 years x 0.08 meters/year = 6 meters which is approximately equivalent to the 20 foot setback recommended in the project geotechnical report.

EXHIBIT NO. 7
APPLICATION NO. A-1-MEN-01-043
GEO TECHNICAL REPORTS & CORRESPONDENCE (1 of 26)

Earth Mechanics Consulting Engineers
Project Number: 93-127
45501 Headlands Drive, Little River
March 13, 2001

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We appreciate the opportunity to be of continued service to you on this project. If you have any questions, please call me at (510) 839-0765.

Sincerely,
EARTH MECHANICS CONSULTING ENGINEERS



H. Allen Gruen, C.E., G.E.
Principal Engineer



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Earth Mechanics

Consulting Engineers

1727 Martin Luther King Jr. Way - Suite 213
Oakland, CA 94612
Phone/Fax (510) 839-0765

P.O. Box 4745
Petaluma, CA 94955
Phone/Fax (707) 769-9235

April 14, 1999
Project Number: 93-127

Mr. Robert L. Steele
43300 Little River Airport Road, #100
P.O. Box 2510
Mendocino, CA 95460

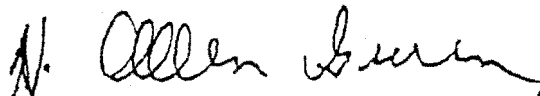
RE: Geotechnical Report for Proposed Residence at
45501 Headlands Drive
Little River, California

Dear Mr. Steele:

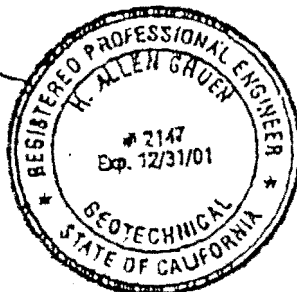
Earth Mechanics Consulting Engineers performed a site reconnaissance and issued a geotechnical report dated August 23, 1993 for the proposed residence at 45501 Headlands Drive, Little River, Mendocino County, California (AP# 121-260-10). We hereby confirm, as of the date hereof, the findings, conclusions, and recommendations contained in such report.

If you have any questions, please call me at (707) 769-9235.

Sincerely,
EARTH MECHANICS CONSULTING ENGINEERS



H. Allen Gruen, C.E., G.E.
Principal Engineer



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REPORT
GEOTECHNICAL INVESTIGATION
Proposed Single Family Dwelling
45501 Headlands Drive
Little River, California

Prepared for:

Mr. Robert Steele
c/o Rawles, Hinkle, Carter, Behnke & Oglesby
P.O. Box 720
Ukiah, CA 95482

Prepared by:

EARTH MECHANICS CONSULTING ENGINEERS
1727 Martin Luther King Jr. Way
Suite 213
Oakland, California 94612
(510) 839-0765

Project Number 93-127

H. Allen Gruen

H. Allen Gruen
Registered Geotechnical Engineer No. 2147



August 23, 1993

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August 23, 1993

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INTRODUCTION

Purpose

A geotechnical investigation has been completed for the proposed residence at 45501 Headlands Drive (AP# 121-260-10) in Little River, California. The purposes of this study have been to gather information on the nature, distribution, and characteristics of the earth materials and ground water conditions at the site, and to provide geotechnical recommendations for development of the lot for single-family residential use.

Scope

The scope of our services is outlined in our Proposal and Professional Service Agreement dated July 21, 1993. Our investigation included a geologic reconnaissance of the site and surrounding properties; a review of published geologic data pertinent to the project area; geologic interpretation and engineering analyses; and the preparation of this report.

This report contains the results of our investigation, including findings regarding site, soil, geotechnical and ground water conditions; conclusions pertaining to site exposure to geologic hazards and sea cliff retreat; and recommendations for site preparation and grading, foundations, floor support and slabs on grade.

References consulted during the course of this investigation are listed in Appendix A.

Proposed Development

The proposed project consists of the design and construction of a single family residence. Details regarding the structure are preliminary at this time; however, we anticipate that the structure will be placed at or near existing grade with the exception of a wine cellar; therefore, site grading is expected to be minimal. No other project details are known at this time.

FINDINGS

Site Description

The proposed project is located on Lot 10 of the Little River Headlands subdivision located on the Mendocino coast, north of Little River and south of Mendocino. Lot 10 is a roughly rectangular parcel covering 0.99 acres. The surface of the lot is relatively flat, with a gentle slope to the south. The lot is bordered by sea cliffs on two sides which extend at steep inclinations to the ocean, approximately 50 feet below. The site is covered by grasses with a few small pine trees around the margins.

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Geologic Conditions

Kilbourne (1983) has mapped the oldest rocks in the area as Cretaceous age Coastal Belt Franciscan complex consisting of well-consolidated clastic sedimentary rocks including sandstone, shale with minor limestone, and conglomerate. Ballerino (1986) reports that the bedrock in this area has a predominately northwestern strike and dips from 50 to 70 degrees to the northeast. This formation is bordered and overlain by undifferentiated Marine Terrace Deposits consisting of well-sorted quartz sand with minor gravel; dune sands may also be present.

Although no major faults are known to exist crossing the site, the San Andreas fault zone lies approximately 4 miles to the west (Williams and Bedrossian, 1976; Jennings, 1992).

Earth Materials

The site is covered with sand containing various amounts of silt. The surficial sand is loose and contains abundant root matter. We expect that the sand becomes denser with depth, and eventually grades into sandstone. Test pits on the site by others indicate the depth of sand overlying bedrock to be about 8 to 15 feet (Ballerino, 1986; Rummel, 1980; and Clark Engineering Service, 1983). The bedrock in the test pits was logged as yellow sandstone which became harder with depth.

Sea Tunnel

A sea tunnel is present under the property. Three openings are visible from adjacent properties. The approximate location of the sea tunnels have been mapped and described by Ballerino (1986), who estimates that there is 30 feet of bedrock between the tunnel and the ground surface. Our field observations and measurements at the tunnel openings confirm the depth of bedrock cover.

Groundwater

Rummel (1980) reported that seepage from adjacent rock cliffs below the site and a check of a nearby well indicates that groundwater is about 40 feet or more below grade. Clark Engineer Service (1988) reported perched groundwater at a depth of about 13 feet. We anticipate the groundwater conditions will vary with seasonal rainfall; however, we would not expect the static groundwater level to rise above the bedrock surface.

Landslides

Williams and Bedrossian (1976) and Kilbourne (1983) have mapped landslides in the coastal zone between Russian Gulch to Buckhorn Cove. Their maps did not indicate landslides on or adjacent to this site. Our geologic reconnaissance confirms this assessment.

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Sea Cliff Retreat

Sea cliff erosion in this area results primarily from ocean-wave action along prominent joints in rocks oriented in a general northwesterly direction. The energy of waves gradually widens the joints to form surge channels and sea caves in the cliffs. The average rate of sea cliff retreat in this region has been reported as 1 foot per year (Tinsley, 1972), but when the roof of a cave collapses, local sea cliff retreat can be as much as several feet in one moment (Williams and Bedrossian, 1976). The average rate of sea cliff retreat for the region may have very little meaning at a specific site because of variations in resistance to erosion of different rock types. Our recommended set back from the sea cliff and sea tunnels for the subject site is presented below.

CONCLUSIONS

General

On the basis of our site reconnaissance and literature review, we conclude that the site is suitable for support of the proposed single family residence. The primary geotechnical concerns are the rate of sea cliff retreat, the potential for collapse of the sea tunnel, and seismic shaking during earthquakes. These items are addressed below.

Setbacks From Sea Cliff And Tunnels

Based on our site reconnaissance, review of data, the character of the bedrock, and the proposed construction, we conclude that a minimum setback of 20 feet from the top of the sea cliff should be maintained. We also conclude that the structure supported on reinforced concrete grade beams and drilled piers extending into bedrock may be constructed above the area of the sea tunnels.

The following data contributed to these conclusions:

- 1) The sandstone observed on the sea cliffs appears to be massive with relatively few fractures or zones of weakness.
- 2) The soil mantle is relatively thin and is situated at a stable angle of repose near the sea cliff.
- 3) Ballerino (1986) reports that no large blocks of rock or earth have slumped into the sea since the subdivision was begun nearly 25 years ago.
- 4) There is approximately 30 feet of sandstone bedrock between the roof of the sea tunnels and the ground surface.

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No one can predict the exact future rate of sea cliff retreat or enlargement of the sea tunnels due to the actions of the ocean, so there is an inherent risk assumed by the owner in constructing a residence next to the ocean in this area. The owner should realize that the risk of potential damage increases as the structure is moved over the sea tunnels and closer to the sea cliff.

Settlement

Provided the building areas are properly graded and/or foundations are designed and constructed in accordance with our recommendations, we estimate that maximum total post-construction settlements resulting from the anticipated static foundation loads will be less than about 1-inch, and that post-construction differential settlements will be less than about 1/2-inch.

Subdrainage

The soils encountered during the previous studies are relatively clean and pervious, and the anticipated groundwater level is well below planned improvements; therefore, we do not feel that subdrains will be required behind retaining walls and adjacent to foundations. Water proofing should be used in areas where moisture migration would be detrimental to interior finishes.

Geologic Hazards

Faulting

The property does not lie within an Alquist-Priolo "Special Studies" Zone. The closest mapped active fault in the vicinity of the site is the San Andreas, located about 4 miles to the west (Jennings, 1992). No faults are shown crossing the site on reviewed published maps, nor did we observe evidence of faulting during our investigation. Therefore we conclude that the potential risk for damage at the site due to surface rupture from faults to be low.

Earthquake Shaking

Earthquake shaking results from the sudden release of seismic energy during displacement along a fault. During an earthquake, the intensity of ground shaking at a particular location will depend on a number of factors including the earthquake magnitude, the distance to the zone of energy release, and local geologic conditions. We expect that the site will be exposed to strong earthquake shaking during the life of the improvements. The recommendations contained in the latest edition of the Uniform Building Code should be followed for reducing potential damage to the structure from earthquake shaking.

Liquefaction

Liquefaction is a sudden loss of shear strength experienced in saturated granular soils below the ground water level during strong earthquake ground shaking. The occurrence of this phenomenon is dependent on many factors, including the intensity and duration of ground shaking, soil density and particle size distribution, and position of the ground water table (Seed,

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1982). Since none of the soils at the site were found to be saturated nor located below ground water table; it is our opinion that the potential for liquefaction at the site is low.

Lateral Spreading

Lateral spreading or lurching is generally caused by liquefaction of marginally stable soils underlying gentle slopes and is usually accompanied by fissures. Because there is only a limited risk of liquefaction, we judge that there is also only a slight risk of seismically-induced lateral spreading.

Densification

There is a reasonable chance for densification and settlement of the loose, granular soils near the ground surface during earthquake shaking. Structural elements founded at least 5 feet below the ground surface should experience negligible settlement. However, improvements founded near the existing grade such as slabs-on-grade and exterior flatwork may experience settlement during seismic shaking. We estimate that the magnitude of settlement due to seismic densification could be as large as two inches. The amount of settlement can be reduced by proper compaction of the subgrade soils.

RECOMMENDATIONS

Site Preparation and Grading

General

Grading is most economically performed during the summer months when the on-site soils are driest. Delays should be anticipated in site grading performed during the rainy season due to excessive soil moisture. Special and comparatively expensive construction procedures should be anticipated if grading must be completed during the winter.

Clearing

Areas to be graded should be cleared of unwanted tree stumps, debris, or other deleterious material, and then stripped of the upper soils containing root growth and organic matter. We anticipate that the required depth of stripping will be about 2 inches. Deeper stripping will be required to remove localized concentrations of organic matter, such as tree roots. The cleared materials should be removed from the site; strippings may be stockpiled for reuse as topsoil in landscaping areas.

Overexcavation

Existing loose fills and topsoil should be overexcavated in areas designated for placement of future engineered fill. The depth and extent of excavation should be approved in the field by the geotechnical engineer prior to placement of fill.

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Difficulty in achieving the recommended minimum degree of compaction described below should be used as a field criterion by the geotechnical engineer to identify areas of unstable soils that should be removed and replaced as engineered fill. The depth and extent of overexcavation should be approved in the field by the geotechnical engineer prior to fill placement.

Excavations

Excavations in the sandy soils can be conducted with conventional equipment. Excavations extending into the bedrock may require extra effort, such as heavy ripping or jack-hammering. We anticipate that the upper few feet of bedrock will be fractured and relatively easy to excavate; however, the sandstone will probably become harder and more massive with depth.

Subgrade Preparation

Exposed soils designated to receive engineered fill should be scarified to a minimum depth of 6 inches, brought to at least the optimum moisture content, and compacted to at least 90 percent relative compaction, in accordance with ASTM Designation D 1557.

General Engineered Fill

It is anticipated that the on-site soils will be suitable for reuse as general engineered fill provided that lumps greater than 6 inches in largest dimension and perishable materials are removed, and that the fill materials are approved by the geotechnical engineer prior to use.

General engineered fill should be placed in level lifts not exceeding 8 inches in loose thickness. Each lift should be brought to at least the optimum moisture content and compacted to at least 90 percent relative compaction, in accordance with ASTM Designation D 1557.

Final Compaction

The uppermost 6 inches of the building pad area subgrade soils should be brought to at least optimum moisture content; compacted to create a smooth, essentially unyielding surface; and maintained in this condition immediately prior to placement of slab concrete.

Temporary Slopes

Temporary slopes higher than 4 feet should be laid back or shored in conformance with OSHA standards. The stable inclination of the sandy soils will decrease upon wetting. All temporary slopes and shoring design are the responsibility of the contractor.

Finished Slopes

In general, cut and fill slopes should be constructed at an inclination not exceeding 2:1. Routine maintenance of slopes should be anticipated. The tops of cut slopes should be rounded and compacted to reduce the risk of erosion. Fill and cut slopes should be planted with vegetation to

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resist erosion, or protected from erosion by other measures, upon completion of grading. Surface water runoff should be intercepted and diverted away from the tops and toes of cut and fill slopes by using berms or ditches.

Seismic Design

The site is within UBC seismic Zone 4; therefore, a Seismic Zone Factor "Z" of 0.4 should be used. The soil profile at the site approximates type S_1 ; therefore, a site coefficient (S Factor) of 1.0 should be used in determining total seismic lateral force in accordance with the *Uniform Building Code* (1991).

Foundations

Foundation support for the improvements is available by means of drilled, cast-in-place, reinforced concrete piers. All drilled piers should be at least 12 inches in diameter and should be designed for end bearing in bedrock only. End bearing pressures of 10,000 psf for dead and sustained live loads, and 13,000 psf for total loads including wind or seismic can be used. The piers should extend at least 2 feet into competent bedrock as determined by the geotechnical engineer during drilling. We anticipate that the piers will be founded at depths varying from about 15 to 20 feet below existing grade.

Uplift forces will be resisted by skin friction between the piers and surrounding soil. An allowable skin friction of 800 pounds per square foot may be used.

Resistance to lateral displacement of individual piers will be generated primarily by passive earth pressures acting against 2 pier diameters. Passive pressures should be assumed equivalent to a fluid weighing 250 pounds per cubic foot. Passive pressures should be disregarded for the uppermost 1 foot of foundation depth.

If ground water is encountered during pier shaft drilling, it should be removed by pumping, or the concrete must be placed by the tremie method. If pier shafts will not stand open, temporary casing may be necessary to support the sides of the pier shafts until concrete is placed. Drilling to achieve the required depth into bedrock may require an increase in time and effort because of variable hardness.

Retaining Walls

Yielding retaining walls free to rotate at least 0.1 percent of the wall height at the top of the backfill could be subjected to active lateral earth pressures equivalent to those exerted by a fluid weighing 30 pounds per cubic foot where the backslope is level. Rigid retaining walls constrained against such movement could be subjected to "at-rest" lateral earth pressures equivalent to those exerted by a fluid weighing 55 pounds per cubic foot where the backslope is level.

In addition to lateral earth pressures, retaining walls must be designed to resist horizontal pressures that may be generated by surcharge loads applied at the ground surface, or from uphill foundation systems behind the walls. Where an imaginary 1:1 (H:V) plane projected downward

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from the outermost edge of a surcharge load or foundation intersects a retaining wall, that portion of the wall below the intersection should be designed for an additional horizontal thrust whose intensity will depend on the position, type and magnitude of the surcharge load. We can assist in evaluating the lateral pressure influences from such loads, where anticipated.

Wall backfill should be spread in level lifts not exceeding 8 inches in thickness. Each lift should be brought to at least the optimum moisture content and compacted to not less than 90 percent relative compaction, per ASTM Designation D 1557. Retaining walls will yield slightly during backfilling. Therefore, walls should be backfilled prior to building on or adjacent to the walls, and should be properly braced during the backfilling operations.

Where migration of moisture through retaining walls would be detrimental or undesirable, retaining walls should be waterproofed as specified by the project architect or structural engineer.

Retaining walls should be supported on foundations designed in accordance with the recommendations presented above. A minimum factor of safety of 1.5 against overturning and sliding should be used in the design of retaining walls.

Slabs on Grade

Slabs may be supported on prepared natural soil or compacted fill. The subgrade should be proof rolled to provide a firm, unyielding surface for slab support. If moisture penetration would be objectionable, slabs should be underlain by a moisture vapor barrier membrane. The membrane should be covered with 2 inches of damp, clean sand to protect it during construction.

Surface Drainage

The site should be graded to provide positive drainage away from building areas as well as the sea cliff and finished cut and fill slopes. Roofs should be provided with gutters and down spouts that discharge into closed conduits, or onto concrete slabs or asphalt pavements that drain away from the foundations and into the site storm drain system. Energy dissipators, such as riprapped stilling basins, may be required to reduce erosion where drains or culverts discharge into drainage ways.

Maintenance

Periodic land maintenance will be required. Drains should be checked frequently, and cleaned and maintained as necessary. Sloughing or erosion that occurs should be repaired before it can enlarge into landsliding. A dense growth of deep-rooted ground cover should be maintained on all slopes.

Supplemental Services

Earth Mechanics recommend that we be retained to review the project plans and specifications to determine if they are consistent with our recommendations. In addition, we should be retained to

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observe geotechnical construction, particularly site preparation and grading procedures, fill compaction, and excavation of drilled piers, as well as to perform appropriate field observations and laboratory tests.

If, during construction, subsurface conditions different from those described in this report are observed, or appear to be present beneath excavations, we should be advised at once so that these conditions may be reviewed and our recommendations reconsidered. The recommendations made in this report are contingent upon our notification and review of the changed conditions.

If more than 18 months have elapsed between the submission of this report and the start of work at the site, or if conditions have changed because of natural causes or construction operations at or adjacent to the site, the recommendations of this report may no longer be valid or appropriate. In such case, we recommend that we review this report to determine the applicability of the conclusions and recommendations considering the time elapsed or changed conditions. The recommendations made in this report are contingent upon such a review.

These services are performed on an as-requested basis and are in addition to this geotechnical investigation. We cannot accept responsibility for conditions, situations or stages of construction that we are not notified to observe.

LIMITATIONS

This report has been prepared for the exclusive use of Mr. Robert Steele and his consultants for the proposed project described in this report.

Our services consist of professional opinions and conclusions developed in accordance with generally-accepted geotechnical engineering principles and practices. We provide no other warranty, either expressed or implied. Our conclusions and recommendations are based on the information provided us regarding the proposed construction, our site reconnaissance, review of published data and previous investigations, and professional judgment. Verification of our conclusions and recommendations is subject to our review of the project plans and specifications, and our observation of construction.

Site conditions and cultural features described in the text of this report are those existing at the time of our field reconnaissance, conducted on August 7, 1993, and may not necessarily be the same or comparable at other times.

The scope of our services did not include an environmental assessment or an investigation of the presence or absence of hazardous, toxic or corrosive materials in the soil, surface water, ground water or air, on or below, or around the site, nor did it include an evaluation or investigation of the presence or absence of wetlands.

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APPENDIX A

List of References

1. Ballerino, J., 1986, *Geologic Report for Assessor's Parcel No. 121-260-10*. Mendocino County, California, August 1986
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GEOLOGIC REPORT
FOR
ASSESSOR'S PARCEL
NO. 121-260-10

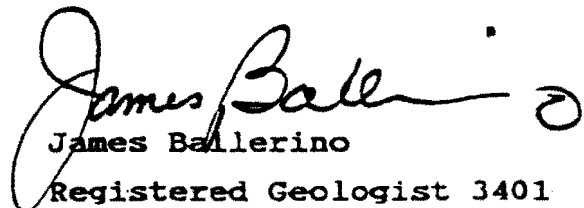
MENDOCINO COUNTY,
CALIFORNIA

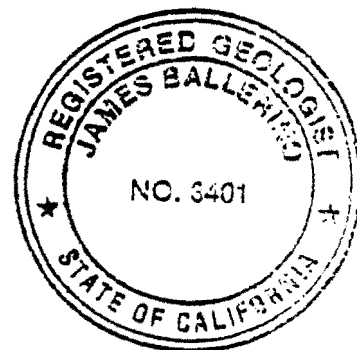
AUGUST, 1986

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INTRODUCTION

This report presents the results of my geologic and soils investigation at a subdivision lotsite near the community of Little River, California. The purpose of the study was to provide information and a professional opinion regarding the nature of any land use constraints which may be present at the property.

The lot is situated in "Little River Headlands", a subdivision containing 15 units, which range in size from .92 acre to 1.46 acres. The prospective owners wish to build a single-family residential dwelling on Lot 10, which is .99 acre in size.

The lot which was examined lies on the Mendocino coast, and for assistance in the preparation of this report, the California Coastal Commission Interpretive Guidelines have been consulted. The scope involved field reconnaissance, oral communication with local residents, and research of geologic literature and former reports for the area. A thorough study of the face and top of the bluffs or cliffs at the property has been made, and an area of demonstration of stability has been assigned based upon the application of all the criteria available.

SETTING

Little River Headlands lies along the northern side of the small bay into which empties Little River, at Van Damme Beach State Park. Lot 10 is located about in the middle of the subdivision, at an elevation of approximately 50 feet above the ocean. The surface of the lot is relatively flat, with a gentle slope to the south. The land is grass-

covered and hosts a few small pine trees. No seeps, springs nor marshy areas are present at the site.

SOILS

Soils at the site are described as the "Baywood loamy sand", and are derived from the first Quaternary marine terrace deposit along the coast. These soils are generally well-drained and have a moderate erosion potential. The effective depth at the study area is six to ten feet. The top 4 to 6 feet consists of sandy to silty soil. Below this is a layer of 2 to 3 feet of weakly-cemented sand containing some cobbles. At the base is about one foot of gravel and sand. The terrace soils lie unconformably upon sandstone/graywacke/shale bedrock, which dips from 50 to 70 degrees to the northeast.

BEDROCK GEOLOGY

The Coast Range of California is composed of the Franciscan Complex, which is divided into melange rocks, related to serpentinite, and the Coastal Belt rocks. The Coastal belt is Late Cretaceous to Late Eocene in age and these rocks have been folded, uplifted, tilted and overturned. numerous faults have resulted, trending mostly in a northwest to southeast direction. The San Andreas fault and other high angle faults have existed for at least 25 million years.

The Coastal Belt sequence includes rocks which are mostly graywacke sandstone and shale. Bedding has a predominantly northwestern strike and homoclinal northeastern dip. Good exposures of the bedrock are commonly seen in roadcuts, ocean cliffs, and stream channels. Surficially, the rock is deeply weathered and covered by marine terrace deposits or soil and vegetation (grass, dense brush, and

trees).

The sandstone is poorly sorted, medium-grained, and has a rather blue to gray color, but weathers to brown. Fresh rocks are well indurated and have a variable fracture pattern.

SURFICIAL DEPOSITS

Surficial units in the study area include Quaternary deposits of marine terrace clay, sand, and gravel. These units locally overlie bedrock. At the site, the terrace deposits make up the entire soils horizon, which is unconsolidated to semi-consolidated at its base or contact with bedrock.

SEISMICITY

The site is in an area which can expect an earthquake of moderate intensity or magnitude from the San Andreas fault zone (which lies about five miles off the coast) within the next fifty years, or during the lifetime of a home which has been built here. The city of Fort Bragg, to the north, was severely damaged in the 1906 San Francisco earthquake, and the north span of the Big River bridge collapsed. The town of Mendocino, closer to the property in this investigation, suffered minimal damages.

Although the area is not considered subject to frequent seismic activity, numerous small earthquakes have been recorded nearby, and will continue to affect the area in the future.

For the maximum credible earthquake which will occur near this property, homesites constructed in compliance with the Uniform Building Code will perform satisfactorily, and damages are expected to be light.

SEACLIFF RETREAT

Seacliff retreat or erosion as treated in this type of an investigation focuses on the "rate of disappearance of marketable real estate". Where documented historical evidence is available, sea cliff erosion has been measured; however, retreat may be very erratic, even over short distances along the coast. This rate of retreat along headlands varies with the geologic, or bedrock, circumstances, and is noted in places to be non-eroding (or stable) to as much as one meter per year. Where actively occurring, retreat may also be sporadic in terms of time, with blocks of rock or soil periodically slumping into the ocean.

No historical information is available for the part of the Mendocino coastline where the study area is located other than the fact that no large blocks of rock or earth have slumped into the sea since the subdivision was begun, nearly 25 years ago. Further guidelines are based upon a complete assessment of specific geologic features at the site such as composition of the bedrock, fracture patterns, jointing, bedding attitude, evidence of landsliding, trees and brush leaning or falling into the sea, and any other features which may be helpful in the investigation.

WATER FACILITIES

Domestic water is being provided by a community water system which was designed and installed in 1963 to serve 15 homesites. At this time six homes are using this system. A single well, 67 feet deep, located on Lot 11, has provided adequate water for these homes during past years, without difficulty. Consideration is being given to drilling a second well within the subdivision, which would be used as a backup well to fill any contingency needs or for use as additional water for future buildout.

SEWAGE DISPOSAL

The sandy-silty soils at the site are considered to be adequate for leachfield use. No failure is expected with normal single-family occupation. The subdivision has had a satisfactory history of leachfield performance. Included in this report is a copy of a statement from the Mendocino County Department of Public Health, which gives tentative approval of a sewage disposal system at the property.

SEA TUNNEL DISCUSSION

A sea tunnel is present under a part of the property. The location and attitude of this tunnel is indicated on an enlarged map, taken from the Assessor's Parcel Maps, and is appended at the back of this report. The description of the tunnel is as follows: At the south "entrance", the width of the opening is about 8 feet, and height (low tide to back of tunnel) is about 20 feet. The tunnel trends from this entrance in a northerly direction and splits into two "exits", each 6 to 8 feet wide

and less than 20 feet high.

The formation of this tunnel has been the result of weathering and wave erosion on a shear zone which traverses this part of the property. The shear zone is not considered an active fault zone, but rather a place where fracturing and shearing of rocks took place during deformation of the region, causing a zone of weakness, which is vulnerable to the effects of erosion.

During the field examination, a small area above one of the tunnel exits was noted to have undergone a degree of settling. The trend of this anomaly is in a northeast to southwest direction. There appears to be a direct relationship between the tunnel and this slight settlement of the soil mantle. The indication is that fractures extend from the back of the tunnel up to the surface and constitute a zone of instability which is considered unsafe for building purposes. The block of rock affected is not likely to slump suddenly, nor is it likely to undergo accelerated erosion or fall suddenly into the ocean, as there is still 30 feet of bedrock between the back of the tunnel and the surface above.

AREA OF DEMONSTRATION -- SETBACK

A building setback has been indicated on the map: a dashed line approximately 50 feet back from the blufftop. This setback takes into consideration the zone being influenced by the sea tunnel and will allow for the design of a single-family dwelling upon the parcel without risk of being over the tunnel or its associated fracture zone.

The building area left on the parcel is adequate to site a home and the sewage system - drainfield. Please note that the on-site disposal drainfield should be located inside the blufftop setback also.

CONCLUSIONS AND RECOMMENDATIONS

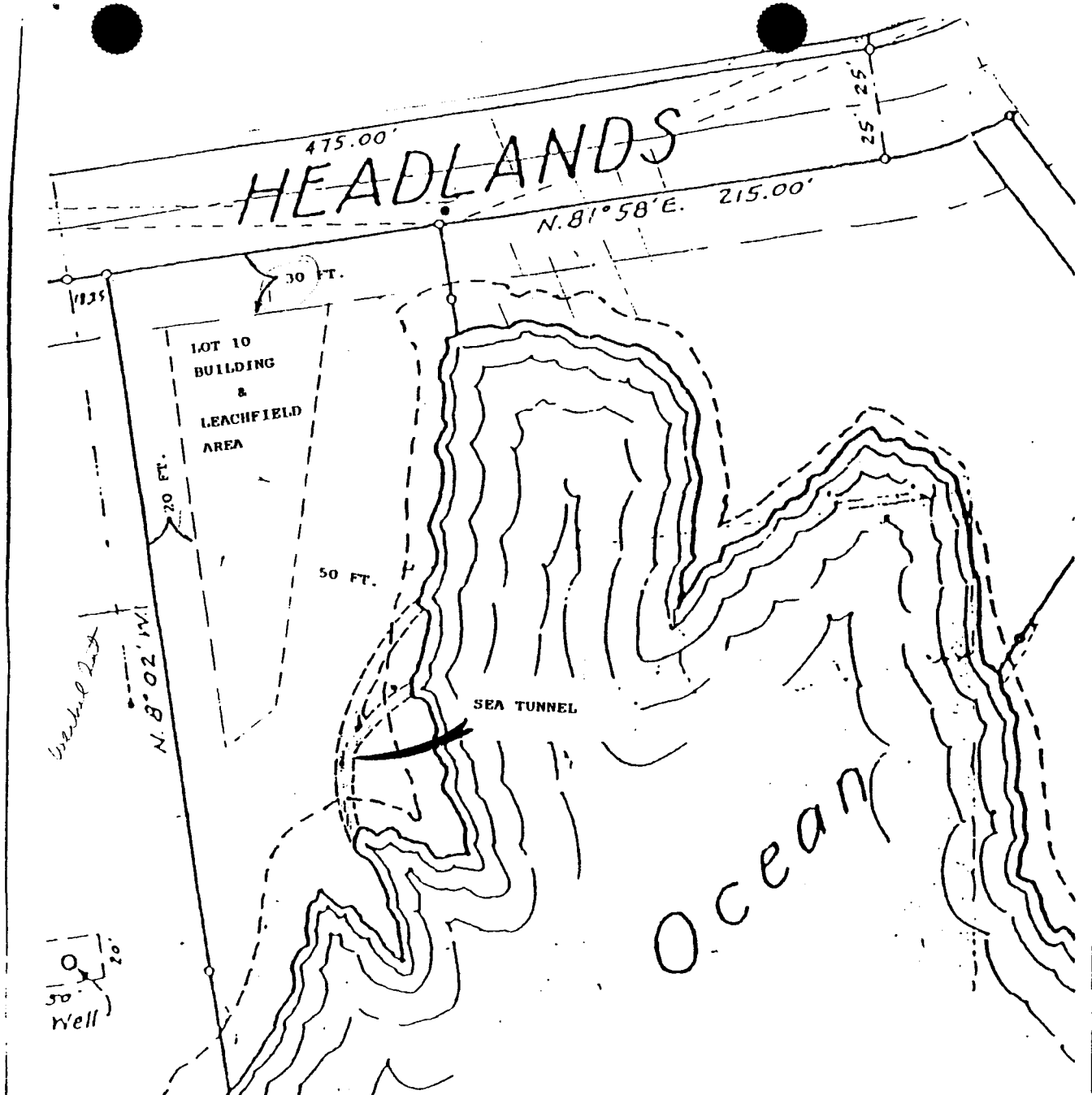
This investigation determined that the site exhibits no severe or gross geologic hazards, although there is a zone near the edge of the bluff which may present some soils stability problems over the lifetime of any structures built here. This area has been identified and an appropriate area of demonstration or building setback has been assigned to mitigate any future contingencies.

The property lies 50 feet above the ocean, and is not threatened by flooding or by tsunami. Differential settlement or soil lurching are a potential hazard only in the case of a major seismic event.

There is a shear zone which has created an embayment along the easterly side of the parcel. Faulting is associated with this zone. Strike is to the north and dip is steeply to the east. There is no documented evidence that any faults at the property or in the immediate area of the subdivision are active.

With the building setback as indicated on the map attached with this report, I recommend that the property be approved for development as proposed.

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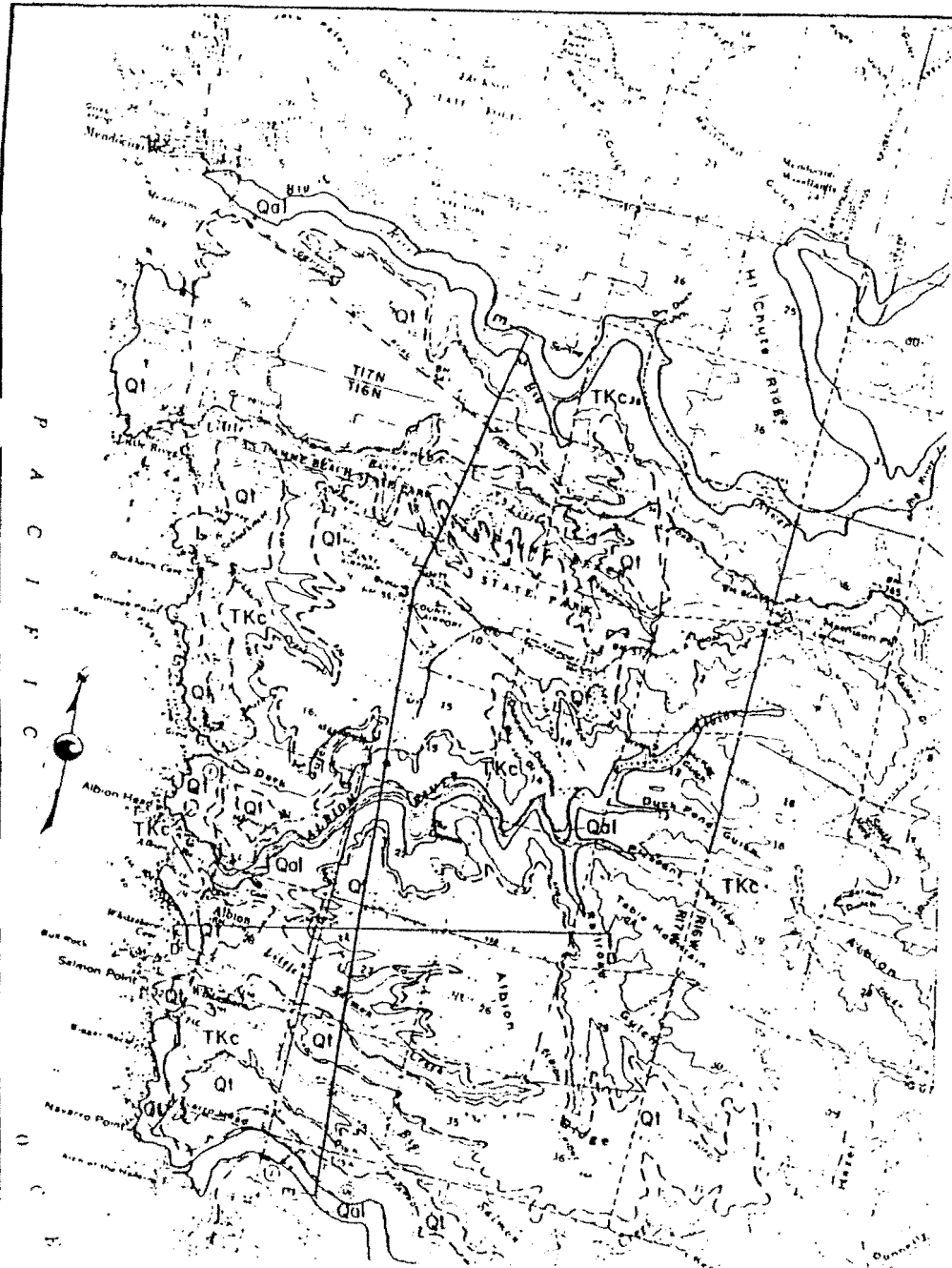


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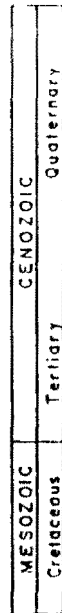
LOT 10
LITTLE RIVER
HEADLANDS
SUBDIVISION

ENLARGED FROM
SUBDIVISION MAP
RECORDED
CASE 2, DRAWER 3, PAGE 70,
M. C. R.

DEPICTS SEA TUNNEL
AND SETBACKS



LEGEND



Qal Alluvium

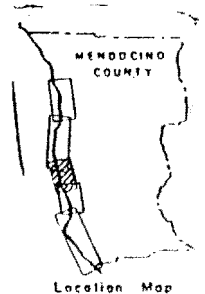
Ql Marine terrace deposits

TKc Coastal Belt Franciscan

Geologic contact, dashed where approximate, queried where questionable, dotted where concealed.

Spring

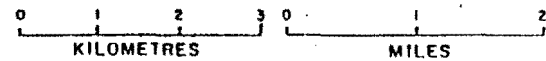
Line of geologic cross section



SCALE

1:62500

Contour Interval = 80 feet



STATE OF CALIFORNIA
 THE RESOURCES AGENCY
 DEPARTMENT OF WATER RESOURCES
 NORTHERN DISTRICT

MENDOCINO COUNTY COASTAL GROUND WATER STUDY

ALBION SUBUNIT

AREAL GEOLOGY

JUNE 1982

26/1/82

