CALIFORNIA COASTAL COMMISSION
NORTH COAST AREA
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
(415) 904-5260

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Filed: July 9, 1997
Hearing Opened: August 14, 1997
Staff: Jo Ginsberg
Staff Report: Sept. 25, 1998
Hearing Date: Oct. 16, 1998
Commission Action:

STAFF REPORT: REVISED FINDINGS

APPEAL NO.:	**A-1-MEN-97-46**
APPLICANT:	**DAVID AND KATHRYN RILEY**
AGENTS:	(1) Ralph Matheson; and (2) Rawles, Hinkle, Carter, Behnke & Oglesby
LOCAL GOVERNMENT:	Mendocino County
DECISION:	Approval with Conditions
PROJECT LOCATION:	38868 Sedalia Drive, Gualala, Mendocino County; APN 145-181-01.
PROJECT DESCRIPTION:	Construct a two-story, 2,814-square-foot, single-family residence with a subterranean garage, driveway, sewer lift pump, drainage system, and grading.
APPELLANT:	Julie Verran
COMMISSIONERS ON THE PREVAILING SIDE	Commissioners Allen, Armanasco, Dettloff, Flemming, Kehoe, Nava, Potter, Reilly, Tuttle, Wan, and Chairman Areias.

SUBSTANTIVE FILE DOCUMENTS: Mendocino County Local Coastal Program; County Permits CDP #06-94 (R/MOD) and #06-94; Coastal Commission CDP's 80-CC-135 (Plenty), 80-CC-102 (Bobba), 1-86-107 (Hilt), and 1-88-195 (Hoffman).

STAFF NOTES

1. Procedure.

At the Commission meeting of August 12, 1998, the Commission considered the project de novo and approved the project with conditions. However, as the Commission's actions on the project differed from the written staff recommendation, staff has prepared the following set of revised findings for the Commission's consideration as the needed findings to support its action. These findings reflect the action taken by the Commission at the meeting of August 12, 1998 on the de novo portion of the hearing. As the Commission found substantial issue (at the meeting of August 14, 1997), consistent with staff's recommendation, the Substantial Issue portion of the report is not attached, but is incorporated by reference.

The purpose of the hearing is to consider whether the revised findings accurately reflect the Commission's previous actions rather than to reconsider whether the appeal raised a substantial issue or to reconsider the merits of the project or the appropriateness of the adopted conditions. Public testimony will be limited accordingly.

2. Background

On August 14, 1997, the Commission found substantial issue on the appeal filed for the subject development, finding that the project as approved by the County raised a substantial issue with respect to visual resources and geologic hazards. During the substantial issue portion of the hearing, the geologists hired by the applicants and the appellant presented conflicting information regarding geologic hazards, so the Commission requested that an independent geologist evaluate the geologic hazards on the site, and continued the hearing. The applicants agreed to hire an independent geologist, Rogers/Pacific, who surveyed the site and prepared a geotechnical report. The geologic report prepared by Rogers/Pacific is attached as Exhibit No. 10.

The Commission continued the de novo portion of the hearing on the project at the meeting of March 11, 1998, and expressed additional concerns regarding sea caves and erosion. The Commission requested that additional information be submitted addressing the issue of sea

caves. This information was later submitted by Dr. Rogers of Geolith Consultants (formerly with Rogers/Pacific), and is attached as Exhibit No.25. The Commission heard the project once again on August 14, 1998, and approved it with conditions, as described below.

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following revised findings in support of the Commission's actions on August 12, 1998, approving the project with conditions.

> (NOTE: Only those Commissioners on the prevailing side of the Commission's action on the permit at the August 14, 1998 hearing are eligible to vote. See the list on Page One.)

COMMISSION ACTION:

The adopted resolution, conditions, and findings in support of the Commission's August 14, 1998 action are provided below.

DE NOVO ACTION ON APPEAL: REVISED FINDINGS

I. ADOPTED RESOLUTION OF APPROVAL

The Commission hereby grants, subject to the conditions below, a permit for the proposed development on the grounds that the development, as conditioned, is in conformance with the certified Mendocino County LCP, is located between the sea and first public road nearest the shoreline and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions: See attached.

III. Special Conditions:

1. Assumption of Risk/Future Response to Erosion:

PRIOR TO ISSUANCE of the Coastal Development Permit, the applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director, which

shall provide: (a) that the applicant understands that the area governed by A-1-MEN-97-46 may be subject to extraordinary hazards from landslides, slope failure, and erosion, and that the applicant assumes the liability from such hazards; (b) that the applicant unconditionally waives any claim of liability on the part of the Commission and agrees to indemnify and hold harmless the Commission and its officers, agents, and employees relative to the Commission's approval of the project for any damage due to natural hazards; (c) that the applicant agrees that no bluff or shoreline protective devices shall be constructed on the parcel, and (d) that the applicant accepts sole responsibility for the removal of any structural debris resulting from landslides, slope failures or erosion on the site.

This document shall run with land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Coastal Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required because the change is not substantive in nature.

2. Final Foundation and Site Drainage Plans:

PRIOR TO ISSUANCE of the Coastal Development Permit, the applicant shall submit for the review and approval of the Executive Director final foundation plans for the house and final site drainage plans for the proposed project. Except as concerns the relocated and redesigned driveway, these plans shall be consistent with all recommendations made in the Geotechnical Investigation Report prepared by BACE Geotechnical, Inc. dated June 30, 1992, which was submitted with the application, with the four addendum letters submitted in 1997, and with the recommendations made by Rogers/Pacific in their review dated November 28, 1997. In particular, the plans shall be consistent with the recommendations regarding site grading, construction of the foundation and retaining walls, blufftop setback for the house, and site drainage.

The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. Proposed changes to the approved final plans shall not occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required because the change is not substantive in nature.

3. Landscaping Plan:

PRIOR TO ISSUANCE of the Coastal Development Permit, the applicant shall submit, for the Executive Director's review and approval, a landscaping plan prepared by a qualified

professional with expertise in the field of landscaping, such as a landscape architect. The plan shall provide for the planting of an evergreen screen of drought-tolerant native or naturalized trees and/or shrubs along the south side of the residence to minimize the visual impacts to the Gualala Point Regional Park as a result of the proposed construction. No fewer than 10 trees shall be planted on the property. The trees to be planted shall be a minimum of five feet high when planted, and must reach a mature height of at least 20 feet. The plan shall specify the type and mature heights of the trees to be planted. The plan shall further include a tree maintenance program (e.g., pruning, fertilizing, watering, etc.) for newly planted trees and a tree replacement program on a one-to-one or greater ratio for the life of the project. The new trees and shrubs shall be planted within 60 days of completion of the project.

The applicant shall notify the Executive Director in writing when the trees have been planted, and Commission staff shall verify the planting via a site visit or by examining photographs submitted by the applicant. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. Proposed changes to the approved final plans shall not occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required because the change is not substantive in nature.

4. Design Restrictions:

All exterior siding and roofing of the proposed structure shall be of natural or natural-appearing materials of dark earthtone colors only. In addition, all exterior materials, including the roof and the windows, shall be non-reflective to minimize glare. Finally, all exterior lights, including any lights attached to the outside of the house, shall be low-wattage, non-reflective, and have a directional cast downward.

5. Tree Removal:

This permit does not authorize the removal of any trees from the subject parcel, other than those required to be removed to meet the fire safety regulations of the California Department of Forestry and Fire Protection or those required to be removed for the relocation of the driveway as required in Special Condition No. 2. Any future removal of trees shall require a new coastal permit or an amendment to Coastal Permit No. A-1-MEN-97-46.

6. Archaeological Resources:

If any archaeological or paleontological resources are discovered on the project site during construction authorized by this permit, all work that could damage or destroy these resources

shall be suspended. The applicant shall then have a qualified archaeologist inspect the project site, determine the nature and significance of the archaeological materials, and, if he or she deems it necessary, develop appropriate mitigation measures using standards of the State Historic Preservation Office.

Should the qualified archaeologist determine that mitigation measures are necessary, the applicant shall apply to the Commission for an amendment to Permit No. A-1-MEN-97-46 requesting that the permit be amended to include the mitigation plan proposed by the qualified archaeologist. The plan shall provide for monitoring, evaluation, protection, and mitigation of archaeological resources on the project site. Should the archaeologist determine that no mitigation measures are necessary, work on the project site may be resumed.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

1. Project Setting, Description, and History.

a. Project and Site Description:

The 1.2-acre subject site is located west of Highway One in Gualala, at the southwesterly terminus of a private road extending from Sedalia Drive. The property, which is situated just northwest of the mouth of the Gualala River near the edge of a steep coastal bluff, consists of a very narrow coastal terrace and part of the adjoining hillside. An abandoned railroad roadbed is located within the property, near the northeasterly property boundary, part way up the hillside. Groves of pine trees are located at the southeast and northwest ends of the property. There is no sensitive habitat on the subject parcel.

The proposed development consists of construction of a two-story, 28-foot-high, 2,814-square-foot single-family residence with an attached, subterranean garage/basement, driveway, sewer lift pump system to accommodate public sewer service, and drainage system that includes freshwater leach lines (see Exhibit Nos. 3-7). The house would be built partly on the terrace and partly on the lower part of the hillside.

b. Project History.

In 1994 the County approved a coastal permit for residential development on the subject site, CDP 06-94. In 1996 the applicant applied to the County for a renewal/modification of the project that proposed a redesign of the house in the same location, including reducing square footage and lowering the height to approximately 28 feet. On February 27, 1997, Mendocino

County's Coastal Permit Administrator approved with conditions Coastal Development Permit 06-94 (R/MOD). This approval was appealed to the Mendocino County Board of Supervisors, who denied the appeal and approved the project on May 23, 1997. The County then issued a Notice of Final Action on the Coastal Development Permit, which was received by Commission staff on June 27, 1997.

The Commission received from Julie Verran an appeal of the County of Mendocino's decision to approve the project. The appellant filed the appeal in a timely manner on July 9, 1997, within 10 working days of receipt by the Commission of the Notice of Final Local Action.

At the Commission meeting of August 14, 1997, the Commission opened the hearing and determined that a substantial issue existed with respect to the grounds on which the appeal had been filed. Staff had prepared a recommendation with regard to the merits of the permit application, but the Commission decided to continue the public hearing to a later date and took no action on the de novo portion of the project that day, requesting additional geologic information.

Additional geologic information was submitted, and staff prepared another staff recommendation with regard to the merits of the permit application. The Commission heard the project de novo at the meeting of March 11, 1998, but again decided to continue the hearing to a later date, directing staff to request additional information from the applicants on sea caves and on the applicants' economic interest in the property. The latter information would be important for considering whether a denial of the project would constitute an unconstitutional takings of private property. The applicants provided the Commission with additional information regarding sea caves, but declined to provide the Commission with information regarding the applicants' economic interest in the property.

2. Geologic Hazards:

The subject site is located upon Robinson's Landing, the northernmost of two parcels which used to be owned by the Gualala Railroad, a local lumber railroad that ran between Bourn's Landing and the Gualala Lumber Company mill in Gualala between 1875 and 1922. The site is located on a narrow coastal terrace atop rugged sea cliffs between 54 and 65 feet high that contain several "sea caves." The proposed house site is situated between the precipice of the sea cliffs and a cut/fill embankment built for the old railroad, which lies between 100 and 200 feet landward of the face of the sea cliff. The house would be partly built on the terrace, and partly built on the lower part of the hillside. The house is proposed to be set back 35 feet from the bluff edge, while the driveway is proposed to be as close as 15 feet to the bluff edge. Because of the close proximity of the proposed house to the bluff edge, the project raises

concern about geologic stability and whether the development would be threatened by bluff retreat and other geologic hazards during its economic life.

a. LCP Policies.

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 lifespans (75 years), and includes a setback formula. The retreat rate shall be determined from historical observation (e.g., aerial photographs) and/or from a complete geotechnical investigation.

Policy 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.

Zoning Code Section 20.500.010 states that new development in the coastal zone shall minimize risk to life and property in areas of high geologic hazard; assure structural integrity and stability; and 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 20.492.025 states that the acceptability of alternative methods of storm water retention shall be based on appropriate engineering studies, and that control methods to regulate the rate of storm water discharge that may be acceptable include retention of water on level surfaces, the use of grass areas, underground storage, and oversized storm drains with restricted outlets or energy dissipators.

Zoning Code Section 20.500.020(A)(2) states that water, sewer, electrical and other transmission and distribution lines which cross fault lines shall be subject to additional standards for safety including emergency shutoff valves, liners, trenches and the like. Specific safety measures shall be prescribed by a licensed engineering geologist or a registered civil engineer.

b. Geotechnical Evaluations of the Site.

A geotechnical report was prepared for the site by BACE Geotechnical, Inc. in 1992, supplemented by four addendum letters in 1997 to address additional concerns. The report indicates that the site can safely support the proposed project, and makes a number of recommendations regarding development on the site.

The appellant for the project hired another geologist, Dr. Kojan, who disagreed with some of the conclusions and recommendations made by BACE Geotechnical, particularly regarding bluff retreat and the recommended building setback. At the August 14, 1997 hearing, the Commission indicated that one of its major concerns regarding the project was whether or not the project would contribute to geologic hazards in a manner inconsistent with the certified LCP. The Commission noted that there were differing opinions regarding geologic hazards presented by the geologists representing the applicants and the appellant, and directed staff to request a geologic report prepared by a third party that had been agreed upon by the geologists representing the applicants and the appellant. The new report was to determine bluff retreat based on a review of historic photos and other available information, investigate through borings whether the various sea caves on the subject site extend under the bluff close enough to the proposed house to threaten development during its 75-year economic lifespan, and investigate thoroughly the issue of seismic hazard to determine whether any faults that may exist on or near the property pose a significant threat to the structure.

The third party chosen was the geotechnical engineering firm of Rogers/Pacific, who prepared a report dated November 28, 1997 (see Exhibit No. 10). This report assesses the site, reviews ground and aerial photographs, and reviews and evaluates the geologic reports prepared for the site. At its hearing of March 11, 1998, the Commission expressed additional concerns regarding sea caves and erosion. At the request of staff, Dr. Rogers, now working for Geolith Consultants, prepared an additional report on sea caves on the subject site, and the potential geologic hazards associated with them (see Exhibit No. 25).

c. Bluff Retreat.

Based on a review of the site and of historic photographs, the Geotechnical Report prepared by BACE Geotechnical, the applicants' original geologist, identifies a bluff retreat rate of one inch per year. Applying the County's setback formula (setback = structure life X retreat rate), the necessary blufftop setback would be 6-1/2 feet. The proposed residence is set back 35 feet from the edge of the bluff, and the driveway is set back 15 feet, which meet the County's requirements. The edge of the bluff is considered to be the portion of the property where there is a clear break in slope. To address drainage, the applicant has proposed a drainage system incorporating freshwater leach lines and vertical risers above the drain pipes, which BACE Geotechnical has indicated would adequately drain the site. This arrangement would be in lieu of collecting the runoff from the site down the face of the bluff, which would be inconsistent with policies of the LCP. The applicant has also proposed to employ a licensed civil engineer to do the structural design of the residence, and has indicated that the structural design would include lateral design calculations to resist seismic and wind forces according to the adopted Uniform Building Code of Mendocino County.

Dr. Kojan, a geologist hired by the appellant, disagreed with the bluff retreat figures in the BACE report, asserting that the "claim of less than 1 inch per year is unsubstantiated, undocumented and is therefore incomplete." Dr. Kojan states that based on his analysis of cliff retreat obtained from large-scale enlargements of historic photographs, a blufftop setback of at least 100 feet is indicated.

Since there was conflicting information on geologic hazards presented by the geologist representing the applicants and the geologist representing the appellant, the Commission requested that a third geologist, agreed upon by both applicants and appellant, prepare a new geologic survey.

The geotechnical engineering firm of Rogers/Pacific, agreed upon by both the applicants and the appellant, prepared a new report dated November 28, 1998 (see Exhibit No. 10) which assesses the site, reviews ground and aerial photographs, and reviews and evaluates the geologic reports prepared for the site. The Rogers/Pacific report concludes that Dr. Kojan's estimates of cliff retreat "puts one in the expectable ballpark of values." Rogers/Pacific recommends that an average cliff retreat rate of five inches per year be applied to the site, resulting in a structural setback of 75 times that amount, or 31.25 feet. As noted above, the house is actually proposed to be set back 35 feet from the bluff edge, greater than the 31.25-foot distance. Rogers/Pacific does point out that even with such a setback, any structure built that close to the headlands is "certainly going to get physically splashed during extreme storm events, and may even experience overt splash damage." The Commission finds that the Rogers/Pacific geotechnical report provides the most recent and comprehensive analysis of bluff retreat at the subject site and that the proposed 35-foot setback is consistent with that recommendation.

Rogers/Pacific further states that the driveway should be pulled back from the cliff face as far as practicable in the vicinity of the erosion cusp where modest levels of erosion have been noticed over the past 25 years, likely due to an unnatural concentration of surface flow emanating from the steep access road (see Exhibits 8 and 9). The report suggests that proper design and construction of the paved driveway could alleviate much of this erosion. The report recommends that the driveway pavement be cross-sloped 5% towards the uphill side, and runoff then be collected, conveyed, and discharged away from the driveway, preferably directly onto exposed bedrock just beneath the terrace colluvium

The report further states that if properly constructed, the driveway could safely encroach to within 25 feet of the bluff edge by utilizing an up to 10-foot-high retaining wall against the west side of the old railroad embankment. The report recommends that any unsupported cuts not be made into the embankment, and that the retaining wall be designed as a fully-drained crib wall, which can be backfilled

with crushed rock to enhance drainage, and covered with plants to soften the visual appearance. Although this a viable option, the Commission finds that it is preferable to avoid cutting into the railroad embankment and risk destabilization of the bluff, which might adversely affect not only the subject property but also adjoining properties. The Commission notes that the Rogers/Pacific report states on page 15 that "the old railroad right-of-way, cut into the natural bluffs behind the proposed residence, is a good area to avoid. (emphasis added) It will continue to experience shallow, localized slope failures, as occurred this past winter. These failures will eventually ravel up slope, and enlarge in volume, but the rate at which such erosion occurs is not linear, it is episodic, a function of the weather."

Avoiding the construction of an up to 10-foot-high retaining wall to allow for the driveway to be located farther inland from the bluff edge as recommended by Rogers/Pacific would also be more consistent with the intent of Zoning Code Section 20.500.010. This section states in part, that new development shall not require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. Locating the driveway where the applicants propose to build it would avoid having to substantially alter a natural landform with a retaining wall, a form of protective device.

The Commission thus finds it is preferable to allow the driveway to be constructed where it is proposed, approximately 15 feet from the edge of the bluff, where no retaining wall will be necessary to support it. This proposal is consistent with the recommendations made by BACE Geotechnical.

The Commission notes that the appellant had previously raised a number of specific concerns regarding bluff retreat at the subject site. In her letter of April 2, 1998 (see Exhibit No. 14), the appellant referred to the situation at Big Lagoon in Humboldt County, also referred to in a letter from the Sierra Club (see Exhibit No. 26), where there has been recent bluff failure, resulting in the loss of property. The Commission finds that Big Lagoon is approximately 200 miles north of the subject site, and has a very different geologic make-up. The geology of even adjacent blufftop parcels can vary tremendously; that is the reason why the Mendocino County LCP calls for site-specific geologic evaluations to account for this fact. The fact that there was bluff failure at Big Lagoon 200 miles to the north in no way affects the potential geologic hazards on the subject site.

In recent letters, the appellant and the Sierra Club also noted a concern about a landslide that occurred in March of 1995 on Coral Court to the north of the subject site (see Exhibits 14 and 26). The Commission finds that the Coral Court slide occurred several hundred yards to the northeast of the Riley site in another drainage, on an upslope parcel separated from the coast by

several other residential lots. Furthermore, the cause of the slide on Coral Court was not due to bluff retreat, but due rather to a unique set of circumstances peculiar to that site. According to a geotechnical investigation prepared for the Coral Court site, the failure occurred as a debris flow consisting mostly of fill soil, wood waste, and debris derived from a former lumber mill located near the head of the landslide. Apparently, during operation of the mill, fill was pushed over the top edge of a steep-sided drainage gully. As a result of the landsliding, most of the debris in the upper portion of the landslide flowed downslope into the portion of the landslide, the Coral Court cul-de-sac, and three adjacent residential parcels. The landslide was triggered by heavy rains which caused surface drainage from Pacific Drive and the Robinson Reef cul-de-sac to flow onto the area of the landslide. Subsurface groundwater flow along the base of the fill and the base of the terrace deposits also probably occurred prior to sliding. The report concluded that poor drainage conditions, loose fill on the affected slope, and over-steep slope inclination all probably contributed to the landslide.

In contrast, the proposed Riley residence is not proposed to be located on a hillside like the Coral Court site, but, rather, on a coastal terrace with one side abutting into the railroad grade. In addition, the Riley site was never used as a dump for lumber mill waste, as was the Coral Court site. Thus, the fact that there was a landslide at Coral Court is in no way indicative of a similar slide occurring at the Riley site.

Finally, the appellant implies in her letter of July 18, 1998 that neither BACE Geotechnical nor Dr. Rogers utilized aerial photography to assess the rate of bluff retreat as called for in LUP Policy 3.4-7. The Commission finds that this assertion is not true. Dr. Rogers did an extensive review of historic aerial photographs and ground photographs of the area, as well as reviewing topographic and geologic maps, government reports and research dissertations, the engineering geologic reports prepared by both BACE and Dr. Kojan, and historic information from published and non-published sources; in addition, Dr. Rogers performed a site reconnaissance on the Riley property (see Exhibit No. 10). In fact, the Commission finds that the report prepared by Dr. Rogers is a comprehensive and complete geologic investigation. Furthermore, the Rogers report, prepared in November of 1997, along with the additional report on sea caves prepared in July of 1998, constitutes the most recent work done on the site (the Kojan report was done in August of 1997).

To ensure that the project will not create any geologic hazards, the Commission has attached to the permit several Special Conditions. Special Condition No. 2 requires submittal of final foundation and site drainage plans that incorporate all recommendations of the BACE Geotechnical report and addendum letters, except regarding the driveway, and also incorporate all recommendations of the geotechnical report done by Rogers/Pacific, except for the recommendation regarding relocation of the driveway. Special Condition No. 2 also requires development to proceed consistent with the certified plans.

In addition, although the applicant understands that the site has the potential for future geologic hazard, no one can predict when or if there might be bluff failure that might affect the house or driveway since such failure appears to be episodic in nature. The Commission thus attaches Special Condition No. 1, which requires recordation of a deed restriction whereby the landowner assumes the risks of extraordinary erosion and geologic hazards of the property and waives any claim of liability on the part of the Commission or its officers, agents, and employees for any damage due to these natural hazards; in addition, the landowner accepts sole responsibility for the removal of any structural debris resulting from landslides, slope failures, or erosion on the site.

The special condition also requires that the landowners agree through recordation of the deed restriction that no bluff or shoreline protective devices shall be constructed on the subject site. This requirement is consistent with Section 20.500.010 of the Mendocino County Coastal Zoning Ordinance, which states that new development shall not in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. The Commission finds that the proposed development could not be approved as being consistent with Zoning Code Section 20.500.010 if projected bluff retreat would affect the proposed house and necessitate construction of a seawall to protect it.

As discussed previously, the geotechnical information prepared in the Rogers/Pacific report indicates that bluff retreat will not adversely affect the proposed house during the economic lifespan of the house, and thus no seawall will be necessary. However, given the varying geotechnical recommendations regarding setback that have been provided for the subject site, the Commission finds the imposition of Special Condition No. 1 especially appropriate. In addition, the Commission notes that the applicant specifically claims that a seawall will not be necessary and has agreed to the imposition of a condition precluding construction of a future protective device.

The Commission finds that Special Condition No. 1 is required to ensure that the proposed development is consistent with the LCP and that recordation of the deed restriction will provide notice of potential hazards of the property and help eliminate false expectations on the part of potential buyers of the property, lending institutions, and insurance agencies that the property is safe for an indefinite period of time and for further development indefinitely into the future, or that a seawall could be constructed to protect the development. Only as conditioned is the proposed development consistent with the geologic setback policies of the certified LCP.

d. Sea Caves.

Regarding the issue of sea caves raised by the appellant and Dr. Kojan, Rogers/Pacific does not recommend any additional protective measures to mitigate against potential sea cave collapse.

Upon direction by the Commission, staff sought additional information on sea caves, which was submitted by Dr. Rogers of Geolith Consultants (formerly with Rogers/Pacific) and is included as Exhibit No. 25. In this most recent submittal on sea caves (a two-page addendum to the original report), Dr. Rogers indicates that the term "sea caves" is a colloquial expression used by area residents to describe localized wave-induced undercut erosion along regional systematic joint clusters in the exposed cliffs. He indicates that the subject site contains three such "sea caves," or localized zones in which waves have undercut along joint clusters. Two of these were observed and the third was actually explored using ropes on October 17, 1998. The northernmost "caves" were selected for study because they appeared to be the most pervasive, extending farthest into the cliffs, and are situated closest to the proposed house site on the Riley parcel.

Dr. Rogers states that the most revealing aspect of the exploration was the observation of cross-cutting joints. The cross cutting nature of the "master" joints creates a physical situation that promotes the formation of rock "wedges" which prevent further collapse of the opening, until such time as the surrounding country rock disintegrates. Thus, the nature of the formation is such that the "sea caves" do not pose a threat to the surrounding property or to the proposed development, consistent with Zoning Code Section 20.500.010, which states that new development shall assure structural integrity and stability and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding areas.

Dr. Rogers thus concludes that although the largest of the so-called "sea caves" extends as much as 30 feet beneath the exposed cliff face, these openings are only a few feet wide. Wave action is concentrated within such openings, causing wave-induced abrasion and exerting considerable suction, which can easily remove loose particles of rock. However, the roofs of these openings do not exhibit evidence of imminent collapse, but will likely retreat with the exposed cliff face, over a period of hundreds of years. Dr. Rogers further concludes that "the physical position of the caves, between 35 and 75 feet below the grade of the exposed terrace (building site), is such that [it] is extremely doubtful these features pose any real threat to a structure designed for a 75-year lifespan."

The appellant has previously asserted in letters to the Commission on the proposed project that the geologist she hired to evaluate the site, Dr. Kojan, has indicated to her that more thorough examinations of the sea caves should be conducted before any development is approved at the site. Specific suggestions have included conducting closely parallel refraction seismic geophysical survey traverses, followed by a series of closely spaced borings with continuous rock cores sampled and logged. (Verran letter of Feb. 28, 1998, Exhibit 12, and July 18, 1998, Exhibit 27.)

Dr. Rogers, however, does not believe such seismic geophysical surveys would be reliable or appropriate in this case. As stated in his November 28, 1997 geotechnical report (see Exhibit No. 10):

> We do not agree with Dr. Kojan's remarks about exploring the sea caves with geophysical techniques. Seismic techniques (refraction or reflection) methods cannot provide reliable indications of voids, such as caves or caverns, only of higher velocity inclusions or units. Voids have zero shear wave velocity. Another complicating factor would be the sea water occupying the floor of such caves, which would reflect..."

In his report of July 13, 1998 on the sea caves issue (see Exhibit 25), Dr. Rogers concludes that "the exploration of such features is best accomplished through direct entry and observation."

The appellant had also asserted that the evaluations of sea caves conducted by Dr. Rogers were inadequate because each of the various sea caves was not explored, particularly those north of the "third promontory." In his July 13, 1998 report (Exhibit 25), Dr. Rogers explains that the caves that were inspected were selected for study because they appeared to be the "most pervasive, extending furthest into the cliffs, and are situated closest to the proposed house site on the Riley parcel."

The Commission finds that the certified LCP does not establish specific standards for geotechnical evaluations of sea caves. LCP Policy 3.4-7 states that the bluff "retreat rate shall be determined from historical observation (e.g., aerial photographs) and/or from a complete geotechnical evaluation." The LCP does not prescribe what a complete geotechnical evaluation should contain. Different geotechnical specialists may vary in their opinions as to precisely how much investigation work is required to assess geologic conditions and whether a proposed development would be safe from geologic hazards. Such differences of opinion between the applicants' original geologist and the geologist hired by the appellant lead the Commission to request that a third geologist chosen mutually by the applicants' and the appellant's geologists be hired to perform an independent geotechnical evaluation of the site. The geotechnical expert chosen to perform the evaluation was Dr. Rogers, who has been certified by the State of California as an Engineering Geologist and Hydrogeologist. Dr. Rogers has performed the most complete investigation of the site conducted to date, and his evaluation is the most recent that has been performed to date. As part of his analysis, Dr. Rogers extensively investigated historical photographs of the site. Given that a complete geotechnical evaluation was prepared which also included an analysis of historical photographs, the Commission finds that the requirements for geotechnical review specified in LCP Policy 3.4-7 have been satisfied.

The Commission further finds that there are no special conditions other than those discussed above which are required to find the proposed project consistent with the certified LCP.

e. Effects on Stability of Adjoining Property.

In her appeal of the project, the appellant had also raised several concerns regarding potential geologic hazards on the subject site and on adjacent property, including her own, including landsliding, bluff retreat, seismic hazards, drainage, and sea caves. The landslide to which the appellant refers is a cut slope failure within the old railroad roadbed, and is located approximately 80 feet from the lower end of the existing driveway; because of its location, runoff from the driveway does not come near the landslide.

In a May 15, 1997 letter, BACE Geotechnical asserts that continued landslide movements would be completely contained by the railroad roadbed, which is flanked by a deep trench at this location. The trench consists essentially of the depression between the top of the raised railroad bed and the hillside. When the railroad bed was constructed, the bed was cut into the hillside and partially raised and the depression created as a means of separating the railroad bed from the adjoining hillside to allow runoff to drain away from the tracks rather than over the tracks which could cause erosion of the railroad bed. Thus, according to the applicants' geologist, "the driveway and proposed residence will have no effect upon the landslide and the landslide will have no effect upon the proposed property improvements."

Rogers/Pacific concurs with the BACE Geotechnical report in concluding that the localized slippage and sloughing of the old railroad cut slope which occurred during the winter of 1996-1997 would not impact any of the proposed improvements on the subject parcel. The Rogers/Pacific report further recommends that the old railroad and piping right-of-way, cut into the natural bluffs behind the proposed residence, should be avoided as a development site, as it will continue to experience shallow, localized slope failures, as occurred this past winter, which will eventually ravel upslope. Rogers/Pacific states that situating the back of the proposed residence against the west-facing slope of the west embankment should serve to isolate the house from both upslope drainage and landslide hazards, provided the structure is designed and built as a fully-drained retaining wall or series of walls.

In her appeal and in subsequent letters submitted to the Commission, the appellant had raised a concern that the proposed development would adversely affect the structural stability of her adjacent parcel. In her letter of July 18, 1998 (see Exhibit No. 27), she states that the proposed Riley house threatens to undermine the bluff occupied by a row of houses up on the hillside. The Riley house will not be located on the hillside; it will, in fact, be located primarily on the coastal terrace and will buttress the railroad grade. In addition, in a letter dated March 5, 1998 (see Exhibit No. 18), BACE Geotechnic indicates that "since the proposed Riley residence will not be in contact with the nearby steep hillside and will not be adding water to the hillside, no conceivable impact to the hillside slope stability will result from the Riley

residence construction." Furthermore, the Commission has determined that the driveway should not be constructed where it would require cutting into the railroad embankment as recommended by Rogers/Pacific. Instead, the Commission finds that the driveway should be constructed where proposed by the applicants and recommended by BACE Geotechnical, approximately 15 feet from the edge of the bluff where no retaining wall will be necessary to support it. As the driveway will not be cut into the railroad embankment or the hillside behind, construction of the driveway will also not adversely affect hillside slope stability.

Concerns were also raised at the March 11, 1998 hearing that runoff from the driveway has eroded a cusp in the soil that rests on top of the bedrock of the bluff and that additional runoff generated by the proposed project might cause further erosion, damaging the bluff on the property to the south. Rogers/Pacific notes in the report dated November 28, 1998 that the cusp in the terrace on the subject parcel has demonstrated "modest levels of erosion...over the past 25 years, likely due to unnatural concentration of surface flow, emanating from the steep access road." Rogers/Pacific points out that "proper design and construction of the paved driveway could alleviate much of this erosion," and recommends that the driveway pavement be cross-sloped 5% towards the uphill side, and runoff then collected, conveyed, and discharged away from the driveway. In this way, the accelerated erosion of the cusp should cease. Thus, construction of the proposed driveway, if done properly, will actually reduce erosion on the site and on the adjoining property to the south.

Therefore, the Commission finds that the proposed project, as conditioned, will neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding areas, consistent with Zoning Code Section 20.500.010. The Commission further finds that no other special conditions are necessary to find the proposed project consistent with the above-referenced policies of the certified LCP.

f. Fault Hazards.

Regarding the issue of seismic hazards raised by the appellant and Dr. Kojan, Rogers/Pacific states that they are not concerned about the potential for surface fault rupture in the very small fault feature exposed in the sandstone cliff on the site, nor are they concerned about the projected fault shown on the 1963 Santa Rosa sheet, which was removed from the newer Santa Rosa sheet released in 1982. No additional measures to protect against fault hazards were recommended.

g. Clean-up of Debris.

As discussed previously, both the BACE Geotechnical and Rogers/Pacific reports conclude that the proposed development can be constructed in a manner that will not subject the home to collapse from bluff retreat over the life of the project or otherwise create a geologic hazard. However, the geotechnical evaluations do not guarantee that bluff retreat will not affect the house. Some risks of an unforeseen natural disaster, such as an unexpected landslide, massive slope failure, erosion, etc. could result in destruction or partial destruction of the house or other development approved by the Commission. When such an event takes place, public funds are often sought for the clean up of structural debris that winds up on the beach or on an adjacent property. As a precaution, in case such an unexpected event occurs on the subject property, the Commission attaches Special Condition No. 1 (d), which requires recordation of a deed restriction whereby the landowner assumes the risks of extraordinary erosion and geologic hazards of the property and accepts sole responsibility for the removal of any structural debris resulting from landslides, slope failures, or erosion on the site.

h. Conclusion.

The Commission thus finds that the proposed project, as conditioned, is consistent with LUP Policy 3.4-7, 3.4-9, and Zoning Code Sections 20.492.025 and 20.500.020(A)(2), as the house and driveway will be set back a safe distance from the bluff edge, the site drainage will reduce erosion of the bluff, and the proposed development, as conditioned, will not result in the creation of any geologic hazards.

3. Visual Resources:

LUP Policy 3.5-1 states that the scenic and visual qualities of Mendocino County coastal areas shall be considered and protected as a resource of public importance, and that 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.

LUP Policy 3.5-5 states that providing that trees will not block coastal views from public areas such as roads, parks and trails, tree planting to screen buildings shall be encouraged.

Zoning Code Section 20.504.020, Special Communities and Neighborhoods, refers to several communities including Gualala, and sets forth development criteria for those areas. Section 20.504.020(C) states that the scale of new development (building height and bulk) shall be within the scope and character of existing development in the surrounding neighborhood, that

new development shall be sited such that public coastal views are protected, and that building materials and exterior colors shall be compatible with those of existing structures. Zoning Code Section 20.504.035(A)(2) states that where possible, all lights shall be shielded or positioned in a manner that will not shine light or allow glare to exceed the boundaries of the parcel on which it is placed.

The proposed development is a total of 2,814 square feet, and is two stories (with a subterranean garage) and approximately 28 feet high. The Commission finds that it is larger in terms of height and bulk than many surrounding residences, and due to its location on the lower coastal bluff, would be quite visible from most portions of the Gualala Point Regional Park in Sonoma County to the south, including from the public beach. While there are a number of other houses nearby on the bluffs above the subject site that are somewhat visible from the public park and beach, the proposed development would be one of the only houses on the lower terrace, and would be very noticeable due to its size and prominent location on the virtually undeveloped terrace.

Staff from Sonoma County Regional Parks has assessed the impacts of the proposed residence on the park, and recommends that an evergreen screen of native trees be planted along the south side of the residence to mitigate the visual impacts of the project on the park, and that the house be constructed with cedar siding with natural stain, dark fiberglass shingle roofing, and native field stone (see Exhibit No. 11). Although some trees grow along the hillside portion of the lot, these trees are located too far to the east of the proposed house location to effectively screen the house from view from the park.

To reduce the impacts of the proposed development on visual resources, the Commission attaches Special Condition No. 3, which requires that the applicant submit a landscaping plan that provides for the planting of an evergreen screen of drought-tolerant native or naturalized trees and/or shrubs along the south side of the residence to mitigate the visual impacts to the Gualala Point Regional Park as a result of the proposed construction. The submitted plan must include a tree maintenance program (e.g., pruning, fertilizing, watering, etc.) for newly planted trees and a tree replacement program on a one-to-one or greater ratio for the life of the project. While offering screening of the proposed house from vantage points within Gualala Point Regional Park, the required trees will not block views from any other public vantage point including roads, parks, and trails. Therefore, Special Condition No. 3 ensures that the project is consistent with LUP Policy 3.5-5.

The Commission also attaches Special Condition No. 4, which imposes design restrictions, including a requirement that all exterior siding and roofing of the proposed structure shall be of natural or natural-appearing materials of dark earthtone colors only; that all exterior materials, including the roof and the windows, shall be non-reflective to minimize glare; and that all

exterior lights, including any lights attached to the outside of the house, shall be low-wattage, non-reflective, and have a directional cast downward. These requirements are consistent with the provisions of Zoning Code Sections 20.504.020(C) and 20.504.035(A)(2).

Since the existing trees on the site provide some softening effects and/or backdrop to minimize visual impacts, the Commission also attaches Special Condition No. 5, which states that this permit does not authorize the removal of any trees from the subject parcel, other than those required to be removed to meet the fire safety regulations of the California Department of Forestry and Fire Protection or those required to be removed for the relocation of the driveway, and that any future removal of trees shall require a new coastal permit or an amendment to this permit.

The Commission thus finds that the proposed development, as conditioned, is consistent with LUP Policies 3.5-1 and 3.5-5, and with Zoning Code Sections 20.504.020 and 20.504.035, as coastal views will be protected and visual impacts will be minimized.

4. Public Access:

Projects located within the coastal development permit jurisdiction of a local government are subject to the coastal access policies of both the Coastal Act and the LCP. Coastal Act Sections 30210, 30211, and 30212 require the provision of maximum public access opportunities, with limited exceptions. Section 30210 states that maximum access and recreational opportunities shall be provided consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse. Section 30211 states that development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation. Section 30212 states that public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, adequate access exists nearby, or agriculture would be adversely affected.

The Mendocino County LUP includes a number of policies regarding standards for providing and maintaining public access. Policy 3.6-9 states that offers to dedicate an easement shall be required in connection with new development for all areas designated on the land use plan maps. Policy 3.6-28 states that new development on parcels containing the accessways identified on the land use maps shall include an irrevocable offer to dedicate an easement. LUP Policy 3.6-27 states that:

No development shall be approved on a site which will conflict with easements acquired by the public at large by court decree. Where evidence of historic public use indicates the potential for the existence of prescriptive rights, but such rights have not been judicially determined, the County shall apply research methods described in the Attorney General's "Manual on Implied Dedication and Prescriptive Rights." Where such research indicates the potential existence of prescriptive rights, an access easement shall be required as a condition of permit approval.

This language is reiterated in Zoning Code Section 20.528.030.

In its application of these policies, the Commission is limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to offset a project's adverse impact on existing or potential public access.

The subject site is located west of the first public road and sits atop a steep coastal bluff. The County's land use maps do not designate the subject parcel for public access, and there does not appear to be any safe vertical access to the rocky shore down the steep bluffs. According to the County, there is no evidence of public prescriptive use of the subject site, and so the County did not instigate a prescriptive rights survey. Although there are some faint pathways on the site, there is no evidence that use of the site has been by anyone other than neighbors or locals. Such use by a limited group of people would not constitute substantial public use that could give rise to prescriptive rights. Moreover, the proposed development does not interfere with any possible existing public use of the site, as no development is proposed for the portion of the site on which the appellant asserts a prescriptive right may exist. Since the proposed development will not increase significantly the demand for public access to the shoreline and will have no other impacts on existing or potential public access, the Commission finds that the proposed project, which does not include provision of public access, is consistent with the public access policies of the Coastal Act and the County's LCP.

5. Planning and Locating New Development:

Policy 3.9-1 of the Mendocino County LUP states that new development shall be located in or in close proximity to existing areas able to accommodate it, and shall be regulated to prevent any significant adverse effects, either individually or cumulatively, on coastal resources. Policy 3.8-1 of the LUP requires consideration of Highway One capacity and availability of water and sewage disposal when considering applications for Coastal Development Permits. The intent of this policy is to channel development toward more urbanized areas where services are provided and potential impacts to resources are minimized.

The subject property is zoned in the County's LCP as Rural Residential-5 acre minimum [Suburban Residential] (RR:L-5 [SR]), meaning that there may be one parcel for every 5 acres, or one parcel for every 6,000 square feet within water and sewer service areas. The subject parcel, which is approximately 1.2 acres in size and is served by community water and sewer services, is a legal, conforming lot.

The Commission finds that the proposed project is consistent with LUP Policies 3.9-1 and 3.8-1 in that the parcel is able to accommodate the proposed development and that adequate services are available.

6. Archaeological/Cultural Resources:

LUP Policy 3.5-10 requires the County to review all development permits to ensure that proposed projects will not adversely affect existing archaeological and paleontological resources, and that a field survey should take place prior to approval of any proposed development within an area of known or probable archaeological or paleontological significance. The policy also requires that proposed projects incorporate reasonable mitigation measures so the development will not adversely affect existing archaeological/paleontological resources.

The cultural resources evaluation done for the site by Archaeological Resource Service indicates that the parcel includes a portion of an old railroad bed. The old railroad bed parallels the coastline and formerly provided access to nearby Robinson's Landing and the old cargo chute dating from the mid-1860's that is located on a rocky promontory at the edge of the bluff on an adjacent parcel. As a result, there is the potential for the presence of cultural resources on the site. With regard to archaeological resources, the survey found no signs of prehistoric shellfish remains or artifacts, but expressed a concern that such remains might be uncovered during grading or construction.

To address this concern, the Commission attaches Special Condition No.6, which requires that if any archaeological or paleontological resources are discovered on the project site during construction, all work that could damage or destroy these resources shall be suspended, and the applicant must then have a qualified archaeologist inspect the project site, determine the nature and significance of any archaeological materials discovered, and, if deemed necessary, develop appropriate mitigation measures to protect the archaeological resources using standards of the State Historic Preservation Office.

The Commission finds that the proposed project, as conditioned, is consistent with LUP Policy 3.5-10, as archaeological resources will be protected.

7. California Environmental Quality Act (CEQA).

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

The proposed project has been conditioned in order to be found consistent with the policies of the Mendocino County LCP and the public access and recreation policies of the Coastal Act. Required mitigation measures will minimize all adverse environmental impacts, including requirements that (1) the applicant shall record a deed restriction regarding assumption of risk and waiver of liability, and stating that no bluff or shoreline protective devices shall be constructed, and stating that the applicant accepts sole responsibility for the removal of any structural debris resulting from landslides, slope failures, or erosion on the site; (2) the applicant shall submit final foundation and site drainage plans for the proposed project that are consistent with the recommendations made in the geotechnical reports; (3) a landscaping plan be submitted that will provide for the planting of an evergreen screen of drought-tolerant native or naturalized trees and/or shrubs along the south side of the residence to minimize the visual impacts to the Gualala Point Regional Park; (4) design restrictions be imposed to minimize visual impacts of the project; (5) any future removal of trees shall require a new coastal permit or an amendment to this permit, other than those required to be removed to meet fire safety regulations or those required to be removed for the relocation of the driveway; and (6) if any archaeological resources are discovered on the site during construction, all work that could damage or destroy these resources shall be suspended, and, if deemed necessary by a qualified archaeologist, appropriate mitigation measures must be developed.

As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act and to conform to CEQA.

ATTACHMENT A

Standard Conditions

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

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

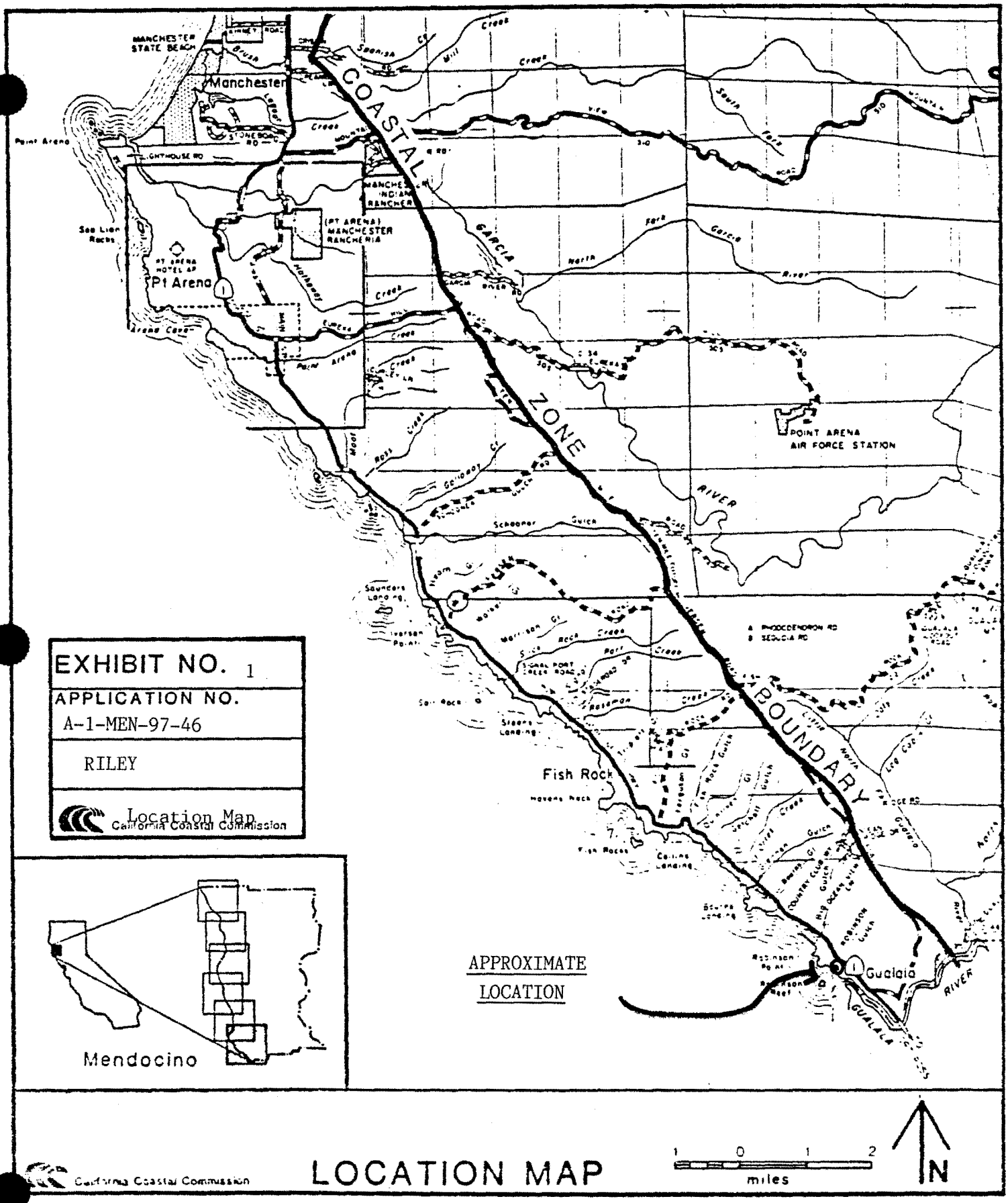
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.

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

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

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

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



County of Mendocino

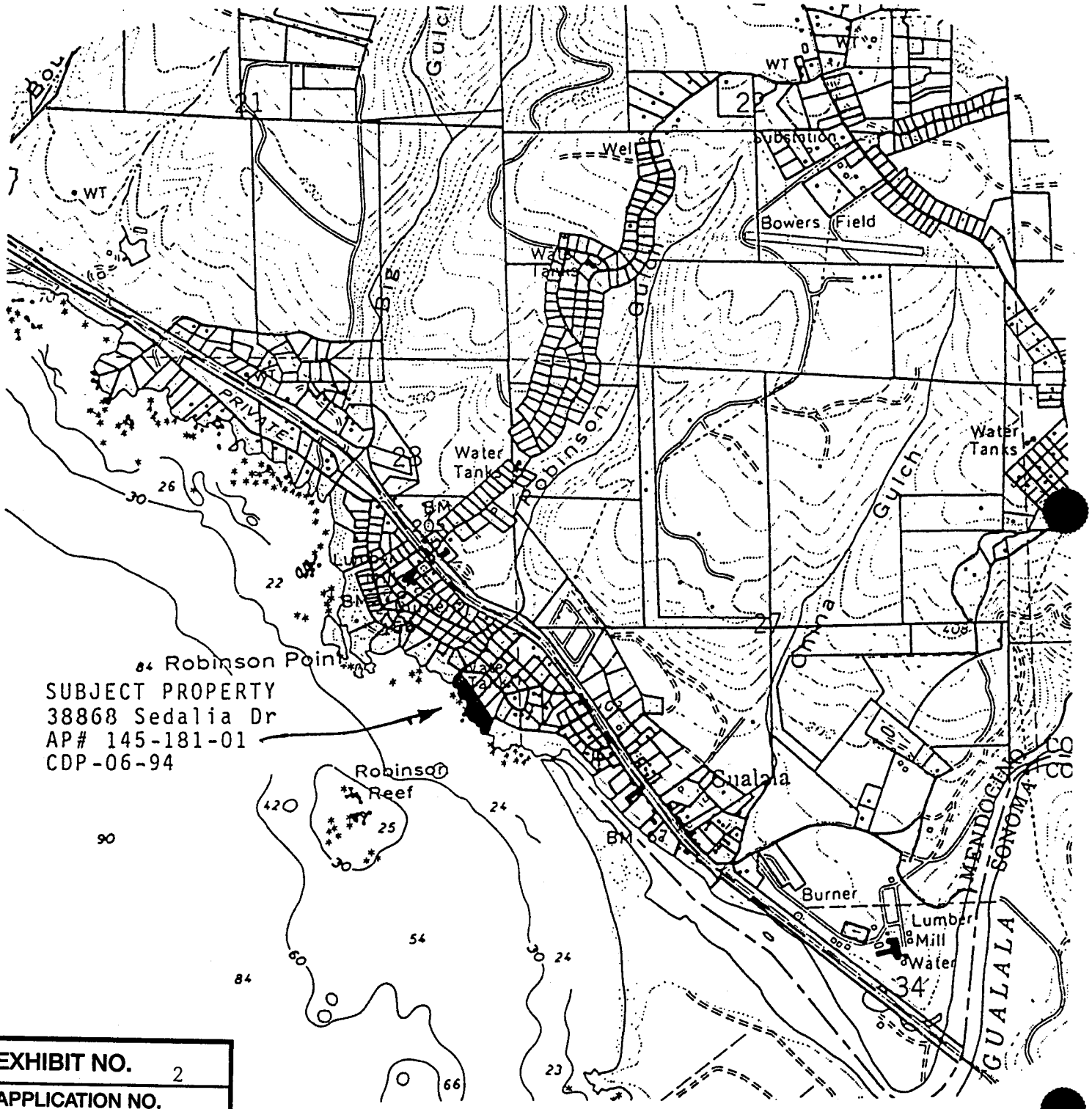


EXHIBIT NO. 2
APPLICATION NO. A-1-MEN-97-46
RILEY
Vicinity Map

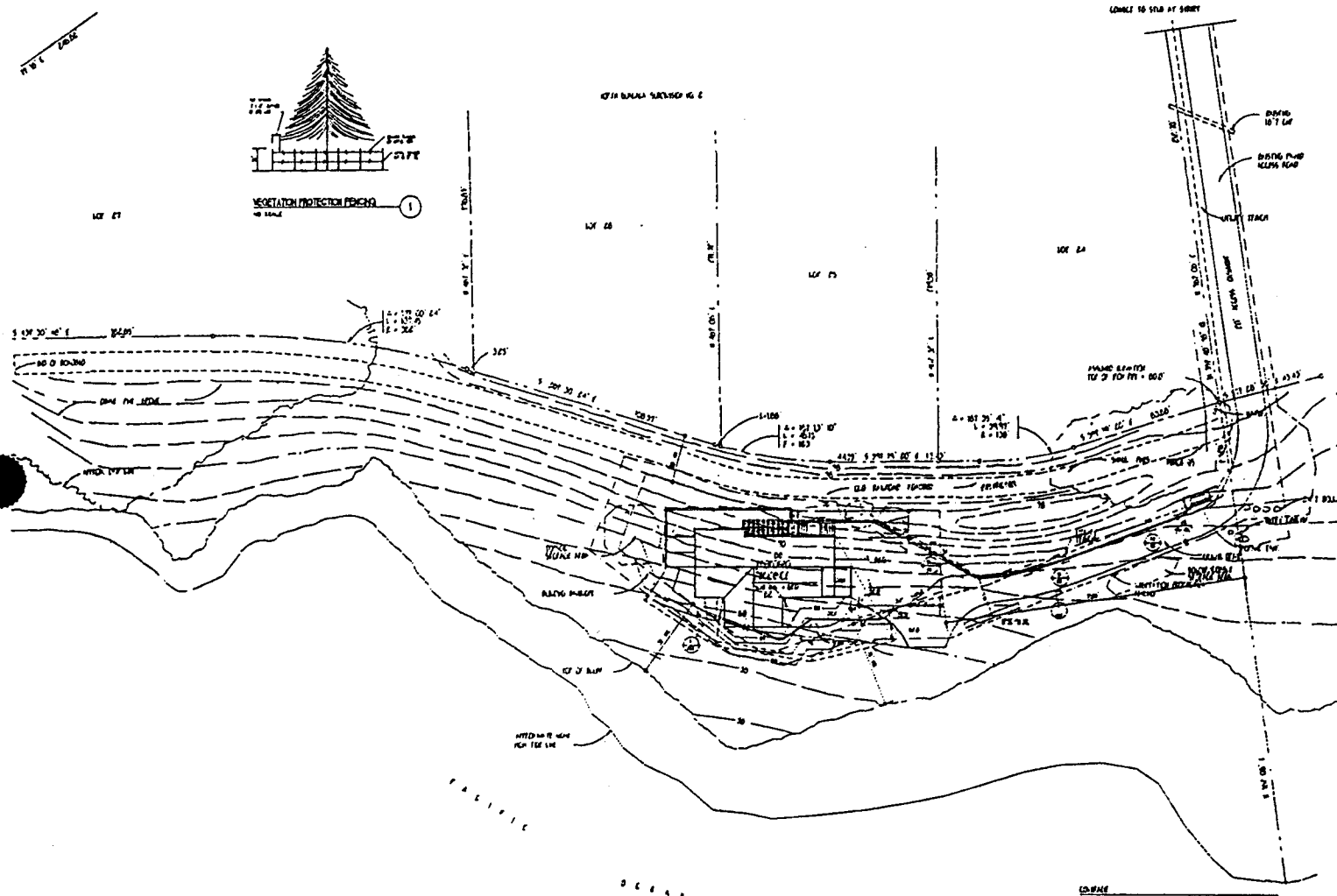
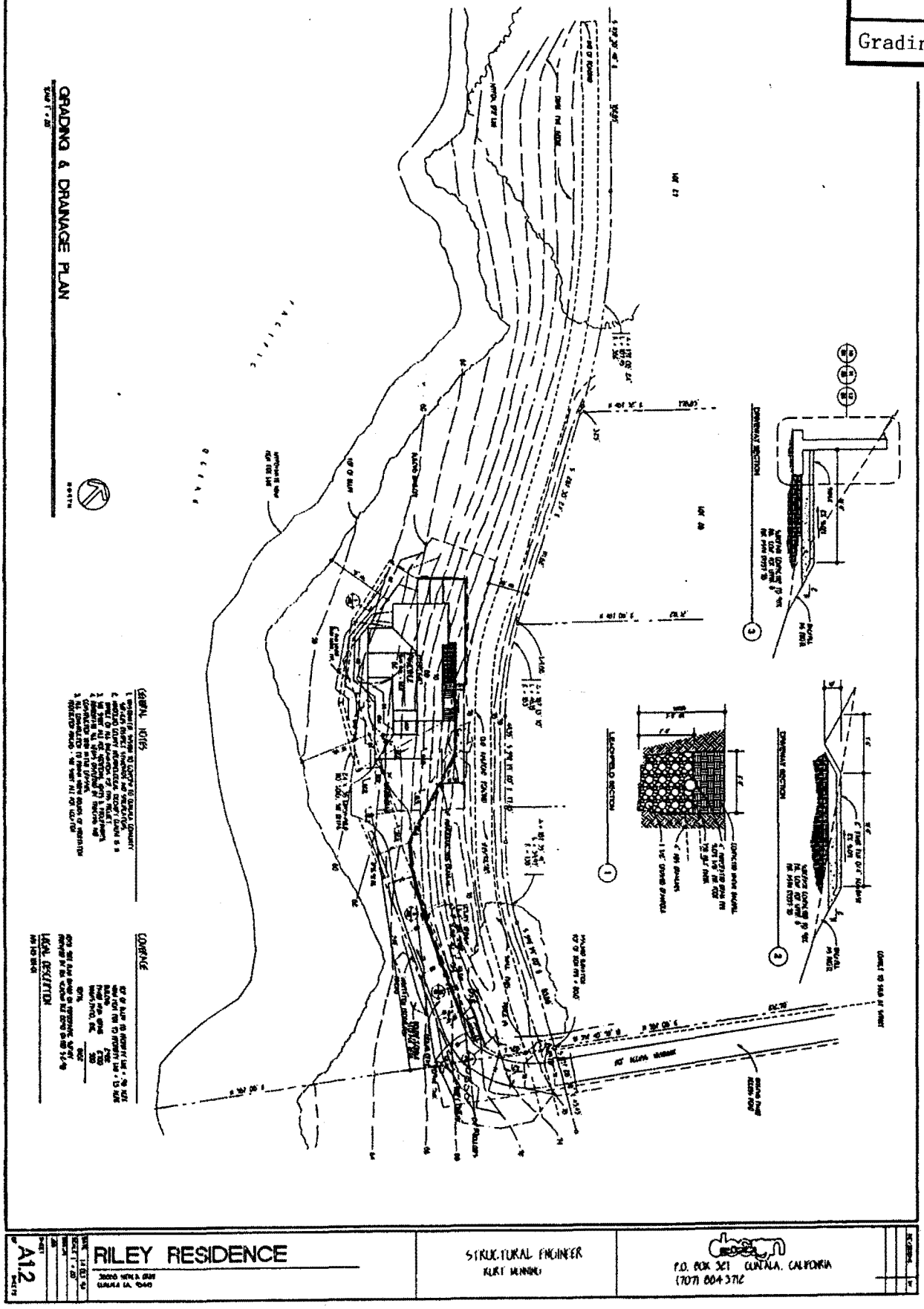
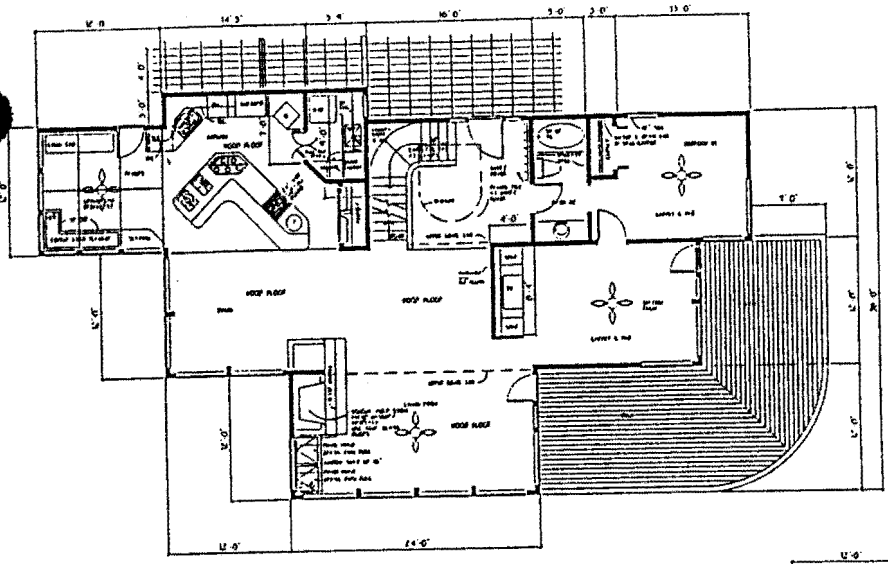


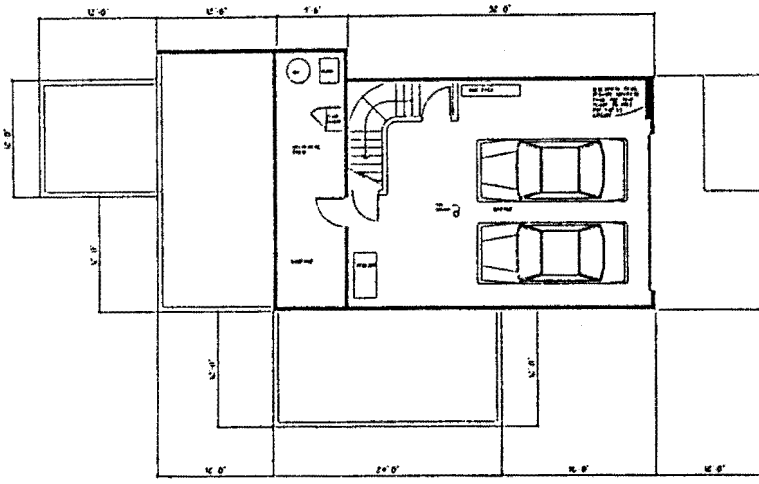
EXHIBIT NO. 3
APPLICATION NO. A-1-MEN-97-46
RILEY
Site Plan

EXHIBIT NO. 4
APPLICATION NO. A-1-MEN-97-46
RILEY
Grading and Drainage

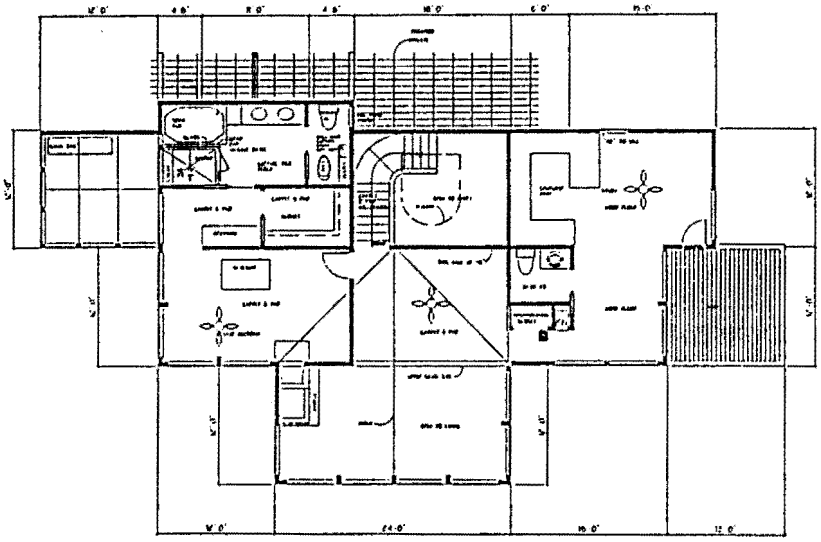




main floor plan



garage/basement plan

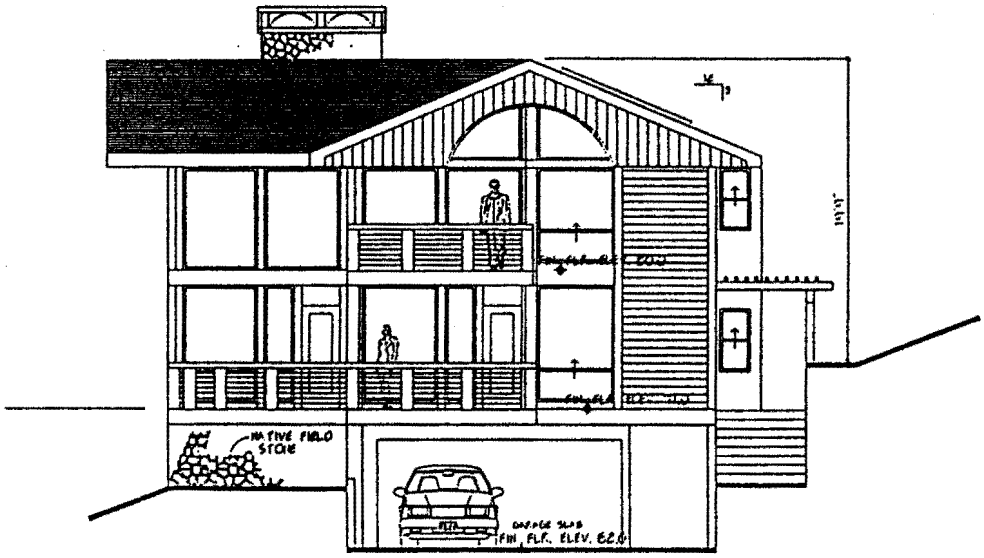


upper level plan

EXHIBIT NO. 5
APPLICATION NO. A-1-MEN-97-46
RILEY
Floor Plans

north elevation

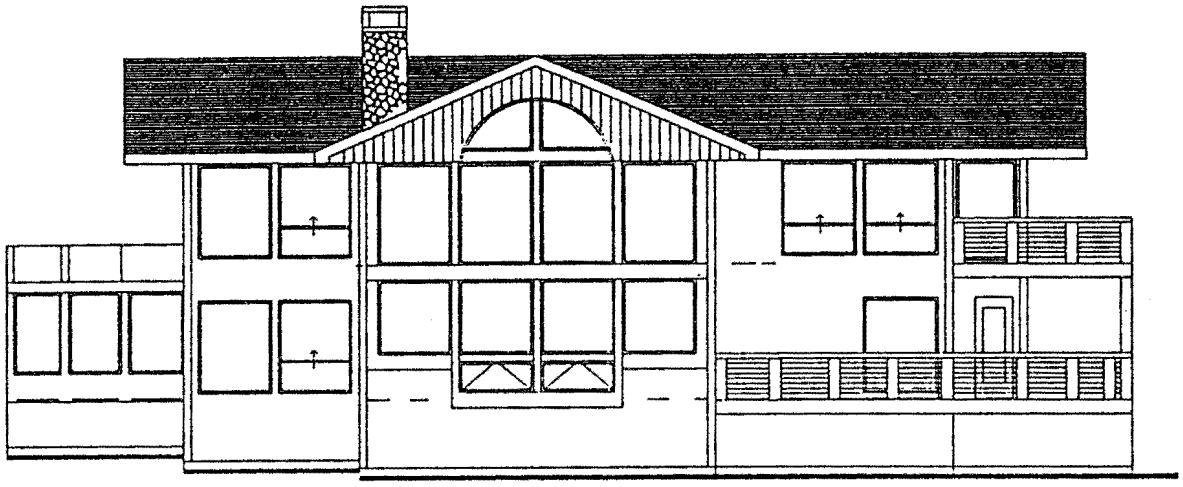
scale 1/4"-1'-0"



south elevation

scale 1/4"-1'-0"

EXHIBIT NO. 6
APPLICATION NO. A-1-MEN-97-46
RILEY
Elevation Plans

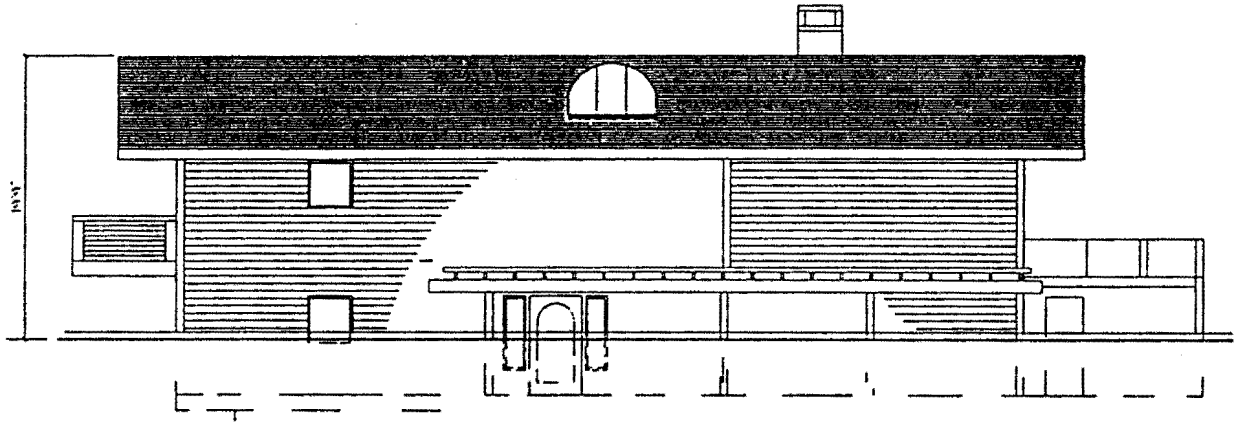


west elevation

SIDING: 1X8 HORIZONTAL CEDAR SIDING LAP SIDING RESAWN FACE

ROOFING: ELK CLASS A ROOF SABLE BLACK COLOR

NOTE: ALL EXTERIOR LIGHTING TO BE SHIELDED WITH BOXED LIG
OR DOWNLIGHT RECESSED SPOTS.



east elevation

EXHIBIT NO. 7

APPLICATION NO. A-1-MEN-97-46

RILEY

Elevation Plans

EXHIBIT NO. 8
APPLICATION NO. A-1-MEN-97-46
RILEY
Photo of Erosional Cusp

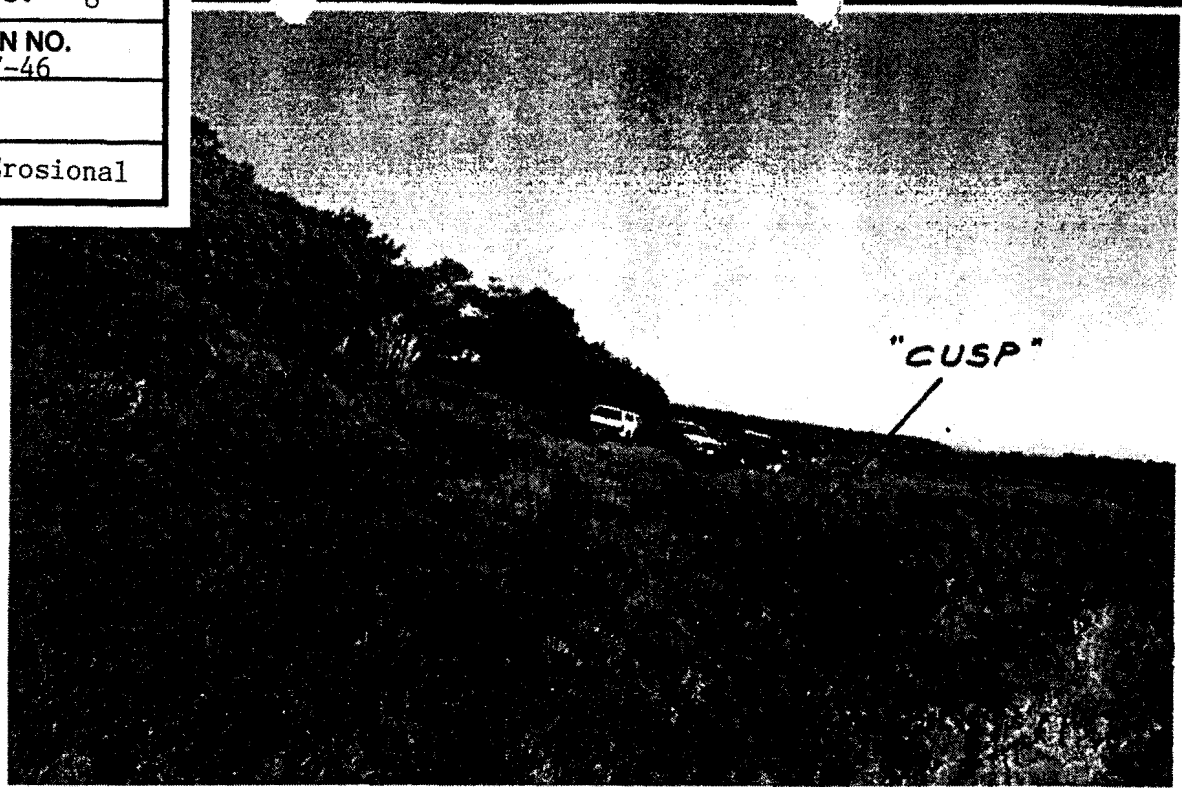


Photo 6: Erosional "cusp" in marine terrace, as seen from just north of the cusp, at the crown of the sea cliffs. The proposed driveway alignment skirts this feature. The old railroad embankment is at left. Note trail, which directs runoff to this location.

Photo 7: View of the erosional "cusp" in the marine terrace, taken from an elevation about 10 feet below the top of cliff. The approximate contact between the Gualala sandstone and the terrace deposits is dashed. Note how the sandstone platform has been washed clean by wave wash, upwards of 50 feet above sea level.

ROGERS/PACIFIC Consultants in the Applied Earth Sciences	RILEY PARCEL		
	38868 Sedalia Drive, GUALALA, CALIFORNIA		
	PROJECT NO. PR3057	DATE NOVEMBER 1997	PHOTO NO. 6 & 7

JULY 1, 1996 AERIAL PHOTO RILEY PARCEL

38868 Sedalia Drive, GUALALA, CALIFORNIA

PROJECT NO. PR-5057	DATE NOVEMBER 1997	PHOTO NO. 11

ROGERS/PACIFIC
Consultants in the Applied Earth Sciences

EXHIBIT NO. 9
APPLICATION NO. A-1-MEN-97-46
RILEY
Aerial Photo

ROGERS/PACIFIC
Geological and Geotechnical Engineering
396 Civic Drive Pleasant Hill, CA 94523
(510) 682-7601 (510) 682-7605 fax
15643 Sherman Way, Suite 410
Van Nuys, CA 91406
(818) 781-2695 (818) 781-6542 fax

Friday November 28, 1997

David and Kathryn Riley
520 Edgehill Drive
Gibsonia, PA 15044-9221

RE: Engineering geologic peer review
38868 Sedalia Drive, Gualala, CA
Mendocino Co. APN 145-181-01

Dear Mr. and Mrs. Riley:

In accordance with our proposal to yourselves and the California Coastal Commission, dated October 15, 1997, we have made a review of the sea cliff and bluff stability situation involving your parcel at 38868 Sedalia Drive in Gualala, Mendocino County, California. The scope of this review included: review of documents in the public record (including topographic and geologic maps; governments reports and research dissertations), review of engineering geologic reports by BACE Geotechnical and Ernest Kojan, Ph.D., RG, CEG; review of historic aerial photographs; review of ground photos; review of historic information from published and non-published sources; a site reconnaissance with your consulting geologist Erik Olsborg and your neighbor Julie Verran (and others); analysis of the collected data; and the preparation of this report.

The purpose of this review is to evaluate certain disagreements which have been aired between your consultants (BACE Geotechnical) and those retained by the upslope neighbors (Dr. Eugene Kojan). Central to this dispute are estimates of the average rate of cliff retreat, since the Coastal Commission requires that new structures be set back 75 times the average annual rate of cliff retreat.

Our review has been made at the request of Ms. Jo Ginsberg of the North Coast Area office of the California Coastal Commission, 45 Fremont Street, Suite 2000, San Francisco, CA 94105-2219. It is possible that additional information, not known to us at this time, could significantly alter the conclusions drawn herein, and that such conclusions, therefore, are based on the available data and our best professional judgement.

EXHIBIT NO. 10
APPLICATION NO. A-1-MEN-97-46
RILEY
Geotechnical Report

Site Location

The subject site is located at 38868 Sedalia Drive in Gualala, California, in extreme southern Mendocino County, right on the shoreline. The parcel is situated upon Robinson's Landing, the northernmost of two parcels which used to be owned by the Gualala Railroad, a local lumber railroad that ran between Bourn's Landing and the Gualala Lumber Company mill in Gualala between 1875-1922. The sea cliffs at this site are between 54 and 65 feet high, very rugged, and underlain by sandstone units of the Gualala formation. In some alcoves there is a prominent bedrock bench situated about 25 feet above low tide, while at the promontories, the cliffs drop straight into the water without any meaningful steps. The house site is situated between the precipice of the sea cliffs and a cut/fill embankment built for the old railroad, which lies between 100 and 200 feet behind the cliff face, depending on location. The building site is underlain by 2 to 6 feet of colluvium/terrace sediments that appear to date from the last glaciation, when the coast was situated about 5-1/2 to 6-1/2 miles seaward of the existing shore. Older terrace surfaces are prominently displayed above the site, and is upon these surfaces that the upslope neighbors of this parcel have founded their residences, at a considerably higher elevation.

Review of Historic Information

The site has a long and colorful history which lends itself to helping to unravel the rate of cliff retreat over the past 130 years. According to the local history book titled Gualala, written by Annette White Parks in 1986, Gualala was served principally by coastal sea schooners who transited back and forth to San Francisco, because, up until the late 1930s, the only wharf in the region was situated in Point Arena. Redwood timber and tanbark was the region's principal commercial commodity in the early days, and loading and unloading of sea schooners was effected via the employment of timber chutes, situated on rocky promontories, such as Robinson's Landing.

Cyrus D. Robinson appears to have constructed the first timber loading chute in the Gualala area at this location, and the remains of the tower structure for the chute can be seen on the adjacent parcel. A single timber post sits on a resistant piece of sandstone about 25 feet above sea level. On page 39 of Parks' book, an undated photo of Robinson's Chute is presented, with the Cole Brothers chute in the background, situated on the adjacent promontory, which collapsed in 1986. Although the photo is undated, according to events in the text, it was likely imaged around 1875 because the Cole Brothers chute, originally constructed in 1865, appears to be inoperative, while the Robinson chute was completely rebuilt in 1875. So, the photo likely dates from 1875, or shortly thereafter, unless the Cole Brothers were just beginning construction, in which case it would be 1865.

Parks (1986) relates that Robinson's Landing was precarious at best, and was "known to close by the first of June each year", due to foul landing conditions. Within a few years, Bourn's Landing, about 2-1/2 miles north of Gualala, became the principal point of shipment for the coastal schooners. We must assume that this transition occurred sometime around 1875, when the Gualala railroad extended their tracks northward, to Bourn's Landing. Bourn's Landing was thriving by 1885, when a photos

of it appear in Logging the Redwoods (Carranco and Labbe, 1975; page 36). Begun as a horse-powered tram railroad, the company employed a novel gauge width of 68-½ inches (in lieu of the standard gauge 56-1/2 inches), so that two-horse teams could pull the freight cars while walking between the tracks. Soon thereafter, the railroad built a small donkey [steam] engine on a flat car, which made three trips to Bourn's Landing each day. In 1877 the railroad re-tracked their line to 30 pound (per 3 feet section) T- rail, and purchased their first steam locomotive (Gualala Mill Co. Engine No 1) from Miners Foundry & Machine Works of San Francisco in 1878. Another San Francisco-built locomotive was purchased in 1884 (Engine No. 2), and the line was again relaid, this time with 40 pound rail (to handle the heavier engines). In 1888-89 the road acquired a Baldwin Locomotive Works engine, christened Engine No. 3, and later still another (Engine No. 4), the latter of which worked the line until its insolvency sometime between 1922-30.

Interior portions of the rail line suffered extensive earth movement damage in the April 1906 earthquake (Photo 33 in Lawson, et al, 1908), not surprising in view of its multiple crossings of the San Andreas fault, which controls the linear trend of the Gualala River. However, there is no evidence that the coastal line serving Bourn's Landing was adversely affected. The big timber mill then burned down in September 1906, never to be rebuilt. According to Logging the Redwoods (page 70), the railroad went into "final bankruptcy" in 1922, but Parks (1986) gives the last date of operations as extending to 1930. Parks relates that the old rails were taken up and sold for scrap in 1936. A piece of what appears to be 30-pound T-rail remains partially buried in the old right-of-way on your parcel.

Review of Ground Photographs

Comparisons of hand-held photographs taken by people on the ground have long proven valuable for discerning changes over time due to the normal processes of erosion and mass wasting. This site is no exception. Figure 12 on page 39 of Parks' book on Gualala presents a high definition view of Robinson's chute tower at Robinson's Landing, built upon a resistant sandstone pedestal on what is now the adjacent parcel (to the south). This view is presented as Photo 1. Comparison with the same view, taken today, is presented in Photo 2. Although taken at different sunlight angles, the comparison suggests that the remaining timber is the north most post of the old supporting bent for the timber chute tower, dating back to at least 1875. We can easily discern a large volume of cliff situated behind the resistant sandstone pedestal beneath the tower has been eroded away, and the supporting pedestal has become isolated, out in the surf. One can no longer walk directly down to the pedestal, as portrayed in Photo 1.

Another view, taken much later, after the chute had collapsed or been torn down is presented on page 22 of Gualala, which likely dates from around the turn of this Century (1900), or later. This is reproduced as Photo 3. In this view only the supporting bent for the chute tower remain. Someone appears to have placed a timber pole diagonally, across the supporting bent, or this may be the remains of the landward side of the chute. The existence of timber drift and flotsam behind the tower bent is corroborated with the present situation, and the resistant pedestal appears more isolated from

the cliff than in the view reproduced as Photo 1. Critical evaluation of Photos 1, 2 and 3 suggests that the sandstone cliffs are actually retreating at discernable rate, likely in excess of several inches per year.

Of particular note in Photo 2 is the existence of a driftwood tree trunk above and behind Robinson's Chute, situated about 45 feet above sea level. This trunk (not to be confused with another tree trunk situated at a higher elevation, but not appearing to be driftwood), attests to the crashing and uplifting action of storm waves over the old Landing pedestal block, which must be considerable during foul weather. Clearly this situation did not exist when Photo 1 was imaged in 1875 or thereabouts.

Ms. Julie Verran, the neighbor at 38864 Sedalia Drive, Gualala, lives on the parcel immediately upslope of your parcel, which her parents purchased almost 30 years ago, in 1969. They built their home a few years later, and she has lived there since that time. She loaned us with two black and white photographs taken of the middle promontory, where the Cole Brothers built their loading chute around 1865. The oldest of these ground photos was taken by Ms. Verran's deceased mother in March 1973. It is reproduced herein as Photo 4. It shows the shoreward 15 to 20 feet of cliff face promontory to be severely undercut and detached, with wide open fissures at two levels: one extending from below sea level to about 15 feet, and another upper level of erosion between 25 and 35 feet above sea level. The loss of material here appears to be controlled by the sluicing action of small shale interbeds, between the more massive beds of sandstone. The seaward column of rock appears to be in a most precarious position. The supporting post for the old Robinson Chute can just be seen protruding from behind the face of this promontory.

The comparison photo is presented as Photo 5. It was taken 24 years later, in March 1997, and shows that the entire block comprising the seaward 15 to 20 feet of cliff face, has collapsed into the sea, and several of the largest blocks can be seen protruding from the surf. The angle of the view is a bit more southerly, suggesting the photographer (Ms. Verran) stood a bit more seaward than her mother's 1973 image. The overhang beneath the Robinson Chute timber post can be easily appreciated.

Review of Aerial Photographs

Stereopairs of aerial photographs taken in 1942, 1953,1964, 1965, 1981 and 1996 were reviewed as part of this project. These photos were provided by Julie Verran, Dr. Kojan and BACE Geotechnical; who obtained them from established aerial photos sources, such as the Fairchild Archives at Whittier College, Geonex of Sacramento, and Pacific Aerial Surveys of Oakland. A key landmark along the crown of the sea cliffs is a small concave cusp extending onto the uppermost terrace deposits, adjacent to the proposed driveway (Photos 6, 7 and 8). It would appear that this small cusp represents accelerated erosion due to localized concentration of runoff, emanating from the steep access road that serves the two undeveloped sea bluff parcels in question. The cusp is a very small, but pronounced feature, extending about 6 feet land ward of the cliff crown north and south of it's location. It was most surprising to find that this feature appears little changed, dating back to the

earliest aerial photos in 1942! There is evidence of some additional erosion on the south side of the cusp feature in the past several years, likely due to the intense storms of January 1993, January 1995 and December 1996-January 1997, which have caused considerable damage along this portion of the coast.

Comparison of the July 6, 1964 and September 29, 1965 aerial photos is of particular importance, because of the March 27, 1964 Alaskan earthquake and a sequence of intense storms that struck the northern California coast during the Christmas holidays of December 1964, causing record runoff in many of the region's rivers, such as the Van Duzen, Mad, Eel, Russian and Klamath. Careful scrutiny of these photos reveals that a major cliff failure occurred sometime between the 1953 and 1964 photos (closer to 1964), towards the north end of your parcel, and about 175 to 250 feet south of Robinson Gulch. This rockfall/cliff retreat sequence is seen in the July 1964 photo, included herein as Photo 9. The scale of this localized cliff retreat appears to be between 20 and 30 feet wide blocks, involving about 60 to 75 feet of the cliff face.

Much of the blocks and detritus from the early 1960s cliff retreat south of Robinson Gulch appears to have been eroded away by the time of the image made in June 1981. There also appears to be some recent scalloping of the terrace deposits capping the Gualala sandstone adjacent to the proposed house site, and some enlargement of the prominent cusp described earlier, along its south side. These erosion features are small, but recognizable, even with large scale images (Photo 10).

This past winter, some localized slumps occurred at the base of the cut slope made for the Gualala Railroad, where it curves around Robinson's Landing. A review of the aerial photos revealed that this is a recurring problem, and was also noted in Photo 9, taken in July 1964. A review of the September 1965 photos suggests that this erosion was renewed during the Christmas 1964 floods (and as occurred this past winter). Given the over steepened nature of this cut slope, this should not be surprising. The July 1, 1996 photo reveals very little erosion of the same cut slope in the 10 to 15 years prior to that image, based on the mature vegetation mantling the cut slope.

The July 1, 1996 aerial photos by Pacific Aerial Surveys of Oakland are color images (Photo 11). They present excellent tonal definition on local ocean turbidity in vicinity of Robinson's Gulch and the Landing, and they show the splash line of the surf on the sea cliffs. The prominent driftwood trunk above and behind old Robinson's Landing is also clearly shown, and appears to be bleached, suggesting it has been in-place for a season or more by mid-1996. The loss of the middle promontory, shown in Photos 4 and 5, is clearly shown, as is the exposed position of the pedestal block supporting the old post at Robinson's Landing. Photo 11 also shows how the entire massif of Robinson's Landing protrudes out into the sea, due to the more resistant nature of the underlying sandstone, as compared to the shaley units outcropping north and south of the Landing. The prevailing longshore wash appears out of the west northwest, hitting the cliffs at an angle of about 45 degrees.

Review of Consultant's Reports

June 1992 Report by BACE Geotechnical Consultants

The original geotechnical investigation for this parcel appears to have been prepared for yourselves by BACE Geotechnical, Inc., back in June 1992. This report was prepared by Erik Olsborg and Art Graff. The purpose of their report was to present geotechnical engineering recommendations for a new single family wood frame residence. BACE related making an earlier reconnaissance of the site for Field Engineering Associates in 1989. A topographic map was included in their report, prepared by D.N. McAdam. Although this map does not extend down to the ocean, it does project a Mean High Tide Line and the abandoned Gualala Railroad alignment.

BACE utilized shallow trenches to explore the site's subsurface conditions because of the relatively thin veneer of terrace deposits lying upon the bedrock pediment form by erosion of the underlying late Cretaceous-age Gualala formation sandstone. BACE states that the sea cliffs are between 54 and 65 feet high, being about 58 feet in height closest to the proposed building site.

A site geologic map was overlain on this topographic site plan. The site geology is described as the Anchor Bay member of the Gualala formation, of Late Cretaceous age (Davenport, 1984), dipping into the cliff. The formation consisted of gray sandstone with shale interbeds in the lower 35 feet of cliff, being overlain by light brown to orange brown sandstone with little fracturing above this transition. Based on their subsurface exploration of the area, they stated that between 4 and 5 feet of colluvium/terrace deposits mantle the bedrock, forming the prominent topographic platform that typifies the building area of the parcel. A sample recovered from this terrace exhibited a free swell of 30% (on Test Pit 2), suggesting they are expansive. Some inactive shears (faults) were also noticed in the exposed cliffs, but assumed to be inactive as no evidence of offset could be traced up into the terrace deposits (see Photo 12).

Although the depth to firm underlying subsoils was presented as being *"about 2-1/2 feet"* (page 7), foundation recommendations were made for continuous spread footings extending between 4 and 6-1/2 feet deep, or, drilled piers with interconnecting grade beams, also extending to depths between 4-1/2 and 6 feet (page 8). Native soils beneath proposed slabs-on-grade were to be overexcavated at least 24 inches (2 feet) and recompacted with engineered fill (page 10).

Bluff stability was considered stable, based on observations between 1989 and 1992. The <u>average</u> rate of bluff retreat was opined to be on the order of an inch per year or less (bottom, page 5). On page 7, Building Setback Criteria were reviewed. A structural setback was calculated by using *"a factor of safety 0.6 times the bluff height of approximately 58 feet vertical (equaling a 35 -foot setback) should be suitable for siting the structure."* Exterior curtilage, such as patios and decks, could encroach on the structural setback, provided they were structurally detached from the main residence.

EXHIBIT NO. 10
APPLICATION NO. A-1-MEN-97-46
RILEY
Geotechnical Report

Comments on the June 1992 BACE report

The report appears adequate for the purposes intended. There might have been some additional discussion of the implications of 30% free swell of the terrace deposits on foundation reinforcement and design. The 0.60H setback, where H is the height of the cliffs, is customary practice for setbacks from static rock cliffs, but in this situation, where ocean waves are pounding away at the cliff toe, might not be as conservative as is presumed by the report's authors.

May 15, 1997 Report by BACE Geotechnical

A letter report was prepared by Messrs. Olsborg and Graff in mid May of this year addressed to Matheson Design of Gualala to respond to concerns voiced by Mendocino County Department of Planning and Building Services on March 26, 1997. A small landslide had occurred during the winter 1996-97 storms on the old railroad cut slope, extending across this parcel and the adjacent plot to the south. BACE concluded that future instability of the cut slope would have no impact on the proposed development, and vice versa, because of the cut/fill embankment on the opposing side of the old railroad right-of-way, which serves to restrict drainage and debris catchment from co-mingling with the proposed site improvements.

BACE also argues for the use of vertical overflow risers for perforated runoff conveyance discharge pipes comprising the "fresh water leach lines" concept mandated by the Coastal Commission. They also identify two sea caves and three potential sea caves on the site plan, though these do not appear to have been precisely located.

They then reiterate their feelings that the cliff retreat rate is infinitesimal, providing comparative ground photos of the crest of the sea cliffs, taken in 1992 and 1997. The reiterate their view that "the bluff is basically stable", and that their previously stated bluff retreat rate (something less than 1" per year) was adequate.

Comments on BACE report of May 1997

It would appear that more localized sliding and sloughing of the old railroad cut slope occurred during the winter of 1996-97 than is represented in this report, which limits the movement to one small area on the adjacent parcel. But, this slippage would not impact any of the proposed improvements on your parcel.

Comparisons of photos taken 5 years apart (1992 to 1997) are not a meaningful exercise to demonstrate cliff face stability, insofar as rock falls likely occur as episodic events, several centuries apart. There is no denying that the sea cliffs area actively regressing at this site, it's simply a matter of determining how much.

BACE Geotechnical Letter of June 10, 1997

Messrs. Olsborg and Graff wrote a two-page letter to Matheson Design again on June 10, 1997 to address new concerns voiced by Mendocino County about the stability and life span of the vehicular driveway serving the proposed residence. In this letter they describe the 35 feet structural setback to be for the house, not for the driveway, and that moving the driveway that far in from the slope would necessitate construction of a 10 feet high retaining wall, supporting the westernmost portion of the old railroad cut/fill embankment on the seaward side of that historic right-of-way.

Comments on BACE letter of June 1997

The rationale for allowing the driveway to be inside the 35 feet structural setback explained by BACE in this response is based upon rational engineering theory, provided the driveway were graded to drain runoff landward, where it can be safely collected and conveyed to a reasonable point of discharge. In this area the cliff has realized its greatest landward regression, due in part to accelerated erosion of the terrace veneer, which has receded about 25 feet behind the actual rock cliff face, so some encroachment of the structural setback could be rationalized here. The terrace materials appear to have been eroded by wave splash, so the driveway may receive considerably more salt water and salt spray than might be imagined by visitors on a fair day.

August 1997 Report by Eugene Kojan, Ph.D., Consulting Engineering Geologist

Dr. Eugene Kojan prepared an 8-page report for the upslope neighbor, Julie Verran, dated August 8, 1997. This report contains a number of issues and concerns raised by Dr. Kojan, principally in regards to sea cliff retreat rates and other geologic hazards of building on the Riley parcel. His scope of work included a site visit in July 1997, review of historic stereopair aerial photographs dating back to 1942, a review of published literature, and preparation of a written report with annotated air photo enlargements.

In the section describing sea cliff retreat rates, Dr. Kojan begins by characterizing the natural retreat mechanisms as being dominated by isolated rockslides and rockfalls, not a coherent semi-uniform retreat normally associated with gradual wearing down of a surface. The geometry of the various bedrock blocks subject to sporadic and isolated episodes of cliff retreat are controlled by the geometry of bedding, pre-existing joints, shears, faults and "*other structural defects*". He also makes mention of the tectonic down dropping of a portion of the Mendocino coastline associated with the 1992 Petrolia earthquake. He then mentions the tsunami that affected downtown Crescent City following the March 27, 1964 Alaska earthquake, and the potential for another tsunami sweeping the terrace platform clean.

Kojan states that he enlarged aerial photos from 1942, 1964, 1984 and 1996 and prepared an overlay which suggests that the cliff rates at various locations varied between 2.6 inches per year to as much as 6.9 inches per year. This range of average cliff retreat would result in structural setbacks of

between 16.25 and 43.5 feet, if taken over 75 years. Further south, Kojan found a retreat rate of 37 inches per year, presumably, in the shales so prominently exposed south of Robinson's Landing. Kojan believed that absent any compelling scientific evidence, the "default setback" should be 100 feet.

Dr. Kojan then examined the cliff retreat processes and determined that the dominant retreat mechanism was almost exclusively the product of rockslides [and rockfalls]. He also described intermittent spring sapping as the dominant means by which the colluvial terrace deposits retreat backward, at a rate faster than the underlying Cretaceous age bedrock cliffs. He also noted how the detritus from such small increments of retreat has been completely swept away, even at the crown of the cliffs, 60 feet above and 20 to 30 inland of the crest of the sea cliffs. He also describes the small debris slides at the base of the old railroad cut, and suggests these be supported by fully drained retention structure(s).

Under the heading of "Seismic Hazard", he describes some inferred fault traces shown on the old Santa Rosa 250,000 scale State Geology Sheet, which trend towards Robinson's Landing. He then opines about the possibility of liquefaction of unconsolidated terrace sediments if they were saturated during earthquake shaking. He then criticizes BACE for not searching more thoroughly for active fault traces, even though the site is not zoned for potentially active fault traces. He then states it is his belief that the terrace platform contains soils that are only 1,000 to 3,000 years old, and that given an age so much less than 10,000 years, the absence of fault offset in these terraces is not sufficient to eliminate the risk of surface ground rupture at the site.

In his 4th section, "Sea Caves", Dr. Kojan describes sea caves along joint clusters trending semi-perpendicular to the cliff face, that appear to be eroded a distance of 20 to 30 feet into the cliffs. He suggests that cliff setbacks be calculated from this line instead of the apparent shore line formed by the cliffs contact with the ocean. Kojan then suggests that geophysical techniques be used to explore the sea cliffs projecting towards the building area.

The fifth and final area of concern raised by Dr. Kojan is that in regards to the potentially detrimental effects of concentrating collected runoff from impervious surfaces onto the fragile terrace colluvium, which exhibits evidence of piping failure out at the face of the sea cliffs. He warns that concentrating this water into leach lines could lead to conditions with localized saturation within the terrace deposits, making them more vulnerable to piping and liquefaction.

Comments on August 1997 report by Eugene Kojan

We agree with Dr. Kojan's characterization of the sandstone cliff retreat mechanisms, in that retreat will be isolated, sporadic and episodic in nature, not gradual like erosion of soft geologic materials being worn away particle by particle. The comments about tectonic down dropping near Petrolia would not appear to be relevant to the geologic setting of this site. Nor, would tsunamis create anything but a gigantic splash, which could endanger structures within the splash zone.

There are some hazards involved with making measurements on aerial photos taken in different years with differing photo centers, discussed later. As a consequence, the "average values" of cliff retreat need to be presented with the appropriate limitations in regards to their efficacy. However, the mere fact that discrete physical retreat of the coastline can be positively deduced from the air photos is of note, and should not be discounted.

We agree with the concerns he voices about the terrace deposits being susceptible to piping erosion and possibly, liquefaction, if saturated when earthquake shaking occurs.

We do not agree with the comments about the age of the terrace soils being only 1,000 to 3,000 years old, we would guess that these are late Pleistocene age, based on the development of a well indurated argillic B-horizon, which would be almost impossible were they so young. This terrace is most likely of late Wisconsin age, between 11,000 and 16,000 years before present (ybp). Nor, are we concerned about the potential for surface fault rupture in the very small fault feature exposed in the sandstone cliffs (Photo 12)

Neither are we concerned about the projected fault shown ion the 1963 Santa Rosa sheet, this feature was removed from the newer Santa Rosa sheet, released in 1982 (discussed later).

We do not agree with Dr. Kojan's remarks about exploring the sea caves with geophysical techniques. Seismic techniques (refraction or reflection) methods cannot provide reliable indications of voids, such as caves or caverns, only of higher velocity inclusions or units. Voids have zero shear wave velocity. Another complicating factor would be the sea water occupying the floor of such caves, which would reflect. There remains no better method than human reconnaissance, followed by small diameter borings. All of this aside, the surface reconnaissance performed on October 17th suggests that the largest of the sea caves pretty much exhibits the precise outline hypothesized by Dr. Kojan on his photo overlay exhibit.

Review of Published Geologic Literature

In the 1890s U.C. Berkeley geology professor Andrew Lawson (1894) performed the first geologic reconnaissance of the coast region, traveling by horseback between San Francisco and Eureka. This trip resulted in the publication of two classic papers on the marine terraces of the California coast. The coastal terraces south of Point Arena became the object of additional studies by U.C. graduate students in the years following the Second World War. Bauer (1952) described the terraces in vicinity of Salmon Creek, near Steward's Point, while Charles Higgins provided the first descriptions of Pliocene units east of Steward's Point (1957), the Ohlson Ranch formation (1960) and causes of relative sea level changes in the area (1965). Intermingled with this work was that of CDMG geologist Bill Irwin (1960), who described the marine sedimentary units and terraces along the coast, and the compilation by Wahrhaftig and Berman (1965) which assembled everyone's work on marine terraces in northern California up until that time.

EXHIBIT NO. 10
APPLICATION NO. A-1-MEN-97-46
RILEY
Geotechnical Report

The earliest published geologic map of the area appears to have been the Santa Rosa Sheet (1:250,000 scale) of the California Division of Mines and Geology (CDMG), published in 1963. This map is at a scale of approximately 1" = 4 miles, so is necessarily broad. Dr. Kojan cited this map about the projected trend of a inferred fault, striking about N 60 W, towards Gualala. This fault may have been hypothesized at that time to better explain the sharp right-hand bend of the Gualala River, just upstream of the town.

A new version of the CDMG 1:250,00 scale Santa Rosa sheet by Dave Wagner and Ed Bortugno was released in 1982. Personal communication with Wagner and Bortugno indicates they discarded this earlier trace because they could not find physical evidence of its existence. Instead, they found that the ancillary faults to the San Andreas pretty much parallel its strike in this area, as well as offshore (later confirmed in the work by Greene and Kennedy, 1989).

The first small scale bedrock geologic map of the area was prepared by Blake, Smith, Wentworth and Wright of the U.S. Geological Survey (USGS) in 1971. Although their mapping project was to terminate at the Sonoma/Mendocino County Line (the Gualala River), it was extended up the coast to Bourn's Rock, so that the mapping would line up with the east-west trend boundary between the two counties, 2-1/2 miles inland from the sea. This map was published at a scale of 1:62,500, or about 1 inch to a mile. The USGS geologists mapped a series of uplifted marine terraces developed upon what at the time they believed to be early Tertiary age Gualala formation bedrock. This age has since been adjusted backward, into late Cretaceous time.

The most recent and detailed geologic maps of the area were prepared by the California Division of Mines and Geology as part of the regional landslide hazard mapping program funded between 1983 through 1995. In 1984 Cliff Davenport authored a set of maps delineating bedrock geology and landsliding of the Gualala 7.5 minute Quadrangle, which was published at a scale of 1:24,000, or 1 inch to 2,000 feet. Davenport mapped the underlying bedrock as the Anchor Bay member of the late Cretaceous-age Gualala formation. A series of erosional terraces appear to have been developed upon the Gualala formation strata. The lowest and presumably youngest, of these terraces is the late Wisconsin age terrace, or erosional pediment, which mantles the building site on your parcel. But, older terraces mantle the landscape eastward, past the San Andreas fault, and extend to elevations as great as 800 feet above sea level.

Publications regarding Offshore Geology

During the 1930s the U.S. Coast & Geodetic Survey and Scripps Institute of Oceanography explored the bathymmetry of the California coastal margins and opined about the likely geologic conditions giving rise to the observed features. This data and maps were published by the Geological Society of America as Special Paper 31 in 1941. Of import to this analysis was the mapping of the continental shelf off of Gualala, presented in Chart II of Special Paper 31, at a scale of 1:500,000 with

a contour interval of 300 feet. The continental shelf lies about 11 miles offshore, at an elevation of around -900 feet. But, if we assume the late Wisconsin age sea level was approximately -350 feet (-106.7 meters) below existing level, the projected position of the late Wisconsin shoreline would be about 4-2/3 miles seaward of the present coastline, based on the 1941 chart.

Between 1984-89 the USGS and CDMG collaborated on a series of offshore studies as part of the Economic Exclusion Zone Studies mandated by the Federal Government in 1981 to extend 200 km offshore. These maps were edited by Gary Greene and Michael Kennedy, and Area 6 concentrated on the North Central California Coastal Margin, between 38 and 40 degrees north latitude. These maps were made from offshore geophysical surveys and other available data, and published at a scale of 1:250,000 (1" = 4 miles).

The maps show a large number of normal and strike slip faults lying off shore, parallel to the San Andreas fault in vicinity of Gualala. Much of the downward throw on these faults appears to account for the position of the continental shelf, south of Cape Mendocino. In this area the shore line appears structurally controlled by these northwest-trending faults.

Sea floor topographic contour interval was 10 meters to the 200 meter depth, thence 50 meters to maximum depth. The minimum map distance to the -350 feet (106 meter) depth contour would be about 5.78 miles, and about 6.4 miles to the -361 feet (-110 meter) depth contour. This should approximate the distance of shoreline cliff retreat during Holocene time, or the last 11,000 years.

References on Sea Cliff Retreat in Northern California

In 1967 Leonard Palmer, a UCLA doctoral student in geology, filed his Ph.D. dissertation titled Marine Terraces of California, Oregon and Washington. Palmer's work was valuable in that it was an exhaustive compilation of all previous worker's efforts, as well as his own field reconnaissances. Between Gualala and Point Arena, he reported between four and seven prominent terraces, at elevations of 15 to 22 meters (49 to 72 feet), 38 to 48 meters (125 to 157 feet), 65 to 70 meters (213 to 230 feet), and 88 to 90 m (288 to 295 feet). Older terraces were also identified at altitudes of 150 meters (492 feet), and higher.

Palmer concluded that the terraces found at elevations below 800 feet were distinctly of marine origin. He also found that terrace elevations rise and drop with areal proximity to the active trace of the San Andreas fault. Palmer describes the Gualala interval: *"Between Point Arena and Fort Ross the narrow land between the San Andreas fault and the sea has numerous well formed terraces which appear to be traceable along the coast. However, these terraces commonly show [inland] tilting along-shore. At least seven distinct levels of terrace planation were recognizable at Point Arena and many of these levels could be traced intermittently southward. Only the lowermost terraces at 200 feet elevation and below show possible correlation traceable across the San Andreas fault....all terraces are relatively fresh west of the fault compared to those of other areas and could*

all represent features formed later in Pleistocene history than terraces at similar elevations in stable areas."

In 1985 UC Santa Cruz geology professor Gary Griggs and his colleague Lauret Savoy edited a book entitled Living with the California Coast, sponsored by the Audubon Society and published by Duke University Press. The book divides the California coastline into sections, and describes shoreline retreat in both general and specific terms, where information was made available to the authors. Chapter 9 covers the reach of shoreline between Point Arena and Point Bonita. The 57 mile shoreline between Point Arena and Fort Ross is described in its own section, with Figures 9.2 and 9.3 providing a strip map with relative geologic environments and assessment of risk for cliff retreat. The zone occupied by the late Cretaceous age rocks tends to fare better than those stretches underlain by the Franciscan assemblage rocks, something the California Department of Transportation can also attest to in regards to costs of maintaining State Route 1. Coves comprised of shale tend to fare worst, while sandstone headlands, such as Robinson Point and Robinson Landing, fare better. They note (page 119) that "*...many of the rocky points have shown insignificant change over the past century*". They list Robinson's Landing as an "unprotected cliff" with a "moderate risk" of slope failure, also noting that scant historic information on cliff retreat is available for the Gualala area.

Problems with Comparative Assessments on Aerial Photos

One of Gary Griggs' doctoral students at UC Santa Cruz, Laura J. Moore, has recently prepared a paper for publication entitled "*A Survey of Shoreline Mapping Techniques and Recommendations for Technique Selection*". The preprint of this article (which has not been published yet) is available over the Internet and represents the most up-to-date techniques for assessing sea cliff retreat using the principles of aerial photography, cartography, and photogrammetry. Moore discusses some of the most pertinent dilemmas facing scientists who attempt to correlate data generated by different sources with differing datums and fiducial centers. Error ranges for various types of projections and printing techniques are also discussed. Among her comments most pertinent to the current investigation are those pertaining to aerial photograph comparisons, to which she states:

"Aerial photographs cannot be successfully interpreted as maps because various distortions and displacements are introduced at different stages in the photographic process. These distortions and displacements are perturbations of the geometric relationship between image space and object space. Image space refers to a three dimensional, rectangular Cartesian coordinate system defined inside the camera with the principal point [fiducial center] as the origin."

The writer (Rogers, 1989a, 1989b) has written about similar problems associated with interpretation and mensuration on aerial images. As a consequence, it is dangerous to be too specific about the calculation of average rates of cliff retreat based on attempts at air photo mensuration when parallax distortions which vary with each image and camera type must somehow be accounted for in a rational manner. Comparisons between historic aerial images are valuable however, in a more qualitative

sense, insofar as discrete block collapse features **can** be reliably identified and their relative scale assessed, using methods of proportionality (Rogers, 1989b).

Cliff Retreat Rates at Robinson's Landing

There exists several established methods to assess the likely range of rates involved in such physical processes of denudation as cliff retreat; commonly built upon constraints of time, distance and elevation. Rates in physical processes are not "real", insofar as we know that the geologic mechanisms controlling mass wasting are episodic; a "rate" is simply an average value, taken over some interim. The further back in time we attempt such an exercise, the greater the expected error. Estimating rates of physical denudation, such as those which could reasonably be ascribed to sea level rise, must of necessity, be limited to the later half of the Holocene epoch (extending out to about 6,800 years before present), when weather conditions developed that are similar to those cycles we have experienced in historic times (past 2,000 years). Estimates can be taken back further, to the Holocene-Pleistocene boundary, but the expected error should increase, depending on latitude. Holocene cyclic effects, such as the Little Ice Ages, have occurred first and ceased last at the higher latitudes, with lag times of several centuries between the more extreme and more modest latitudes (Grove, 1989).

Given these limitations, we have attempted to estimate the average rate of sea cliff retreat in the vicinity of Gualala, based on the constraints of time and distance associated with the likely position of the late Pleistocene shoreline, likely between 5.8 and 6.4 miles southwest of it's present location, beginning around 11,000 y.b.p.

Since the rate of sea level rise has not been linear, we must search for an accurate depiction of the rate of sea level rise with time during the Holocene epoch, which can be done by borrowing from the work of Atwater, Hedel and Helley of the U.S.G.S., published in "Late Quaternary Depositional History, Holocene Sea-Level Changes, and Vertical Crustal Movement, Southern San Francisco Bay, California", published as USGS Professional Paper 1014 in 1977. Figure 6 in that report relates Holocene sea level changes in vicinity of southern San Francisco Bay in elevation versus time, extending back 9,700 years before present. This data was based upon careful analysis of foraminifera contained in estuarine muds recovered from borings for the various bridges crossing San Francisco Bay. This relationship reproduced herein as Figure 1. Subsequent work by others (NRC, 1987; Nummedal et al, 1987; and Emory and Aubrey, 1991) has since confirmed the rates of sea level rise for northern California first published by Atwater, Hedel and Helley in 1977.

If we assume that the rate of sea level rise is proportionally related to cliff retreat, we can back out an average rate of cliff retreat for the last 6,000 years, when the rate of sea level rise has been a relatively constant 1.67 mm per year. We begin the exercise by assuming that the shoreline retreats at a very high rate when sea level is rising at a high rate. Between 11,000 and 9,650 ybp, sea level rose 186 feet, or about 53% of the total rise up till the present time. If we assume that the shoreline

also retreats 53% of the total distance during this same interim, we can back-calculate rates of shoreline retreat for each increment of sea level rise. The only variable, therefore, is the beginning distance: how far the coast line has receded at any given location over the past 11,000 years.

Between 9,650 and 8,400 ybp, sea level rose another 28 1% in just 1250 years. Between 8,400 and 6,000 ybp, sea level rose 10.1% in 2400 years. And, over the past 6,000 years, sea level has risen just 8.7 % of the total Holocene rise of approximately 350 feet. This latter rate is the one which we are concerned with, for it should provide a maximal constraint on the "average" rate of shoreline retreat, taken over the past 6,000 years.

Based on an evaluation of the Greene and Kennedy (1989) bathymmetry maps, the likely range in distance to the late Pleistocene shore off Gualala is something between 5.78 miles (30,552 feet) and 6.4 miles (33,792 feet). If sea level has only risen about 30.5 feet in the past 6,000 years, we are assuming only 8.71% of the shoreline regression to have occurred during that interim. The range in values would be calculated by multiplying 0.087 times the total distance of shore regression, and dividing by 6,000 years. By performing this simple calculation, a range of between 5.3 inches per year and 5.9 inches per year was estimated.

There are a few other physical constraints, such as direction of absolute retreat (we have assumed minimal distance, retreating in a northeasterly direction; and, there are headland effects, which cause resistant strata, such as Robinson's Landing, to deflect prevailing wave fronts around their leeward extremities, causing increased erosion and cusping of the coastline along either side of a promontory. This appears to be the case at Robinson's Landing, where the adjoining shoreline has retreated at an accelerated rate (see Photos 13 and 14). This means that actual average rate of retreat at Robinson's Landing us probably as much as 25% to 50% lower than the adjoining coastline. 25% to 50% less would equate to 2.65"/year to 4.42"/year, certainly not much less than that.

Conclusions

It would appear that Dr. Kojan's estimates of cliff retreat, despite the short (55 year) interim and theoretically flawed method of overlaying historic aerial photos, puts one in the expectable ballpark of values: something between 2.65 and 5.5 inches per year, taken over a very long period of time. The style of movement is blocky rockfall, usually effected by undermining, and several centuries could be expected to lapse between sequences of retreat at any given point, hence the difficulty in using historic records that only extend back to the late 19th Century.

Recommended Setback

It would be our recommendation that an average cliff retreat rate of 5 inches per year be exercised on this site. That would result in a structural setback of 75 times that amount, or 31.25 feet. That would be a minimum value, and any structure situated that close to these headlands is certainly going to get physically splashed, during extreme storm events, and may even experience overt splash

damage. Additional setback for quality of life might well be considered, as should be the weathering effects of consistent seasonal salt spray on wood framing elements. Based upon the physical evidence for storm splash at this site, pulling the house back as far as possible would seem to be a prudent precaution.

Railroad right-of-way

The old railroad right-of- way, cut into the natural bluffs behind the proposed residence, is a good area to avoid. It will continue to experience shallow, localized slope failures, as occurred this past winter. These failures will eventually ravel upslope, and enlarges in volume, but the rate at which such erosion occurs is not linear, it is episodic, a function of the weather.

Situating the back of the proposed residence against the west-facing slope of the west embankment should serve to isolate the house from both upslope drainage and landslide hazards, provided the structure is designed and built as a fully-drained retaining wall (or series of walls). At some point in the future, drainage of surface runoff within the closed depression formed by the old railroad corridor, should be considered, as runoff now concentrates towards the north, where runoff from other parcels on Sedalia Drive also concentrates, causing increased levels of erosion.

Driveway

Every effort should be made to pull the driveway back from the cliff face as far as practicable in vicinity of the erosion cusp (Photos 6, 7 and 8). The proposed alignment comes very close to the cusp in the terrace, where modest levels of erosion have been noticed over the past 25 years, likely due to unnatural concentration of surface flow, emanating from the steep access road. Proper design and construction of the paved driveway could alleviate much of this erosion. If the driveway pavement is cross-sloped 5% towards the uphill side, and runoff is then collected, conveyed and discharged away from the driveway, preferably directly onto exposed bedrock just beneath the terrace colluvium (Figure 2). If the driveway is constructed in such a manner, the accelerated erosion of the cusp should cease. However, rainfall and splash activity appears to encroach the crest of the sea cliffs at regular intervals, so some accommodation for this should also be considered.

The driveway could, therefore, encroach the 31.25 feet setback, but it is our recommendation that this be minimized as much as possible, through the construction of a up to 10 feet high retaining wall against the west side of the old railroad embankment, which should provide for a 25-feet setback. We would not recommend that any unsupported cut be made into the embankment. The retaining wall should be designed to be fully-drained, such as a crib wall. A crib wall can be backfilled with crushed rock to enhance drainage, it allows for a near vertical cut, and plants will overgrow it so as to give it a very "soft" visual appearance, should the old rail line be someday converted to a regional recreation corridor.

Sea Caves

Dr. Kojan's assessment of the sea cliffs also turned out to be close to the mark, at least for the largest cave, explored by myself and Mr. Olsborg on October 17th. In that case, the extreme penetration of the ocean occurs below mean low tide, and extends between 85 and 100 feet behind the extreme point of cliff (the third promontory on Photo 11).

As described previously in regards to Photos 4 and 5, cliff erosion is most pronounced at two horizons, between sea level and +15 feet, and between 25 and 35 feet. Close inspection of the sea caves revealed that they are forming on these two levels. The upper cave level was not being impacted by wave action at the time of our inspection, due to low sea state and low tide conditions. It appears to be invaded at higher tides and sea states, which serve to suction out particles. The sea caves appear to have formed along prominent regional systematic joint clusters, trending into the cliff.

The prominent cave situated seaward of the proposed house site appears to have limiting geometry roughly in keeping with those areal limits opined by Dr. Kojan on his 1996 air photo color overlay. However, this cave does not appear to be in any danger of collapsing anytime soon, due to the crossing nature of the master joint suites, as shown in Photos 13 and 14. The geometry of crossing joints serves to form large wedges which can only be removed through lateral erosive action or loss of supporting pedestals. This later mechanism appears to be the dominant failure mode, as evidenced by those portions of the proto sea cave which must have collapsed seaward of the present opening.

WARRANTY AND CLOSURE

This review has been performed by request of the California Coastal Commission, and our choice as an independent peer reviewer was agreed to in writing by letters from Dr. Eugene Kojan (September 9, 1997) and BACE Geotechnical, Inc. (September 17, 1997). Our services have been limited to the review of the documents previously identified and a recent visual review of the property with various members of the project team and Ms. Julie Verran, one of the upslope neighbors. We have no control over the future construction on this property and make no representations regarding its future conditions.

We have employed accepted engineering geologic procedures, and our professional opinions and conclusions are made in accordance with generally accepted engineering geologic principles and practices. The contents of this report are valid as of the date of preparation. However, changes in the condition of the site can occur over time as a result of either natural processes or human activity. In addition, advancements in the practice engineering geology may affect the validity of this report. Consequently, this report should not be relied upon after an elapsed period of three

years without a review by Rogers/Pacific, Inc. for verification of validity. This warranty is in lieu of all other warranties, either expressed or implied.

We hope this report provides you with the information which you require to proceed. If you have any questions regarding this matter, please feel free to give us a call.

Very truly yours,

ROGERS/PACIFIC, INC.

J. David Rogers, Ph.D., RG, CEG, CHG
Principal

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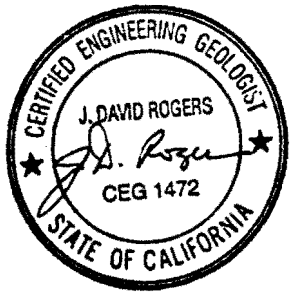

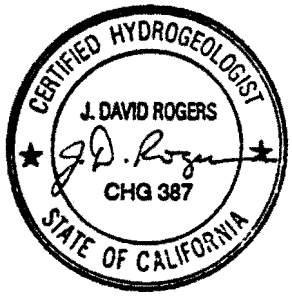

Copies: Addressee (2)
California Coastal Commission, North Coast Area, Jo Ginsberg
Mendocino Co. Planning & Bldg. Services, Gary Berrigan
BACE Geotechnical, Erik Olsborg, CEG
Dr. Eugene Kojan, CEG
Ms. Julie Verran
Matheson Design Services, Ralph Matheson, AIBD

EXHIBIT NO. 10
APPLICATION NO. A-1-MEN-97-46
RILEY
Geotechnical Report

EXHIBIT NO.
APPLICATION NO. A-1-MEN-97-46
RILEY
Geotechnical Report

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EXHIBIT NO. 10
APPLICATION NO. A-1-MEN-97-46
RILEY
Geotechnical Report

SONOMA
COUNTY
REGIONAL
PARKS

Jim R. Angelo
Director

April 11, 1997

RECEIVED
APR 15 1997
PLANNING & BUILDING SERV.
FORT BRAGG, CA

Gary Berrigan, Coastal Permit Administrator
County of Mendocino
Department of Planning & Building Services
143 West Spruce Street
Fort Bragg, CA 95437

Dear Mr. Berrigan:

Thank you for the opportunity to comment on the potential impacts to Gualala Point Park from the proposed Riley residence (CDP #06-94) to be constructed on the bluff North of the park.

Staff from Regional Parks visited the building site and the park on April 9, 1997 to assess the impacts of the proposed residence on the park. The only identifiable impact would be visual. The building site and proposed residence is a middle ground view and is visible from most areas of the park on the West side of Highway One.

The choice of materials and finishes for the exterior of the residence, ie. cedar siding with natural stain, dark fiberglass shingle roofing, and native field stone will reduce the visual impacts to the park.

We did not receive a landscape plan as part of the planning packet, so we are uncertain if any attempt has been made to lessen the visual impacts to the park and soften the architectural lines of the residence. We would like to propose that the conditions of the permit include an evergreen screen of native trees along the South side of the residence (see included site plan) to mitigate the visual impacts to Gualala Point Park as a result of this construction.

If you have any questions or require additional information. please call me at (707) 527-2041.

Sincerely,

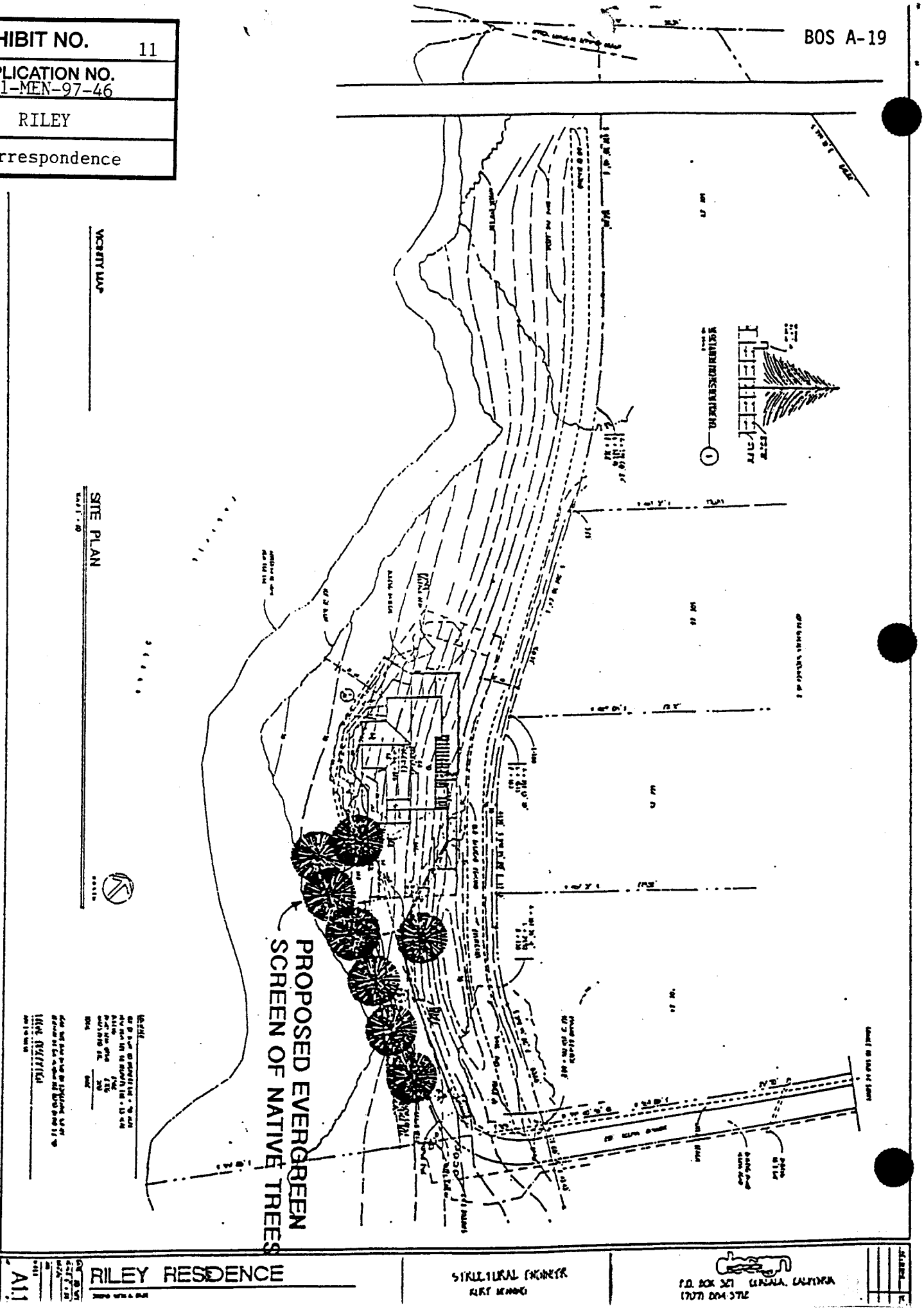
Philip Sales
Planning & Design Administrator

cc: JRA

2300
County Center Drive
Suite 120A
Santa Rosa
CA 95403
Tel: 707 527 2067
Fax: 707 579 8247

EXHIBIT NO. 11
APPLICATION NO. A-1-MEN-97-46
RILEY
Correspondence

EXHIBIT NO. 11
APPLICATION NO. A-1-MEN-97-46
RILEY
Correspondence



To: Members and staff of the California Coastal Commission

From: Julie Verran
P.O. Box 382 (38864 Sedalia Drive)
Gualala, CA 95445

Feb. 28, 1998

Re: Appeal # A-1-MEN-97-46

Two eminent geotechnical experts, Dr. Eugene Kojan and Dr. J. David Rogers, have examined the subject parcel, now APN 145-181-01 and formerly part of the Empire Redwood railroad easement, and submitted written reports to you. Many points in these reports support concerns raised in my July, 1997 appeal. In one area, the two experts substantially disagree: the relative importance of seismicity and glaciation-induced sea-level change in forming the northern California coastline. This is a genuine scholarly disagreement which is beyond the scope of this appeal.

There are serious liability concerns involved in building on the subject parcel, because the ca. 1870s cut bank of the former RR line forms the western boundary of four parcels on which houses were built prior to the passage of the Coastal Act. One of these houses, is my home on APN 145-181-3.

The old RR easement from the mouth of the Gualala River to Robinson Gulch remained in timber company ownership until the late 1980s. In 1989 two parcels were created by Certificate of Compliance CC 44-89. The Kojan and Rogers reports show many elements of fragility and hazard on the subject parcel, such that construction of the proposed building and drive could cause premature retreat of the bluff and/or landslides and cliff collapse which could damage or destroy the upslope dwellings. It may be possible to build a smaller, carefully engineered house on the subject parcel.

The extent of only one of the sea caves identified by applicants' geotechnical expert Erik Olsborg has been probed. (These are formed by the action of water on jointed sandstone, not limestone.) The cave or arch under what Dr. Rogers terms the second promontory has not been investigated, nor has one just to the south of that promontory, on the next parcel but with potential to affect the access road to the subject parcel. Several caves and a general overhanging aspect north of the third promontory were not investigated or probed, although the footprint of the proposed house would extend north of that promontory, which overhangs as well.

Enough is known and included in the two reports to allow the Commission to deny this project on liability grounds. My home and others near it would be placed at unacceptable risk if this project is approved.

I have included here the sections of Mendocino County planning and zoning law cited in my July appeal, with statements from the Kojan and Rogers reports which I believe relate to those sections and provide support for my appeal. Also included are some of my own comments. There is one small correction to Dr. Rogers' report: While members of my family lived in the house since it was built, and I always had a room there, my voting address was elsewhere until 1996. Please note that when Dr. Kojan refers to "your property" he means the Verran home, and when Dr. Rogers refers to "your property" he means the Riley parcel.

The following section is cited by Dr. Kojan as Zoning Code Section 20.500.010, where the same language is repeated.

Mendocino County General Plan Coastal Element, 3.4 Haza
cites Coastal Act Section 30253. "New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and will neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs."

Dr. Kojan: [referring to sea caves] Any structure built on a surface subject to sudden roof collapse could be severely damaged and might be life threatening. There is a high risk of violation of Zoning Code Section 20.500.010.

[referring to seismic hazard] Most serious however, is the complete absence of any reference in any of the documents which I have reviewed which indicate the responsible involvement and signature by a licensed structural engineer or architect. Applications for construction permits for dwellings in seismically hazardous zones (such as the entire coastal zone of California) should be summarily rejected unless signed by a licensed structural engineer and/or a licensed architect. The inadequacies of the report in dealing with the very real seismic hazard appear to violate Zoning Code 20.500.010.

Dr. Rogers: [p. 8] The terrace materials appear to have been eroded by wave splash, so the driveway may receive considerably more salt water and salt spray than might be imagined by visitors on a fair day.

[p. 16] Every effort should be made to pull the driveway back from the cliff face *as far as practicable* in the vicinity of the erosion cusp (photos 6, 7 and 8). The proposed alignment comes very close to the cusp in the terrace, where modest levels of erosion have been noticed over the past 25 years, likely due to unnatural concentration of surface flow, emanating from the steep access road. [**J.V. comment**: This confirms the premise of my first written complaint to the county, dated 1991.] Proper design and construction of the paved driveway could alleviate much of this erosion. If the driveway pavement is cross-sloped 5% towards the uphill side, and runoff is then collected, conveyed and discharged away from the driveway, preferably onto exposed bedrock just beneath the terrace colluvium (figure 2). If the driveway is constructed in such a manner, the accelerated erosion of the cusp should cease. However, rainfall and splash activity appears to encroach the crest of the sea cliffs at regular intervals, so some accommodation for this should be considered.

The driveway could, therefore, encroach the 31.25 feet setback, but it is our recommendation that this be minimized as much as possible, through the construction of a up to 10 feet high retaining wall against the west side of the old railroad embankment, which should provide for a 25-feet setback. We would not recommend that any unsupported cut be made into the embankment. The retaining wall should be designed to be fully-drained, such as a crib wall. A crib wall can be backfilled with crushed rock to enhance drainage, it allows for a near vertical cut, and plants will overgrow it so as to give it a very "soft" visual appearance, should the old rail line someday be converted to a regional recreation corridor.

J.V. comment: The supporting crib wall, and especially the drainage discharge onto the bluff face, would violate this provision of the Coastal Act, LCP and Zoning Code. The

February 20 staff report requires this crib wall with a setback of 25 fee[illegible] The western face of the railroad berm, where Dr. Rogers recommends pl[illegible] is less than 20 feet from the edge of the bluff. Both Dr. Kojan and Dr. Ro[illegible] the RR berm undisturbed to avoid the existing landslide. A 25-foot setback would require removing the RR berm.

Before I hired Dr. Kojan, I had Licensed Surveyor Richard Seale from Fort Bragg locate my property corners and markers. He had recently done the same for the Stillman property adjoining mine to the south. He gave me a copy of the county parcel map showing the approximate location of the slides affecting the two properties, with a statement, " " He advised me to get a top-flight geotechnical expert from the Bay Area, so I did. At Dr. Kojan's request, Seale also prepared a map of the position of the soil scarp in relation to the Stillman and Verran properties. This is less detailed than the old McAdam map that applicants use, but it shows the bluff top as of last July, while the McAdam map may be as much as 10 years old. The July, 1997, space between my property line and the soil scarp is known: approximately 62 feet at the cusp.

A 25-feet setback would extend into the RR berm. A 10-foot wide drive and 2 feet for the proposed drainage structure would require not just an "unsupported cut", but removal of the berm altogether. Then the crib wall could not be placed against the western slope of the RR berm, because the berm would be gone, exposing the toe of the 1997 landslide that threatens the Stillman and Verran homes. The only place for a crib wall would be on the eastern side of the RR easement, where it would encroach on the Stillman and Verran lands. Such an alignment would require removal of the copse of pines at the foot of the access road, violating another staff condition.

The staff conditions sound good on paper but do not conform to on-the-ground reality. Since the Seale survey was done, the soil scarp retreated at Dr. Rogers' cusp and at two similar cusps just north of his third promontory. The extent of this retreat must be measured before any permit is granted.

In addition, the proposed condition appears to violate **Mendocino County Zoning Code Sec. 20.429.010 Grading Standards.** "(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. (F) Adjoining property shall be protected from excavation and filling operations and potential soil erosion."

No permit for this project should be granted.

Coastal Element Policies: Hazards

"3.4-7 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 protection works. Adequate setback distances will be determined from information derived from the required geologic investigation and from the following setback formula:

Setback (meter) = Structure life (years) x retreat rate (meters/year)

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

Dr. Kojan: In summary, [air photos] indicate a rate of retreat ranging from 2.6"/year to 37" /year. Immediately seaward of the proposed dwelling, they indicate a rate of cliff

retreat of 2.6" /year (section 1A) to 6.9" /year (section 1B) between the [illegible] 1996. For the zone immediately seaward of the proposed dwelling, *thes[illegible] to 43.5 feet of setback, applying the Coastal Commission's criterion of 75 times the annual rate of cliff retreat.* The proposed structure is set back only 35 feet. Four hundred feet to the south, the rate of cliff retreat increases to 37" /year for sections 4 and 5 between the years of 1984 and 1996, translating into a required setback of 231 feet.

J. V. comment: Neither Olsborg's method of determining the setback by using a percentage of the cliff height, nor Dr. Rogers' method of calculating from the extent of the coastal shelf during the Pleistocene conform to the above section. In addition, neither method takes into account the location of the parcel at the mouth of a river, subject to strong northward flow laden with sediment and woody debris which scours along the cliffs after rains. Dr. Kojan's method does conform. Because of technical aspects of the air photos, which Dr. Rogers explains [p. 13], Dr. Kojan did not continue his analysis of soil scarp retreat north of the third promontory. Dr. Rogers was willing to make an estimate of the retreat north of that promontory:

Dr. Rogers: [p. 5.] Comparison of the July 6, 1964 and September 29, 1965 aerial photos is of particular importance, because of the March 27, 1964 Alaskan earthquake and a sequence of intense storms that struck the northern California coast during the Christmas holidays of December 1964, causing record runoff in many of the region's rivers, such as the Van Duzen, Mad, Eel, Russian and Klamath. Careful scrutiny of these photos reveals that a major cliff failure occurred sometime between the 1953 and 1964 photos (closer to 1964), towards the north end of your parcel, and about 175 to 250 south of Robinson Gulch. This rockfall/cliff retreat sequence is seen in the July 1964 photo, included herein as Photo 9. The scale of this localized cliff retreat appears to be between 20 and 30 feet wide blocks, involving about 60 to 75 feet of the cliff face.

J. V. comment: This gives a conservative cliff retreat rate north of the Third Promontory of about 30 feet between 1953 and 1996 – 43 years – about 6.7 inches per year. 6.7 x 75 years = 42 feet. This is very close to Dr. Kojan's recommended setback based on his calculations of retreat above the sea cave located just south of Promontory Three. A conservative coastal setback for this parcel would be 45 feet. Required rear setback under county zoning is 20 feet. The depth of the subject parcel in front of my northwest corner stake is only about 85 feet; 85' - 65' = 20'. There is not room on the parcel for the proposed house and the Coastal Commission must uphold my appeal and deny the permit for this proposal. (**Mendocino County Zoning Code, Coastal Zone. Chapter 20.384, SR–Suburban Residential District: Sec. 20,384.030 Minimum Front and Rear Yards for SR Districts.** Twenty (20) feet each. (Ord. No. 3785 (part), adopted 1991.)

Dr. Rogers [derives a 31.25-foot setback: p. 15-16] That would be a minimum value, and any structure situated that close to these headlands is certainly going to get physically splashed, during extreme storm events, and may even experience overt splash damage. Additional setback for quality of life might well be considered, as should be the weathering effects of consistent seasonal salt spray on wood framing elements. Based upon the physical evidence for storm splash at this site, pulling the house back as far as possible would seem to be a prudent precaution.

Dr. Kojan: In 1997, in response to the appellant's protests, the posit were finally indicated on a map without any indication of their in longitudinal boundaries and extent.

Sea caves must be considered as the advanced front of wave attack, erosion, collapse and retreat of the sea cliff, and their maximum landward extent should be the basis for subsequent calculations for the setback line.

The position, orientation, width, depth and maximum landward extent of all of the sea caves should be accurately determined before any approval of any construction plans be allowed within the entire coastal zone.

The position, orientation, depth, width and landward extent of all of the sea caves can be effectively determined by detailed, closely parallel refraction seismic geophysical survey traverses. The results of these surveys should then be verified by a series of closely spaced borings with continuous rock cores sampled and logged.

Dr. Rogers: [p. 10] There remains no better method than human reconnaissance, followed by small diameter borings. All of this aside, the surface reconnaissance performed on October 17th [1997] suggests that the largest of the sea caves pretty much exhibits the precise outline hypothesized by Dr. Kojan on his photo overlay exhibit.

[p. 17] Dr. Kojan's assessment of the sea cliffs also turned out to be close to the mark, at least for the largest cave, explored by myself and Mr. Olsborg on October 17th. In that case, the extreme penetration of the ocean occurs below mean low tide, and extends between 85 and 100 feet behind the extreme point of the cliff (the third promontory on Photo 11). ... The sea caves appear to have formed along prominent regional systematic joint clusters, trending into the cliff.

Coastal Element 3.4 HAZARDS MANAGEMENT, p.72. "Erosion. Beach erosion by wind and waves, surface runoff, and landslides are continuing occurrences. These processes cause coastal retreat, although their impact varies in different areas. Beaches protect dunes and bluffs, so the reduction of beach area increases the erosion rate of the dunes or bluffs. Runoff and human activities also can increase the rate of cliff retreat. Local geology rather than the littoral processes determine the amount of potential erosion. Building setbacks necessary to protect development along the coast should be based on the specific characteristics of the site."

Dr. Kojan: At this site, rockslides dominate. In common with rockslides worldwide, they typically occur sporadically, suddenly and massively without warning. In fact, the higher the intrinsic strength of the rock material, the more sudden and unpredictable they are. (Note Yosemite Valley rockslides of 1996.) [...]

The sea cliff for at least 300 feet to the north and 450 feet to the south consists *almost exclusively* of the product of rockslides. A jumble of very large, fresh, joint blocks derived from rockslides on the immediately adjacent scarp are undeniable evidence of recent rockslides on the face of the scarp and to its fundamental instability. Such slides fail instantaneously and move at very high velocities (tens to hundreds of feet per second). Factors which contribute to the high rockslide susceptibility include the very steep slope, high relief (up to 65 feet high above sea level), the adverse orientation of pre-existing, persistent rock defects and of continuous wave attack.

At the top of the scarp and overlying the bedrock surface of the wa colluvium is *failing* by a continuous series of small debris slides and by piping failures. In general, this rubble, including the largest of the roc colluvium, have been swept away by wave splash.

Dr. Rogers [p. 13] cites Griggs & Savoy, *Living with the California Coast*, 1985: They list Robinson's Landing as an "unprotected cliff" with a "moderate risk" of slope failure, also noting that scant historic information on cliff retreat is available for the Gualala area.

Coastal Element 3.4 Hazards Management, Landsliding, p. 72: "The main factors contributing to landslides are loose or weakly consolidated rock or soils, steep slopes, and water. Human influences include septic tank systems, excessive irrigation, and poorly constructed or incorrectly graded cuts and fills. The potential for landslides is high in most of the coastal zone; slides most frequently occur along road cuts, steep valleys and stream canyons, and along coastal cliffs. They are particularly common in the San Andreas fault zone along the Garcia and Gualala Rivers."

J.V. Comment: In recent weeks numerous road slip-outs occurred between the two rivers.

Coastal Element, Appendix 3. Geotechnical evaluation requirements, p. A3-2: "**Landsliding.** 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 the 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."

Dr. Kojan: Debris slides along the western portion of your property and of your neighbors' to the south are, in part, a response to the initial excavation of the old railroad cut bordering your property. Any adverse effects on the stability of the berm along the western side of the cut (beyond your property line) could severely accelerate and expand the boundaries of existing slides and create new ones. If the berm is to be partially removed, a properly designed and fully drained retaining structure should be constructed.

Dr. Rogers: [p. 5] There also appears to be some recent scalloping of the terrace deposits capping the Gualala sandstone adjacent to the proposed house site, and some enlargement of the prominent cusp described earlier, along its south side. ... This past winter, some localized slumps occurred at the base of the cut slope made for the Gualala Railroad, where it curves around Robinson's landing. A review of the aerial photos revealed that this is a recurring problem, and was also noted in Photo 9, taken in July 1964. A review of the September 1965 photos suggests that this erosion was renewed during the Christmas 1964 floods (and as occurred this past winter). Given the over steepened nature of this cut slope, this should not be surprising. The July 1, 1996 photo reveals very little erosion of the same cut slope in the 10 to 15 years prior to that image, based on the mature vegetation mantling the cut slope.

[p.16] The old railroad right-of-way, cut into the natural bluffs bel residence, is a good area to avoid. It will continue to experience shall failures, as occurred this past winter. These failures will eventually enlarge in volume, but the rate at which such erosion occurs is not linear, it is episodic, a function of the weather.

Situating the back of the proposed residence against the west-facing slope of the west embankment should serve to isolate the house from both upslope drainage and landslide hazards, provided the structure is designed and built as a fully-drained retaining wall (or series of walls). At some point in the future, drainage of surface runoff within the closed depression formed by the old railroad corridor, should be considered, as runoff now concentrates towards the north, where runoff from other parcels on Sedalia Drive also concentrates, causing increased levels of erosion.

J.V. comment: This confirms the basis of my continued requests for a drainage evaluation by the county. The Sedalia Drive neighborhood suffered drainage problems in the past few months, including water coming up through the street pavement. Almost every property lost trees, many uprooted in part because of soil saturation. This area drains onto the subject parcel via two county drainage easements from Sedalia Drive.

On February 23, at my request, a county road person cleared a blocked culvert on the east side of Sedalia near the top of the access road to the subject parcel. He told me that the culvert was smaller than the county recommends. He said the county plans to re-ditch the neighborhood when the ground dries out enough. Based on this, I talked to Planner Alan Falleri on February 25, to renew my request for a drainage evaluation of the area. He advised writing to the Board of Supervisors.

See also my comments, above, on the siting of the proposed driveway.

Mendocino County Zoning Code, Coastal Zone, Sec. 20.492.025 Runoff Standards. "(C) The acceptability of alternative methods of storm water retention shall be based on appropriate engineering studies. Control methods to regulate the rate of storm water discharge that may be acceptable include retention of water on level surfaces, the use of grass areas, underground storage, and oversized storm drains with restricted outlets or energy dissipaters."

"(G) Subsurface drainage devices shall be provided in areas having a high water table and to intercept seepage that would adversely affect slope stability, building foundations, or create undesirable wetness."

Dr. Kojan: The engineering descriptions of the soils encountered in each of the 5 test pits reported on Plates 3, 4 and 5 of the 1992 BACE Geotechnical Report are without exception cohesionless and very susceptible to piping (progressive subsurface erosion) when saturated even under static (non-earthquake) conditions and liquefaction under conditions of ground shaking in an earthquake.

The discharge of accumulated runoff by means of leach lines in such soils would lead to a rise in the level of saturation *in the soil adjacent to the leach line*, and to a significant hazard of piping and liquefaction.

The adverse changes in ground water hydrology due to the creation of impervious surfaces and the consequent more sudden, locally concentrated surface and/or subsurface flows would locally increase seepage pressures on the face of the unsupported soil scarps at the

top of the cliff, leading to increased seepage pressures and a degrading and accelerated erosion of the soil cover on the marine terrace surface. This could be in violation of Policy 3.4-9 and Zoning Code Section 20.492.025.

Dr. Rogers: [p. 10] We agree with the concerns he voices about the terrace deposits being susceptible to piping erosion and possibly, liquefaction, if saturated when earthquake shaking occurs.

MCZC Coastal Zone Sec. 20.500.020 Geologic Hazards – siting and land use restrictions. (A) Faults. "(2) Water, sewer, electrical and other transmission and distribution lines which cross fault lines shall be subject to additional standards for safety including emergency shutoff valves, liners, trenches and the like. Specific safety measures shall be prescribed by a licensed engineering geologist or a registered civil engineer."

Dr. Kojan: The northern California coastal region is among the most seismically-active areas on earth. The main San Andreas fault zone, and its branches, which control the course of the Gualala River and of the development of portions of the coastline itself, is less than one and one-half miles to the northeast. ...The nearby surrounding region includes the epicenters of many moderate to large earthquakes. The seismic hazards at this site consists of both the *direct* effects of ground shaking and *indirect* effects in the triggering of rockslides and other types of landslides along the base of the bluff. Sudden seismically generated, massive rockslides causing a 30 to 50 foot long collapse cannot be dismissed.

Another indirect effect of ground shaking of cohesionless silts, silty sands and sandy silts (such as described in the 1992 BACE report as occurring in *every* one of the five test pits excavated) is liquefaction. During an earthquake, if saturated, such materials lose virtually all of their strength, destroying buildings and other structures placed on them.

Disposal of concentrated storm runoff from impervious surfaces could lead to increased saturation, making this soil extremely vulnerable to liquefaction.

Dr. Rogers: [p. 12] The maps [North Central California Coastal Margin, Area 6] show a large number of normal and strike slip faults lying off shore, parallel to the San Andreas fault in vicinity of Gualala. Much of the downward throw on these faults appears to account for the position of the continental shelf, south of Cape Mendocino. In this area the shore line appears structurally controlled by these northwest-trending faults.

J.V. comment: This code section calls only for strengthening utility lines where they cross known faults. This particular parcel lies well below the elevation of the surrounding neighborhood. Both water and sewer lines, if breached, could compromise service to the homes above. Not only would these lines be threatened by seismic shocks, but also by slip-outs and piping as discussed above. Structures, if any, on this fragile terrace should have utility lines strengthened throughout.

Sincerely, Jim Verran

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To: Members and Staff of the California Coastal Commission
March 8, 1998

EXHIBIT NO. 13
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 1 of 3 California Coastal Commission

From: Julie Verran
P.O. Box 382 (38864 Sedalia Drive)
Gualala, CA 95445

Re: Appeal # A-1-MEN-97-46

To approve this bluff top project now would be to fly in the teeth of a gale of facts which the scientific community has not had time to analyze. An Internet search March 6 revealed that the San Jose Mercury News ran 105 stories on mudslides and crumbling bluffs Just since January 1, 1998. A March 6 San Francisco Examiner story by Eric Brazil stated that 86 percent of the California coastline is crumbling. The Coastal Commission should take judicial notice of recent storm-related events, and declare a one-year moratorium on approval of any bluff top projects, until scientists can determine new standards for bluff retreat and setbacks. A minimum statewide setback should be established by the legislature.

Brazil quotes Gary Griggs, professor of earth sciences at UC Santa Cruz. "'I'm appalled when I read quotes from people who don't have a clue that 86 percent of the coast is eroding,' Griggs said. 'People can no longer be surprised. They're in an extremely dynamic environment. The beach is the shock absorber, and if the beach is gone, your sliding glass door isn't going to do the job.'"

The subject parcel has no beach.

Just three days ago one of the four members of the editorial staff of the newspaper I work for had to abandon her interest in a bluff top property in Trinidad which she bought in late 1997, after a thorough geotechnical evaluation. By last week, the bedroom was hanging over the void. Last month, the tenant of the house located on the fifth parcel south of mine vacated because of sliding below the house, which also threatened a house on the old RR grade – the same level as the subject parcel of this appeal.

I inadvertently left out of my February memo what the surveyor wrote on the parcel map of my property in 1997: "The old slide extends a few inches onto your property. There may have been new activity on this slide this past winter." The map he prepared for Dr. Kojan to use with aerial photos is not detailed enough to determine bluff retreat over the past winter. The map applicants submitted was made at best in 1992; probably in 1989. While it appears accurate for the eastern part of the property, it can no longer be correct for the western boundary. I challenge the survey. Building the proposed house and drive at the required setbacks without a current survey could cause encroachment into the 20-foot required rear setback, or even onto neighbors' property.

There are problems with the Commission's staff report, including, but not limited to, the following. The deed language regarding assumption of risk does not appear to indemnify the Commission or anyone else from damage to this lot or from this lot to third parties, or for damage from this project to neighboring lands. So applicants say they will indemnify the Commission: what if my lot is damaged and they go bankrupt? How would I or my heirs be indemnified?

The condition regarding the driveway states that it will be "relocated." Examination of the maps submitted by applicant and the marked photograph in the Rogers report show exactly the same alignment, skirting the western edge of the western RR embankment. A crib wall, Mr. Hoffman tells me, requires horizontal pieces extending inwards eight or10 feet. That would require removal of much of the embankment, which now supports the toe of the landslides referred to by Surveyor Seale. Should they regress headwards, as they are likely to do if the embankment is removed, they could reach the Stillman and Verran houses. There is no room for a 25-foot setback with this driveway alignment. Does Dr. Rogers calculate the setback from somewhere out on the bedrock?

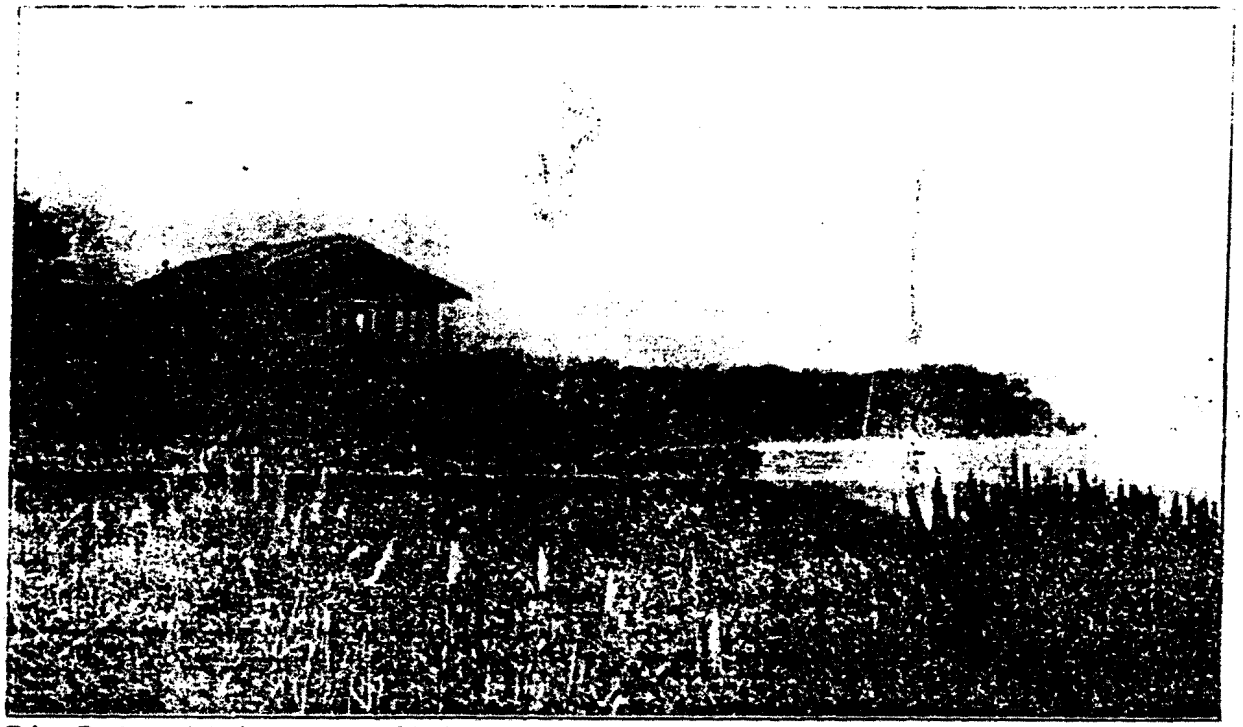
Nightmare for local fishermen
See page 4

The good, the bad & the ugly
See page 8

McKinleyville F

Vol. 2 No. 28

Living on the edge



Erica Redmond, below, copes with the loss of her beautiful Big Lagoon home, which included spectacular ocean views and a tranquil garden setting. The Lakin home, above, could fall at anytime.

Residents evacuate Big Lagoon homes

PRESS STAFF REPORT

As her neighbor's house teetered over a cliff a few yards away, Erica Redmond packed her belongings Friday and prepared to say goodbye to the home she's lived in for 18 years.

Although the home was in one piece, with noth-

See HOMES, back page

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The departm[illegible] official work pla[illegible] sion will allow C[illegible] ing the river over[illegible]

"We haven't [illegible] Ginn said.

Because of t[illegible] posed designs.

Mor[illegible] your

By JESSIE FA[illegible]

McKinleyvil[illegible] tique the propos[illegible] Scott Kelly, t[illegible] Advisory C[illegible]m for written [illegible] dents complaine[illegible] allow enough ti[illegible] ment. Sessions w[illegible]

HOMES: Bluff crumbles away; homes destroyed

Continued from front page

ing apparently wrong with it, Redmond was told by geologists earlier in the week that the bluff on Roundhouse Road in Big Lagoon could give way at anytime - sending her neighbor's home, and eventually her own home, to the surf below.

Rita Lakin's house, located between Redmond's house and the ocean, was about to collapse over the cliff on Friday. With high winds and heavy rain, it was only a matter of time, said Redmond.

Lakin reportedly lost 55 feet from her backyard during a three day period. As of Friday, her home extended a few feet over the cliff. The house, along with one nearby owned by Frank Walls, has been condemned.

Redmond said she had planned to stay in her house but changed her mind after several nights of "sleeping with one eye open" last week. As of Friday, she's was staying at a motel, moving everything out of her house and trying to figure out what to do next.

"Everything I own is going out through these trucks," she said as friends loaded boxes and appliances into their vehicles.

Fortunately, Redmond may still have time to move her house – if she can find a place to put it.

"My movers have been here to look at it and said it can be moved," she said.

But there's a catch.

"You can't take it out on the fr[illegible] so you can't take it to McKinleyville," sh said. Because of this, she needs to find nearby lot in Big Lagoon.

And what will she do with what's lef of her Roundhouse Road property? "We' have this property for a flower garden, said Redmond as she choked back tears.

"It feels like the guts have been a ripped out of you," she said.

SOIL: Questions raised about wetlands

Continued from front page

which will naturally remove the petroleum contaminants.

In about two years, Hunter said, the soil will be tested. If the contaminants are gone, then the soil would be removed.

"There is no danger to the public," said Hunter, who has offered to show the project to anyone with concerns about it.

But the county has yet to determine whether such a project can take place on the land.

County Planner Reid Storre said the Department of Planning and Building is requiring an initial environmental study to "evaluate the impacts that have already occurred and develop feasible mitigation measures."

Storre stressed that the department is not issuing a permit for the operation. Before anything is done, he said, the project has to be studied.

Hunter said he was unaware that he needed the permits. When informed abou the requirement, he filled out the neces sary paperwork, he said.

Hunter also said he thought he[illegible] approval from the North Coast Regiona Water Quality Control Board.

But Susan Warner, a senior engineer with the NCRWQCB, said the state agency has not approved the project. Before the board considers Hunter's request, she said, he needs to get permits from the county.

If he obtains those permits, ther shouldn't be any major issues in regard to his application to the NCRWQCB Warner said.

The state agency's main concern, she said, is preventing any discharge into near by waterways.

Julie Verran
P. O. Box 382
Gualala, CA 95445

April 2, 1998

Rusty Areias, Chair
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

Ref.: Appeal # A-1-MEN-97-46

Dear Chairman Areias,

Thank you for the thoughtful hearing you gave my appeal of the proposed Riley project in Gualala. After Mr. Heckert chose to speak during the public comment period, I asked time to rebut. You offered a choice of speaking the next day, or writing to you. I decided to go home and consult my real estate advisor, Karen Peterson Scott. She sends you greetings, and says that if you bring the Commission up to Gualala to look at the situation, she will take you out to lunch at a nice Mexican restaurant.

Bringing the whole Commission might be hard to arrange, but if you and Commissioner Reilly could make the trip, you could stop on the way to look at the place where Highway 1 is closed between Fort Ross and the Jenner Grade. Caltrans Supervisor David Wells (707-576-2319) took me on a press tour 3/26. A whole valley is collapsing in blocks toward the sea. The road is at an elevation of about 800 feet. Caltrans will start May 1 to site the road inland a few hundred feet. This will require movement of about 250,000 cubic yards of material. There will be questions about where to put it.

Getting back to Monterey, Mr. Heckert said you intimidated him into not speaking sooner. By raising the issue of intimidation, he gives me an opportunity to lay it at his door. Shortly after the August hearing of my appeal, the geotechnical expert I hired, Dr. Eugene Kojan, called to say that someone whose name began with H had called and accused Dr. Kojan of lowering the value of H's property by including it in his evaluation of the bluff retreat rate of the promontory at the mouth of the Gualala River. Such conduct was unprecedented in Dr. Kojan's experience. He asked, "What kind of a place do you live?"

The identity of H was a mystery. When I compiled the list of landowners for my appeal, First American Title Co. told me the parcel sold in June, 1997, for $258, 000 to Grattan et al. Profit Sharing Trust, 50 Old Courthouse Square, Santa Rosa. None of the six listed principals had names staring in H.

On October 17, 1997, Dr. J. David Rogers did his evaluation of the Riley parcel. Erik Olsborg, the Rileys' geotechnical expert, invited the experts who had worked on the Riley or adjacent parcels. Dr. Kojan could not attend. Dr. Rogers invited me. There were about a dozen

3.

Public acquisition of these two parcels as too dangerous to build looks like a reasonable way for the owners to save what they can. Nomination of the Gualala for Heritage River status was withdrawn for now. Traditional fishing access and use of the area by wildlife as a small but significant refuge are good reasons for public acquisition. The most persuasive argument for public acquisition is the historic section of Dr. Rogers's report. Another possibility he mentions, a regional recreational trail, is not feasible because there are too many breaks and unsafe passages in the old RR grade. I used to walk to town on the RR easement to shop, and could have claimed public prescriptive right when the Plentys built their house on the RR easement, but did not because the trail was already unsafe. I knew about State Park trail standards because I used to do a lot of environmental volunteer work for the Sierra Club, especially on coastal State Parks. I led a number of backpacking trips on proposed sections of the Lost Coast Trail. State Park standards precluded use of some routes with great views because they were too close to the edge.

I also served for about 10 years on an advisory committee about land adjacent to Sinkyone Wilderness State Park. Originally it advised the Mendocino County Supervisors, and later, the board of the Coastal Conservancy. Some of the Commissioners may recall my work. Members of that committee went on field trips with experts on geology, hydrology, road and stream restoration and other disciplines. This helped me acquire the knowledge needed to do this appeal. That's nice for me, but what about average homeowners confronted with dangerous development proposals?

From what I've seen so far, they would have no chance. The Commission should hire a geologist. The way it worked out, after the county Coastal Permit Administrator and many others told me I must hire my own geologist, and I did so – not an option for ordinary working people, because of the cost and the fact that the better firms rarely do work for individuals – the Commission staff solution of requiring applicant to hire another geologist sounds good, but in practice it meant applicant's two geologists are treated as outweighing my one, who is subject to attack. True objectivity may only come with a Commission geologist.

My co-worker Jackie Norton, who lost her recently-purchased retirement home at Big Lagoon, sent for a copy of the Coastal Development Permit. All those conditions discussed at the Monterey meeting – manufactured homes, requirements to move them, and the like – that were said to be recorded with the deeds, were NOT recorded with the deeds. Have any such conditions imposed by the Commission ever been recorded with the deeds? This supports my argument submitted at Monterey that such conditions protect no-one.

In addition to the Coral Court slides, there are local factors which can cause decline in Gualala property values and limit return on investment. For families here long-term, like the four upslope owners, that is not so much of a problem, but the downslope landowners appear to be speculators who want a quick return. You may remember the nationally-covered post office scandal in Gualala about a year ago. The feds raided the post office. It used to take about a week for a letter to get to Santa Rosa. The rest of the Gualala infrastructure is in a similar poor state, possibly caused by pressures of too-fast development.

recent commercial / residential development in Gualala, Cypress Village, is up

people there, including a videographer. To start, the whole group trekked across the "Grattan" parcel to what Dr. Rogers's report calls Promontory One. There they lined up in three rows facing north, and several took pictures. This shows that it was not "gratuitous," as Mr. Heckert told the Commission, for Dr. Kojan to include that promontory and surroundings in his evaluation of the Riley parcel; it was standard operating procedure. Photos Dr. Rogers took from that promontory at that time are included in his report as Photo #2.

At the 10/17/97 meeting I was accosted by a local real estate agent, Jerry Tinkess, who said that my geologist had lowered the value of his client's property by going on it and including it in his report to the Coastal Commission. I said it was a de facto public use area going back many years as shown by aerial photos, and asked who his client was. He said he was Gerald Heckert of San Mateo. So it appears that it was Mr. Heckert who called Dr. Kojan, a possible attempt to intimidate Dr. Kojan as a witness in my appeal. Mr. Heckert appears to argue that the value of the parcel depends on concealment of its nature from permitting authorities.

Leaving Promontory One, the group walked east on the Heckert parcel while Dr. Rogers pointed out a fault which appeared to extend up between the Bower and Hiller houses, showing sandstone on one side and shale on the other, indicating considerable displacement.

Mr. Tinkess serves on the Gualala Municipal Advisory Council, a local planning body. In February, 1997, I appealed the Riley project to the Mendocino County Board of Supervisors, and in March I brought it to the GMAC as a non-agenda public comment item. GMAC does not formally consider residential permits, but informally they advised me that the steep access road was a weak point in the Riley proposal. I passed around a color oblique aerial photo, and Mr. Tinkess asked for a copy of it. So Mr. Heckert should have known when he bought his parcel in June with Mr. Tinkess as agent that development of the adjacent Riley parcel was under appeal.

Also in March, 1997, Mr. Heckert sold an oceanfront parcel at Collins Landing, about two and a half miles north of Gualala, which he had held for several years without building. The river-mouth parcel he bought (as a profit sharing trust) in June, 1997, for $258,000 was originally listed ca. 1990 at $595,000. The smaller Riley parcel was originally listed at $395, 000, so both owners paid deeply discounted prices. The Heckert 1997 purchase price was 43% of the original price: 43% of $395,000, the original price of the Riley parcel, is $169,850 – a ballpark 1997 value.

Another parcel on the old RR grade north of Robinson Point sold in October, 1997, for $160,000. It was originally listed at $395,000, and it is considered 2 acres to the Riley parcel's 1.4 acres (some of the acreage of such parcels is between the soil scarp and the mean high tide line). The $160,000 parcel has a culvert to deal with a county drainage easement that ends at the eastern boundary; the Riley parcel has no means of dealing with the drainage from two such easements. The $160,000 parcel has better access than the Riley parcel. That gives a provisional October, 1997, value for the Riley parcel of $125,000 – $150,000. The value of all such bluff-edge parcels will have declined since then due to the events of the winter. A third, more recent comparable sale is needed to establish value; such a sale may not occur soon. The value of the Riley parcel has steadily declined.

for sale. The downtown is full of signs offering vacant commercial space, which stays vacant because rents are high. The TV cable company is in bankruptcy court. The sewer district declared bankruptcy in 1996. The water company is using unpermitted wells that may draw down the Gualala River, a coho stream, and has failed to complete a system upgrade required by the State Division of Drinking Water Safety. Water and sewer rates are high. There is no school in Gualala, though 85 percent of local school children live here. They are bused 16 miles north or nine miles south. School busing costs and issues are a constant headache, and almost bankrupted the elementary school in Point Arena last year. There are serious problems in keeping Highway 1 open between Gualala and Point Arena, in addition to those near Jenner.

In short, neither my activities nor those of Dr. Kojan are affecting the value of the Riley / Heckert lands; their expectation of return on investment is exaggerated. Would lenders take on the Riley proposal, with such a large structure on such a small and shrinking lot with no current survey? Could they insure the structure with anyone less than Lloyd's of London?

A number of local people have told me or my co-workers things that lead me to believe that applicants plan some sort of commercial structure, perhaps a bed & breakfast, think tank or conference center. Mr. Olsborg confirmed at Monterey that they intend to install a full-time caretaker, when he repeated the original architect's claim that erosion would not be a problem once a Person was on site. A Person would not be enough to deal with storm damage. The Person would have to hire crews, and at such times, crews (bless them) are run ragged.

I claim dangerous nuisance from the Riley proposal to my property as follows: West of Highway 1 between the mouth of the Gualala River and Robinson Gulch there are three sea terraces, each 50 -60 feet above the next. The Rileys propose to build on the lowest terrace. A row of houses, including mine, is founded on the second terrace. The third terrace holds more houses, parking lots, a plant nursery, a lumber yard, and a small shopping center. All the drainage that does not go to Robinson Gulch ends up on the Riley / Heckert lands. The hydraulic pressures have never been measured or estimated. That they may be extreme is shown by the wetness of the subject lands and by upslope problems such as water forcing through the pavement at the corner of Sedalia and Hubert Drives (uphill and to the south from my house). To site the "subterranean" part of their structure, the Rileys would cut into the slope 20 feet from my property line (which is at the level of the RR grade), a cut about 15 feet deep and 90 feet long, across the entire front of my 70-foot lot. This would de-stabilize the bluff that supports my house. The subterranean aspect may be a violation of FEMA guidelines. I cannot believe the U.S. Supreme Court intended to encourage such egregiously destructive building projects under the rubric "return on investment."

Yours sincerely,

Julie Verran

Julie Verran
(707) 884-3740 h, (707) 884-3501 w

April 23, 1998

Ms. Jo Ginsberg & Mr. Robert Merrill,
California Coastal Commission, Northern Area
45 Fremont, Suite 2000, San Francisco, CA 94105-2219

RECEIVED
APR 24 1998
CALIFORNIA
COASTAL COMMISSION

RE: My appeal # A-1-MEN-97-46

Dear Coastal Commission Staff,

The enclosed photo pages support my contention that the Riley project would destabilize the bluff that supports the upslope houses, including mine. Later, when I have more information, I will send copies to the Commissioners. The information will be such things as the county grading permit for the access road, maps such as hydrological and tsunami, information on drainage and the Coral Court slides from the county, and the like. To avoid duplication of effort, please let me know what you may request or have requested from the county and the applicants, if possible.

Have you requested a current survey showing the position of the western edge of the property? The map applicants are using is as much as ten years old and does not show the current edge. I am aware that I can send applicants a letter challenging their survey, and should they refuse to redo it, proceed and charge them three times the cost of said survey, but this may be inappropriate in the context of this administrative process. Taking a setback from an unknown edge for a structure of a set size is problematic.

The next time my appeal is scheduled, I will request to show more slides, and I will try to get Dr. Kojan's (photo) map with overlays mounted so it can be placed on an easel, so I will request an easel.

Thank you for all your help on this matter.

Sincerely,

Julie Verran

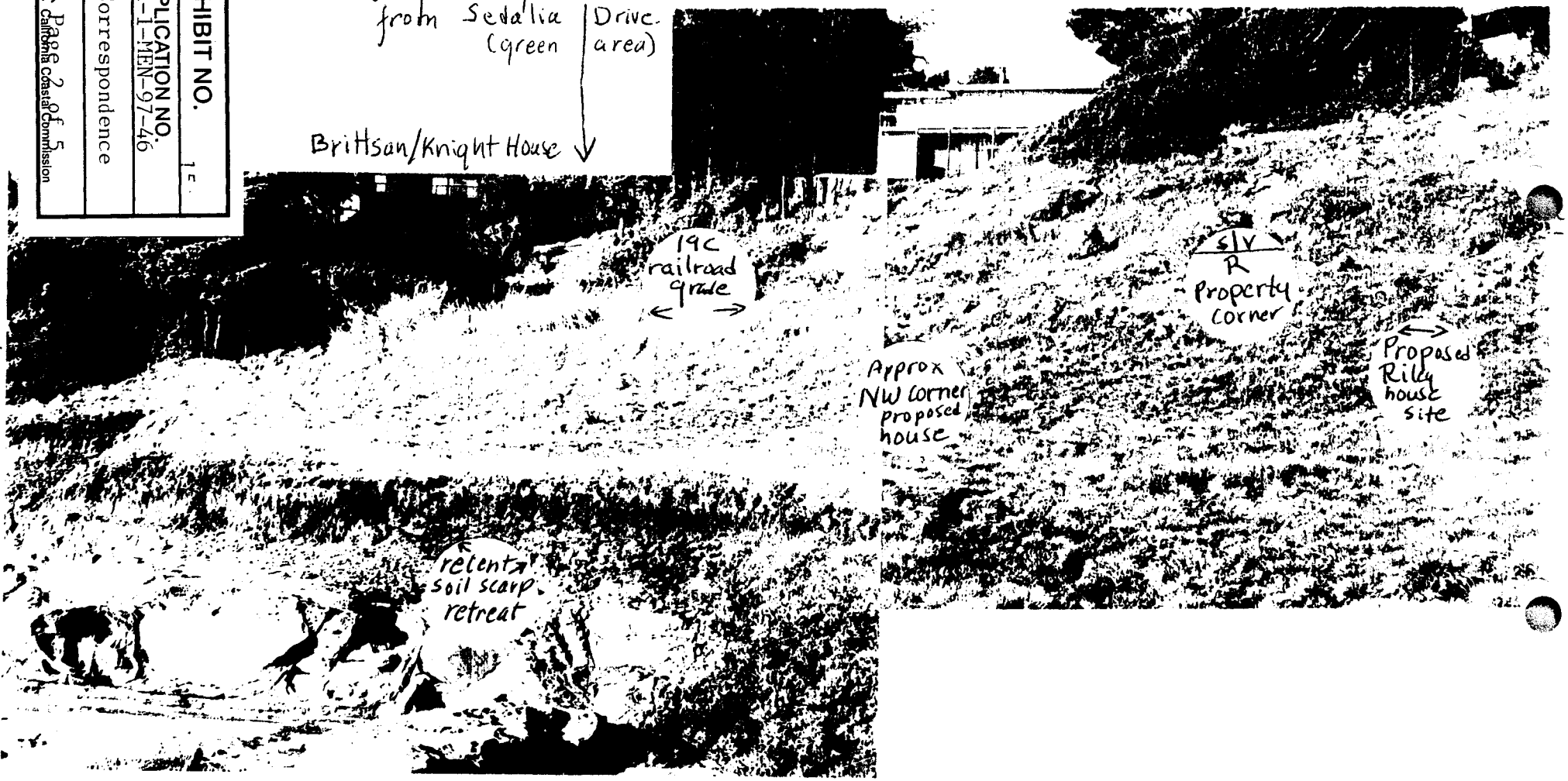
Julie Verran
P.O. Box 382, Gualala, CA 95445
(707) 884-3740 h, (707)884-3501 w
(707) 884-1710 fax, e-mail, steveico@mcn.org

EXHIBIT NO. 15
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 1 of 5
California Coastal Commission

Appeal NO. A-1-97-46 (Riley, MEN Co.)
Photos submitted by J. Verran, 4/98 p.1.

N

EXHIBIT NO. 1E
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 2 of 5
California Coastal Commission

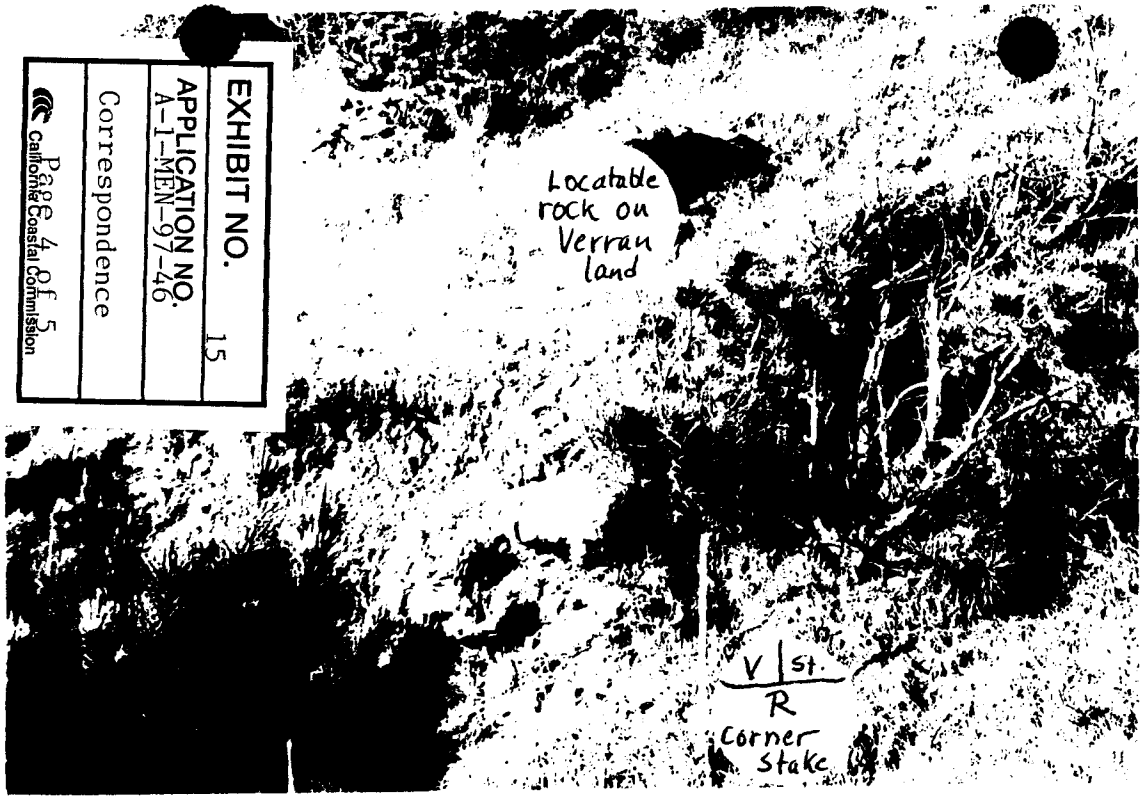


Photos taken 3/15/98 w. 55 mm lens; show areas of recent bluff retreat over sea caves, and areas of soil slippage on east side of old RR grade

Appeal No. A-1-97-46 (Riley, MEN Co.) Submitted by J. Verran p. 2, 4/98

EXHIBIT NO. 15
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 3 of 5
California Coastal Commission

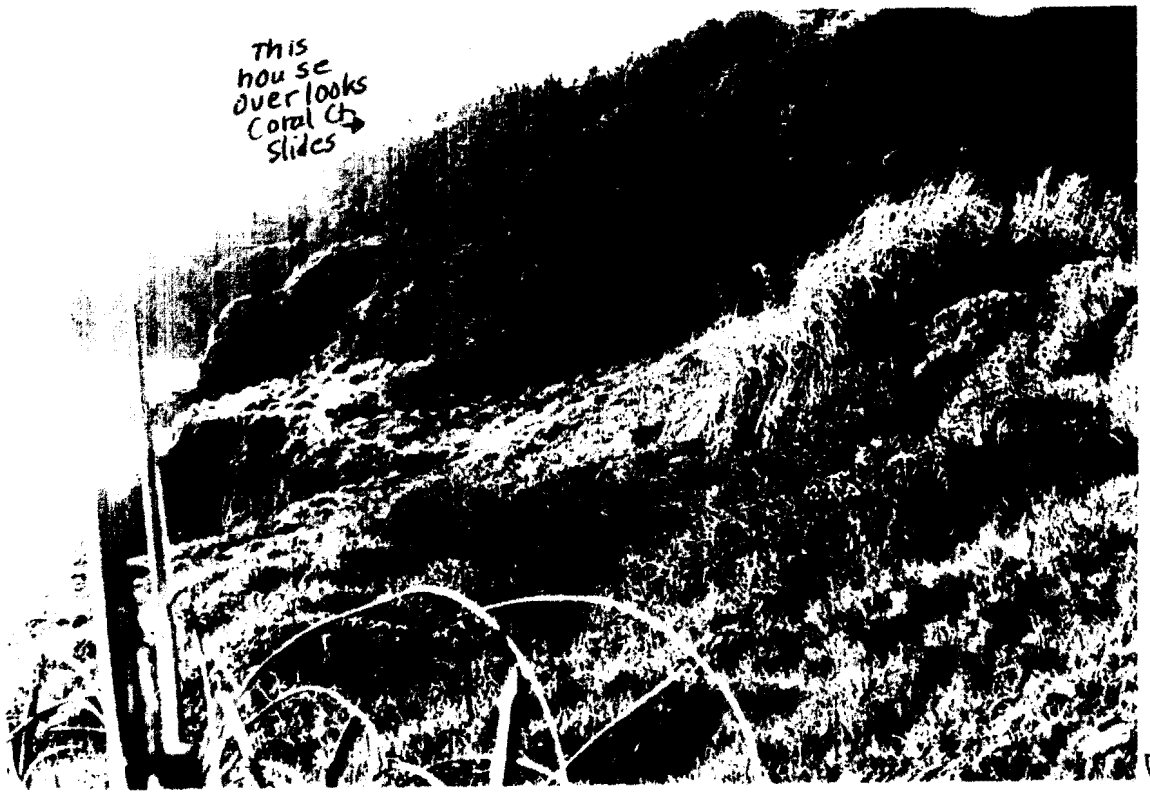
Photos taken 3/15/98 show traditional public fishing access and points of public viewshed on riverbank, highway + park.



Proposed Riley driveway alignment. Not fresh soil scarp retreat at 'cusp', old side-cast RR grade berm above, + top of the slide shown at left visible above berm. This is a disturbing line-up of erosion feature

ppeal No. A-1-97-46
(Riley, MEN Co.) Verran,
4/98 p. 4

Looking N. from NW Verran property corner along old RR grade. N. end of Riley house would extend beyond this point at l. of photo.



Slide affecting Stout Sheridan and Verran lands

← looking South

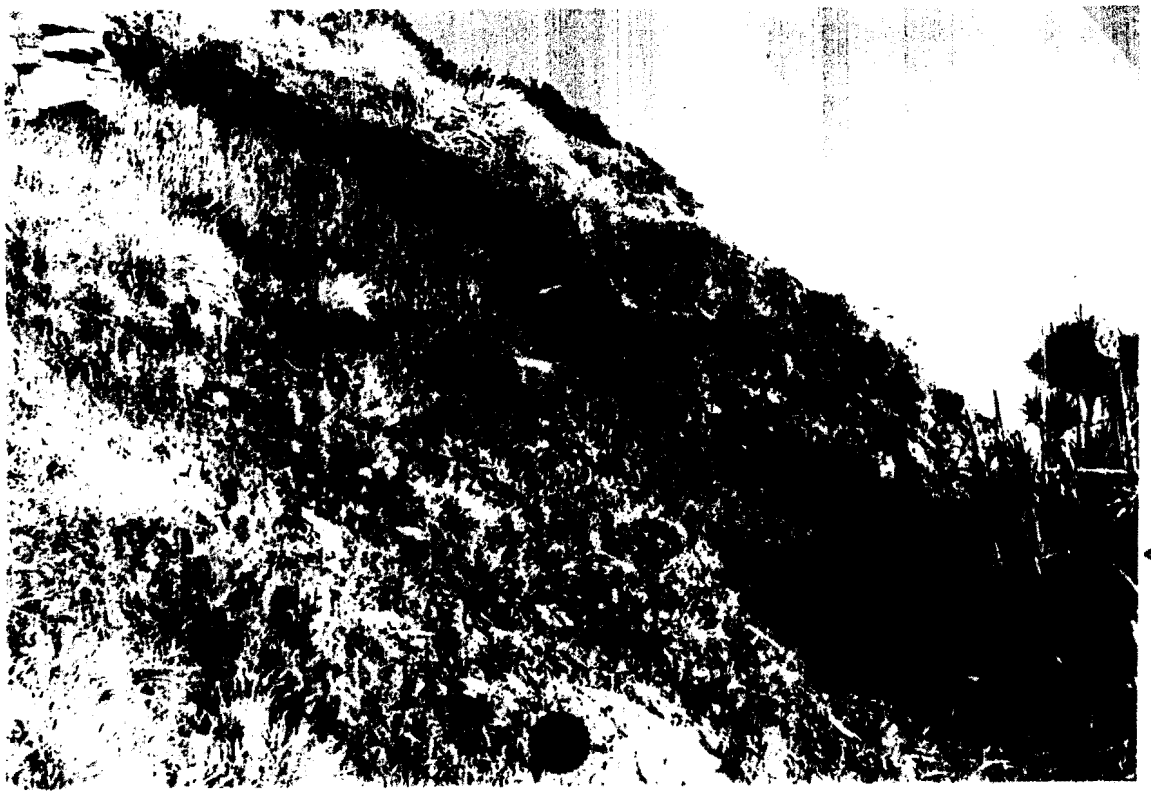


EXHIBIT NO. 15
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 5 of 5
California Coastal Commission

EXHIBIT NO. 16
APPLICATION NO. A-1-MEN-97-46
RILEY
Correspondence

J. Verran
P.O. Box 382
38864 Sedalia Drive, Gualala, 95445

January 8, 1998

Mr. Robert Merrill & Ms. Jo Ginsberg
California Coastal Commission, North Coast Area
45 Fremont, Suite 2000, San Francisco, CA 94105-2219

RE: my appeal # A-1-MEN-97-46

Dear Coastal Commission Staff,

This letter follows up on our phone conversations in December. When documents sent you before the August Commission meeting are relevant, that will be noted thus (S).

I request that the continuation of my appeal not be heard until May, 1998, to allow evaluation of winter storm effects on the subject property. Even without multi-day winter storms, there has been soil scarp retreat since the geotechnical experts gathered there on October 17, 1997. This winter is predicted to be one of the most severe on record; the most severe storms here typically occur between January and March.

I also request a new staff field review. The review took place before you received my appeal, in mid-summer when drainage and wave-action issues are hard to see. Please take note of the following:

The sites of the 1995 and 1997 Coral Court slides, and continuing efforts to stabilize the area, located only 3 or 4 parcels north of the subject parcel.

Piping, as defined by Dr. Eugene Kojan, is occurring on the side of the access road to the subject parcel, near the Hathcoat propane tank. It is already two feet or more deep.

At the foot of the access road the drive to the proposed house would have to make a near-90-degree turn past the cusp defined by Dr. David Rogers, the furthest retreat of the soil scarp. The space between the cusp and the foot of the railroad berm is less than 20 feet. (S) not allowing for a 15-foot setback without removing the railroad berm. From the top of the RR berm near the cusp the 1995 landslide affecting the Stillman and Riley properties is visible, as well as original 19th Century ties and a section of rail. All property corners and intermediate survey points are now flagged on the boundary between the old RR easement, now the subject parcel, and the upslope properties. (S)

A game trail enters the rock bench area at the cusp. Local game wardens say animals using it may be going down to the ocean for salt. The human trail used by picnickers and people who fish is located south of the cusp, opposite the end of the access road.

There has been substantial loss of vegetation and soil scarp retreat since 10/17 north of what Dr. Rogers calls the third promontory. This would threaten the northwest corner of the proposed building.

Continuing north, the area at the foot of the 10-foot county drainage easement between the Stout/Sheridan house and the Brittsan/Knight house is where Dr. Rogers estimates that a 25 to 30-foot bluff collapse occurred along a 60 to 70-foot front about 35 years ago. There appears to be a large sea cave under this area, which the geotech experts did not have time to check on 10/17/97.

Further north along the RR grade lie the remains of a 19th Century RR engine. Dr. Rogers estimated, based on the Bessemer steel and the type of concrete used, it dates after 1874.

Past that are the remains of the burned trestle and a drop off to Robinson Gulch where the boundary between the Riley and Hoffman properties lies.

In updating the staff report, please consider both the Kojan and Rogers reports and include photographs from both. A serious inequity occurred in the original staff report: Eight photographs submitted by applicant's agent Olsborg were in included but none of my many photographs(S). In addition, I request to show about 15 slides at the continuation meeting showing views of the subject parcel from other properties, wave action, and drainage issues.

My appeal of this project to the Mendocino County Supervisors was continued on issues of park viewshed and drainage. William Hoffman, the adjacent landowner to the north of the subject parcel, is a soils scientist and attorney. He attended both county hearings and wrote to the Coastal Commission in August, 1997, that the response of applicants' agents was inadequate on drainage. It appears that this letter, of which he says he hand-delivered 20 copies to your office in good time, did not reach the Commissioners. Had they read it, they likely would have asked for more drainage information. The subject parcel lies at the foot of two county drainage easements, which date from the creation of the subdivision ca. 1960(S). When the subject parcel was formed by certificate of compliance in 1989, no provision was made for this drainage; the easements still just end at the property line. A complex system of culverts drains into these easements carrying storm drainage from Sedalia Drive, a county road, and possibly from further up the hill. The County Engineer's office can look into this at your request.

The easement for access to the subject parcel, which lies within the southerly drainage easement, also dates from the original subdivision. At that time no dwellings were planned on the RR easement. Therefore, the easement may have been intended for public access, or for access to repair the RR right of way, which unravels periodically as shown by aerial photos over time(S). Applicants are now denying access to repair a 1997 slide which affects primarily the Stillman property, secondarily the subject property, and has the potential to expand to affect my property, according to Licensed Surveyor Richard Seale(S). If the Commission and the County cannot guarantee access for repairs to the upslope landowners whose western boundary is the eastern side of this 19th Century cut bank, no permit can be granted, because of liability.

There is new information on environmental and park issues. Public acquisition of the subject promontory, which is located at the north side of the mouth of the Gualala River, was proposed in the 1980s but not followed through. That may be the best solution. In November, 1997, the Resources Agency released the Progress Report of the California Rivers Assessment. That document ranks the estuary / lagoon of the Gualala River an Outstanding rating for both aquatic and riparian factors. The subject promontory drains partly into the estuary / lagoon, and partly just outside it, where anadromous fish are also likely to gather at times in their life cycles.

Both the 1992 archaeological report (S) and the 1997 Rogers report emphasize the historic importance of the promontory. The RR ran from the mill at Mill Bend, near the present north end of the Gualala river Bridge, to Bourn's Landing, about two miles north of the subject parcel. The promontory may be the only place where actual traces of the RR and chutes remain. Much of the RR grade has fallen into the sea. On December 2, 1997, fish biologist Patrick Higgins presented

his literature search on the Gualala River to the GR Watershed Council. His study was funded by the Coastal Conservancy via the Redwood Coast Land Conservancy. Higgins found that the Gualala R. has more 19th Century photo documentation than any other watershed he knows of. Many 8"x10" glass plates showing industrial methods (and fish habitat) are preserved at the Heald-Poage Museum in Ukiah. Based in part on the Higgins report, the GRWC applied for federal Heritage River status for the Gualala. If it is granted, the industrial remnants at the mouth of the river – including the subject parcel – will increase in importance.

The long-term public use of the promontory, which shows in paths visible on aerial photos, is not limited to locals. Even if it were, when the Coastal Act went to the voters, one selling point was that it would retain access to the shoreline for local residents. The promontory is visible from the inn in downtown Gualala. It is only a fifteen-minute walk – the only attractive walk available from downtown. The people who fish there probably have local roots, but may no longer live here.

The Kojan and Rogers reports support many of the points in my original appeal relating to the Coastal Act and the Local Coastal Plan. Liability is an important concern. My house is most directly threatened by the proposed project, but others could also be affected. Can a house be built on the subject parcel that will last 75 years, and can it be done without endangering existing upslope houses? Geotechnical experts can point out difficulties, but only a structural engineer can suit a building to such conditions, and make full recommendations to safeguard the upslope properties. Applicants had an architect who was with an engineering firm, but they fired him in late 1994, according to a letter in county files (S). Hence my concern that if a permit were granted the project could be started but never finished. Applicants should be required to post a bond to guarantee return of the land to its original condition in event of abandonment, plus a bond to cover damage to upslope properties, including the two houses on the east side of Sedalia Drive opposite the two county drainage easements – based on the Coral Court experience, they are also at risk.

As Mr. Hoffman points out, applicants and their agents give changing sizes, heights, and square footage for the proposed building. Their former architect wrote (S) that they intend to install a full-time caretaker. This suggests that they may intend to build a two-unit structure. The lowest size estimate they give would be twice the size of my house, which is the nearest home and in the mid-range of size for the immediate neighborhood. Mendocino County does not have the resources to assure that buildings in this outlying area conform to requirements during construction. As part of my work I have photographed: the Gualala Country Inn built partly in the right of way of Center Street; the Breakers and Sea Cliff inns built into the Gualala bluff-top trail easement; a house at the mouth of Galloway Creek that was said to be placed out of sight from Schooner Gulch State Beach, but is intrusively visible. You must be aware of these cases. No permit should be granted for the current Riley project.

Yours sincerely,

Julie Verran

Julie Verran, (707) 884-3740

EXHIBIT NO. 16
APPLICATION NO. A-1-MEN-97-46
RILEY
Correspondence

EXHIBIT NO. 16
APPLICATION NO. A-1-MEN-97-46
RILEY
Correspondence

J. David Rogers
Rogers/Pacific
396 Civic Drive
Pleasant Hill, CA 94523

Dec. 1, 1997

P.O. Box 382
Gualala, CA 95445

Dear Professor Rogers,

This is to follow up on the phone message I left you re the Riley property in Gualala. First, I had the great good fortune to have my file box with original photos and negatives returned. Someone who found it in Ukiah looked in it and found my phone number! So, if you want better copies or slides of the photos you wanted for your classes, let me know. Second, I have been keeping a safety watch on the area and have some things to report.

On November 9, two friends and I noticed some cracks parallel to the soil scarp, two "bites" north of the point of rock in front of my house. The cracks were two or three inches wide and within 3 or 4 feet of the vegetated edge. We were concerned these might presage a landslide.

On Nov. 14 there was a 6.7 foot high tide accompanied by waves the Press Democrat said were 30 feet. They may have been more like 20 feet here. High tides and surf also occurred for a couple of days around that. The waves were striking the bluff and cascading up 20 feet or more and then falling as water, not spray, on the bluff edge and running off. This was most pronounced where we had seen the cracks, and also above the cave you probed on October 17. There was no wind and the weather was clear and warm.

On November 26 we had a severe storm with high, sustained wind and a lot of rain. It took out the biggest tree in my yard (sigh). The wind was from the northwest. There were similar high waves cascading upwards, and the water was just blown across the proposed building site with great force. After the storm I checked for unsafe conditions. The place where we saw the cracks no longer showed them. Either the soil washed away from around the plants, or the edge itself crumbled away. No new cracks appeared, but it does look like there has been retreat of the vegetated edge since October 17.

On that date, Mr. Stillman's geotech consultant, Jim Glomb from Sebastopol, told me he was there in part to negotiate for access to repair the landslide on Mr. Stillman's property. He said the applicant was denying access and the work needed to be done soon. He has still not done the work, so I assume there is still no access. This could cause a liability situation for applicant.

On Nov. 26, after the storm, I checked the slide. It looked like there was little, if any, movement since 10/17. The portion of the slide that is on applicants' property was blocking the drainage from the north and causing water to back up in the railroad grade at the base of the cut bank that forms the western boundary of ~~the~~ my property. Could the construction of the railroad grade in the 19th Cent. have changed the drainage pattern, shifting it toward the south? Would the original drainage have gone straight to the v-shaped indentation?

I hope you and your family are well,

~~Sincerely,~~

Julie Verran

cc: Eugene Kojan, Jo Ginsberg

Photo taken March, 1973 (1)
Gualala Point County Park in
back ground shows bluff shape.
VERRAN appeal of Riley CDP 6-94

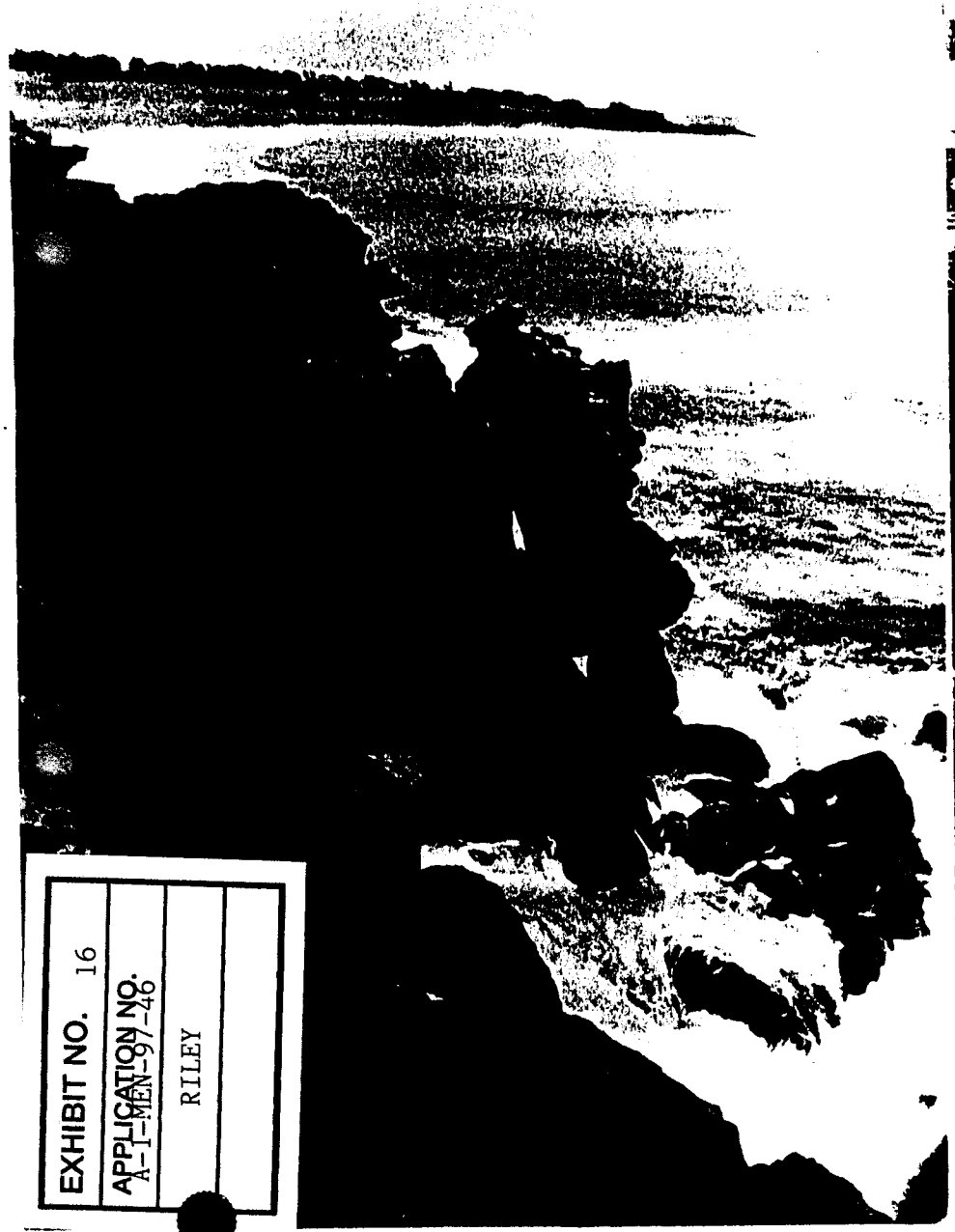
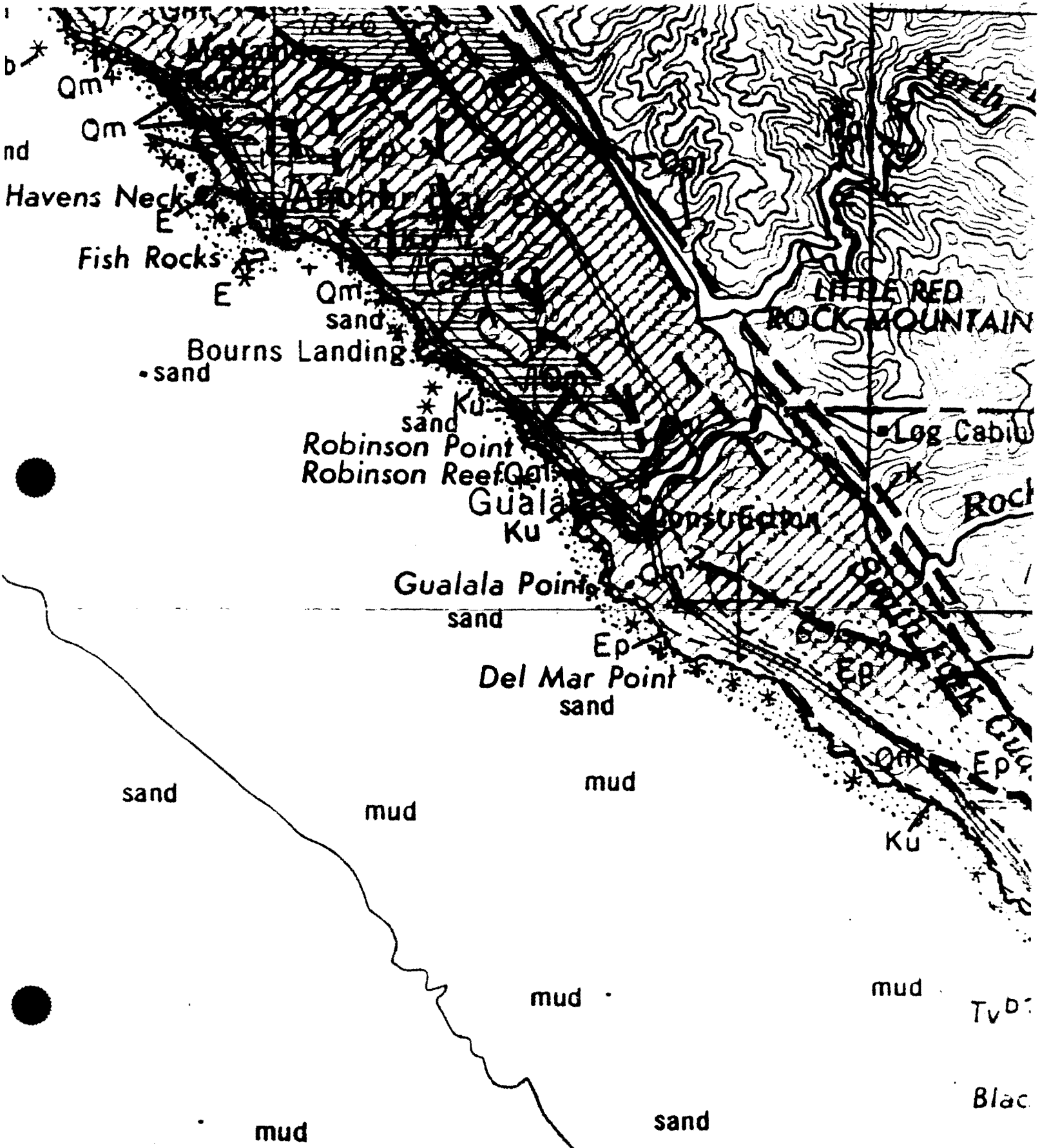


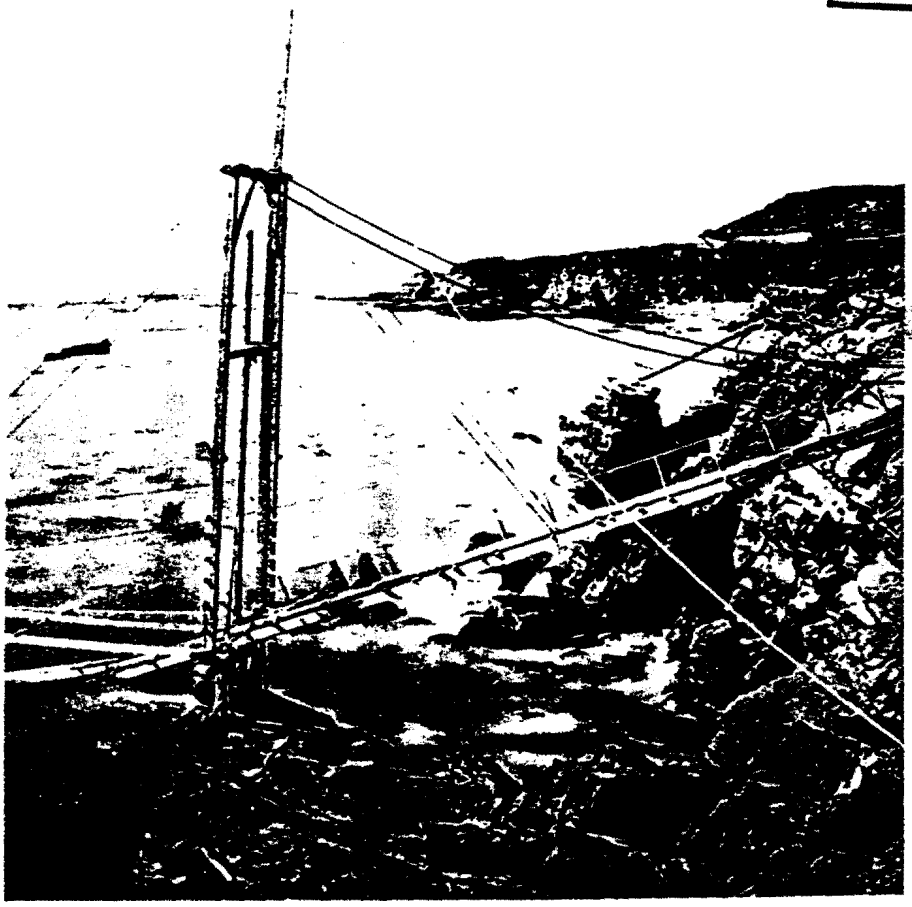
Photo taken March, 1997 (2)
showing same location with
bluff retreat.
VERRAN appeal of Riley CDP 6-94

EXHIBIT NO. 16
APPLICATION NO.
A-1-MEN-97-46
RILEY

EXHIBIT NO. 16
APPLICATION NO. A-1-MEN-97-46
RILEY



12. Robinson's chute, with two passengers soaking up spray. The remains of Cole Brothers chute show in the background.



<- Subject Parcel

beach the next day. The vessel was insured and will be sold by the Underwriters' Agent for this District in a few days.[8]

The biggest problem at the Gualala landing was always *shoaling*, or the tendency of sand to accumulate in large amounts where the river met with the sea. The story is also told of *Lulu*, who, on January 17, 1884, was driven onto the beach by a northwester and "floated off the next morning at high tide with the help of a strong, downriver land breeze." A postscript to *Lulu's* story is that a year later she wrecked at Westport with a full load of tanbark and was sold for ten dollars—"after her lines parted during a storm."[9]

When a ship pulled into a *landing*—usually on a bluff high above a small bay—it moored at the closest possible point underneath. Location of both boat and landing were arranged to make the best use of gravity. Near to the bluff's edge—usually called a *point*—special *chutes* were set up, designed to work as closely as possible with the nature of land and sea as they existed in proximity to one another. Most basic of chutes was the *apron*, which worked a lot like a slide; merely scooting cargo from the landing point to the ship deck below. Walter A. Jackson, author of *Doghole Schooners*, described this chute as: "merely two poles placed upright in the form of an inverted V supporting a wooden trough and held in place by ropes or wire cables."[10] Cargo was controlled at the ship end by means of an "apron," hinged to be lowered or raised as required.

More advanced among chutes was the *wire*—alternately referred to as *cable*—which stretched from the point to where a ship was moored in the sea and sent cargo down in a sling. Its weight caused the load to descend, while brake control remained at the head. Reputed to have derived from the rigs miners used to extract gold from the Sierras,[11] the wire chute was sturdier, faster and allowed more control than the apron. In the 1870's the St. Ore's brothers, George

EXHIBIT NO. 16

APPLICATION NO. A-1-MEN-97-46

RILEY

A-1-97-46 (Riley, MEN)
Photo #2 shown March 11, 1998. Grassy area below houses is upper track of 1995 Coral Court slide.

Moderate waves on March 1, 1998, splash up to blufftop Riley house site.

EXHIBIT NO. 17
APPLICATION NO. A-1-MEN-97-46
Appellant's Photos
California Coastal Commission

A-1-97-46 (Riley, MEN)
Photo #7, shown 3/11/98 in Monterey. This is approximate site of 3-story Riley proposed house.

EXHIBIT NO. 17

APPLICATION NO. A-1-MEN-97-46

Appellant's Photos

California Coastal Commission

EXHIBIT NO. 17

APPLICATION NO. A-1-MEN-97-46

Appellant's Photos

California Coastal Commission

A-1-97-46 (Riley, MEN)
Photo #8, shown 3/11/98, bluff-edge stake shows boundary between Heckert and Riley lands, with Riley at right.

BACE Geotechnical
A Division of Brunsing Associates, Inc.

March 5, 1998

10578.2

Ms. Jo Ginsberg
Members and Staff
California Coastal Commission
North Coast Area
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

RE: Response to Neighbor's Concerns Regarding Drainage, Erosion, And Hillside Stability, Proposed Riley Residence, 38868 Sedalia Drive, Gualala, Mendocino County, California, Appeal No. A-1-MEN-97-46

Dear Ms. Ginsberg:

This letter presents our response to concerns raised in letters from several area residents regarding impacts from construction of the proposed Riley residence. The letters to which we are responding are from the following persons:

* Ms. Julie Verran, 12/1/97, 1/8/98 & received by the Coastal Commission 3/3/98;
* Ms. Lindsay Vurek, 7/22/97;
* Mr. Ronald Knight, 8/10/97;
* Mr. William Hoffman, received by the Coastal Commission 8/11/97.

The main concerns presented in these letters and our responses are as follows:

Hillside Stability - Since the proposed Riley residence will not be in contact with the nearby, steep hillside and will not be adding water to this hillside, no conceivable impact to the hillside slope stability will result from the Riley residence construction. The most important factor for the stability of this hillside is the condition of the graded pads and drainage features associated with the developed parcels on this hillside. Maintenance of drainage features on these properties is the most critical aspect of hillside slope stability. Riley property development, being on the terrace below the hillside, will have no effect on the uphill drainage.

Soil Support of Foundations - The terrace deposit soils that mantle the bedrock at the property are a few feet in thickness and consist of fine sand, silty sand, and sandy silt. These soils have a potential for densification (if above the water table) or liquefaction (if below the water table) during a nearby, moderate or

severe earthquake. The foundation design criteria recommended in our Geothnical Investigation report, dated June 30, 1992, specifies that all foundation elements be deepened to penetrate through these terrace soils to gain support in the underlying, hard rock. Therefore, densification, liquefaction, and/or erosion of the terrace soils would have little, or no effect upon the proposed residence structure.

Access Road Erosion - Recent erosion along the steep portion of the paved access road, as reported, is relatively minor, and can easily be controlled by standard erosion control measures, such as fabric and rip rap placement, lining of ditches, removal of obstructions, revegetation, etc. These are normal homeowner duties that can most efficiently be handled when the road owner/user is in residence.

Site Drainage - During the course of this winter, the Riley property, as typical of properties throughout this region, has been saturated from incessant rainfall. Excess water within the terrace soils has been running off as sheet flow across the site, pārticularly during severe storms. The recommended drainage measures associated with the proposed Riley residence will add some additional water to the terrace. When saturation levels are achieved during future storm periods, water from the "fresh water leach fields" will sheet flow across the site in the same manner as presently occurs. The additional water from area drains will be spread out across the site without substantially changing present seepage paths or amounts.

We trust the above information suits your needs at this time. Please contact us if you have questions, or if we can be of further service to you on this project.

Respectfully submitted,

REGISTERED GEOLOGIST
ERIK E. OLSBORG
No. 1072
Certified
Engineering
Geologist
STATE OF CALIFORNIA

a/p 2/28/99

Erik E. Olsborg
Engineering Geologist - 1072

REGISTERED PROFESSIONAL ENGINEER
ARTHUR H. GRAFF
NUMBER 2319
Exp. 3/31/99
GEOTECHNICAL
STATE OF CALIFORNIA

Arthur H. Graff
Geotechnical Engineer - 2319

EEO/AHG/eo

cc: Mr. Ralph Matheson

EXHIBIT NO. 18
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 2 of 2
California Coastal Commission

BACE Geotechnical
A Division of Brunsing Associates, Inc.

January 8, 1998
Re-issued March 5, 1998

Ms. Jo Ginsberg
Members and Staff
California Coastal Commission
North Coast Area
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

RE: RESPONSE TO ROGERS/PACIFIC ENGINEERING GEOLOGIC PEER REVIEW REPORT, PROPOSED RILEY RESIDENCE, 38868 SEDALIA DRIVE, GUALALA, MENDOCINO COUNTY, CALIFORNIA, COASTAL DEVELOPMENT PERMIT APPEAL NO. A-1-MEN-97-46

Dear Ms. Ginsberg:

This letter presents our response to the Engineering Geologic Peer Review Report, dated November 28, 1997, prepared by Rogers/Pacific, for the proposed Riley Residence, 38868 Sedalia Drive, Gualala, California. Representatives of BACE Geotechnical met at the site with Dr. David Rogers, of Rogers/Pacific, and provided him with our file data, on September 19, 1997.

Our review of the Rogers/Pacific report was generally favorable; we concur with most of his findings and conclusions, with the exception of his determined erosion rates. Practice accepted by the Coastal Commission has been for consultants to base ocean bluff erosion (retreat) rates on historical, site-specific evidence. This is generally considered by others in the profession to be more valid than to project theoretical performance of a bluff back to the Pleistocene Epoch. What will happen to a bluff in the next 75 years can be more realistically predidicted based upon what has occured in the last 140 years (since written records and photographs have been available), rather than in the last 11,000 years (during which there have been many fluctuations in the regional climate).

Evidence to support our previously provided erosion (bluff retreat) rate of about one inch per year can be seen in Photographs 1 and 2, presented in the Rogers/Pacific report. Photograph No. 1 shows the subject bluff in about 1875. Photograph No. 2 shows the bluff in it's present condition (1997). The over-all, average amount of erosion that has occured during the time interval between the photographs (122 years) appears to be on the order of about 10 to 15 feet. This would correspond to an average (including periodic, localized rock falls) retreat rate of about one to one and one-half inches per year over 122 years. A retreat rate of 2.65 to 5.5 inches per year (concluded in the Rogers/Pacific report), would correspond to an erosion loss of between 27 and 56 feet, which clearly is not evident in these two photographs, nor in

any of the other photographs that we have reviewed.

We consider the above discrepency worthy of note, but not to be a major issue, since the resulting Rogers/Pacific setback criteria is generally in agreement with our own recommendations. We also wish to reiterate that the driveway should stay in it's presently-planned location, since it is relatively "easy" to move a gravel driveway, should the need ever arise. Moving the planned driveway into the railroad embankment at this time would involve the unnecessary expense of constructing a retaining wall. Such a measure may not be needed during the lifetime of the house.

We trust the above information suits your needs at this time. Please contact us if you have questions.

Respectfully submitted,

REGISTERED GEOLOGIST
ERIK E. OLSBORG
No. 1072
Certified
Engineering
Geologist
STATE OF CALIFORNIA

2/28/98

Erik E. Olsborg
Engineering Geologist - 1072

REGISTERED PROFESSIONAL ENGINEER
ARTHUR H. GRAFF
NUMBER 2319
Exp. 3/31/01
GEOTECHNICAL
STATE OF CALIFORNIA

Arthur H. Graff
Geotechnical Engineer - 2319

cc: Ralph Matheson

EXHIBIT NO. 18
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 2 of 2
California Coastal Commission

BACE Geotechnical
A Division of Brunsing Associates, Inc.

January 8, 1998

Mr. Ralph Matheson
Matheson Design
P. O. Box 321
Gualala, CA 95445

RE: RESPONSE TO ROGERS/PACIFIC ENGINEERING GEOLOGIC PEER REVIEW REPORT, PROPOSED RILEY RESIDENCE, 38868 SEDALIA DRIVE, GUALALA, MENDOCINO COUNTY, CALIFORNIA, COASTAL DEVELOPMENT PERMIT NO. CDP 6-94 (R/MOD)

Dear Mr. Matheson:

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Our review of the Rogers/Pacific report was generally favorable; we concur with most of his findings and conclusions, with the exception of his determined erosion rates. Practice accepted by the Coastal Commission has been for consultants to base ocean bluff erosion (retreat) rates on historical, site-specific evidence. This is generally considered by others in the profession to be more valid than to project theoretical performance of a bluff back to the Pleistocene Epoch. What will happen to a bluff in the next 75 years can be more realistically predidicted based upon what has occured in the last 140 years (since written records and photographs have been available), rather than in the last 11,000 years (during which there have been many fluctuations in the regional climate).

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We trust the above information suits your needs at this time. Please contact us if you have questions.

Respectfully submitted,

REGISTERED GEOLOGIST
ERIK E. OLSBORG
No. 1072
Certified
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Geologist
STATE OF CALIFORNIA

2/28/99

Erik E. Olsborg
Engineering Geologist - 1072

REGISTERED PROFESSIONAL ENGINEER
ARTHUR H. GRAFF
NUMBER 2319
Exp. 3/31/01
GEOTECHNICAL
STATE OF CALIFORNIA

Arthur H. Graff
Geotechnical Engineer - 2319

cc: David & Kathryn Riley
David Rogers, Rogers/Pacific
Jo Ginsberg, California Coastal Commission
Linda Ruffing,
Mendocino County Planning & Building Services

EXHIBIT NO. 19
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 2 of 2
California Coastal Commission

R. Kurt Menning
CIVIL ENGINEERING CONSULTANT
Post Office Box 5040
Gualala, CA 95445
707-884-1070

RECEIVED
MAR 0 9 1998
CALIFORNIA
COASTAL COMMISSION

March 5, 1998

Commissioners, Jo Ginsberg & Staff
California State Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

RE: Appeal #A-1-MEN-97-046
David and Kathryn Riley, Gualala, CA

Gentlepersons:

I am the Civil Engineer doing the vertical and lateral structural calculations on this residence. It must meet the structural requirements of the current issue of The Uniform Building Code and a special requirement on the coast to resist a 100 mph wind force from any direction. This will produce lateral forces significantly larger than the earthquake design force requirement in the code.

Foundation design criteria is specified in the Soil Report by Bace Geotechnical, Inc., PO Box 749, Windsor, CA 95492: Report 10578.1 of June 30, 1992. On page 9 of the report, all retaining walls must be restrained to resist movement (at least) an equivalent pressure of 55 pounds per cubic foot for horizontal backfill. This is 88 percent of the forces that a solid wall of water would produce against a wall. In addition, a 2 pounds per cubic foot surcharge shall be added for each 5 degree increase in slope of compacted backfill behind the walls. If a vehicle is parked by a wall an additional surcharge shall be added equivalent to 3 feet of backfill (165pcf).

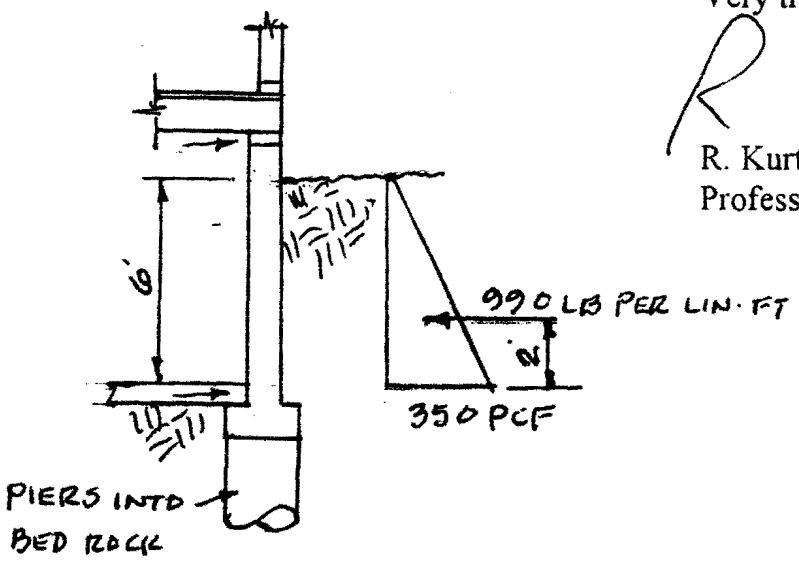
All of the retaining walls shall have permanent drains to prevent the build up of water pressure. The following sketch gives an example of a six foot retaining wall with no other surcharges. (NEXT PAGE)

As a final statement, besides doing structural design for architects and other engineers for 41 years, I was an Engineering Plan Checker for the City of San Jose for 17 years and the Senior Civil Engineer (Structural) for the Architectural Division of Public Works for 2 years. My last major design was the complete structural restoration of the Point Arena Theater working with Mr. Richard Perkins, the architect.

If you have any questions or concerns I will be happy to address them for you.

Very truly yours,

R. Kurt Menning
Professional CA Engineer CE 13090



EXAMPLE OF 6 FT RETAINING WALL PRESSURE

R. KURT MENNING
CIVIL ENGINEERING CONSULTANT
California Professional Engineer CE 13090
PO Box 5040 Gualala, CA 95445
707 884-1070

July 23, 1997

Attn: Ms. Jo Ginsberg
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 4105-2219

REF: County CDP #06-94(12/MDO) Appeal #A-1-MEN-97-046

Dear Ms. Ginsberg:

I am the Civil Engineer working on the David Riley Residence to be located on the coastal bluff at 38868 Sedalia Drive, Gualala, CA 95445.

Specifically, I am doing the structural design which includes lateral design calculations to resist seismic and wind forces according to the adopted Uniform Building Code of Mendocino County, State of California. In this case, a wind of 100 mph governs over seismic forces. I am also providing structural calculations on the foundation, wall, floor and roof framing members. Included with the calculations are structural details that the designer, Ralph Matheson, will incorporate in the final plans. A Soils Engineer did several test drills and made recommendations for foundation design criteria.

The plans are being prepared under my supervision and guidance and the final set will have my Professional Engineer's stamp on all sheets with a "wet signature."

A brief history of my engineering background:

1. Graduated Purdue University, B.S. Civil Engineering, Jan 1957
    A. Member of Honoraries: Tau Beta Phi, Chi Epsilon
2. Bechtel Corp. 1957-58, Jr. Engineer
3. City of San Jose 1958-1984
    A. Building Dept. Plan Checker 1958-1975
    B. Public Works Dept., Sr. Engineer; Sidewalks, Curbs, & Gutters 1975-1978
    C. San Jose Municipal Airport Planner 1978-1980
    (Shift due to Proposition 13)

D. Public Works Dept., Sr. Civil Engineer of Structural Design Section 1980-1984

E. Retired April 1984

4. Obtained Professional license in 1960; CE 13090
5. Obtained Outside Work Permit 1960-84

   Provided structural calculations and details for hundreds of churches, apartment buildings, homes, retaining walls and swimming pools for architects and developers (outside of San Jose).
6. Renovation of Point Arena theater 1995-97

   Provided structural calculations and details to Architect, Richard Perkins.
7. Project Engineer, Gualala Arts Center 1996-97

   Provided calculations and details for structural changes and special inspections.
8. Residential Structural Designs: 1984-1997

   Continued designs for local architects and designers, about one residence a month.

Please call me if you have any structural questions or concerns.

Very truly yours,

R. Kurt Menning

REGISTERED PROFESSIONAL ENGINEER
R. KURT MENNING
No. CE 13090
Exp. 3/31/01
CIVIL
STATE OF CALIFORNIA

EXHIBIT NO. 21
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 2 of 2
California Coastal Commission

Mr. & Mrs. David C. Riley
520 Edgehill Drive
Gibsonia, PA 15044-9221

April 15, 1998

Ms. Jo Ginsberg
Members and Staff
California Coastal Commission
North Coast Area
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

RE: **PROPOSED RILEY RESIDENCE, 38868 SEDALIA DRIVE, GUALALA, MENDOCINO COUNTY, CALIFORNIA, COASTAL DEVELOPMENT PERMIT APPEAL NO. A-1-MEN-97-46**

Dear Ms. Ginsberg:

Until this time, my wife, Kathy, and I have limited our response to the technical issues presented by the appellant in our case. We did this out of respect for the process and the difficult task which that process presents to the Staff and the Commission. When a case is given to you, there is no way of knowing the merits of the issues.

Having now endured two Commission hearings, August 1997 and March 1998, it has become obvious that this is not enough. This caused us to sit back and review the information submitted to the Staff and Commission for their consideration. It quickly became obvious that the appellant, a reporter for a local weekly newspaper, had, through a steady campaign of implications, half-truths, exaggerations, and falsehoods, painted a vivid picture of the carpetbaggers from the East, with too much money, making a hasty, ill considered, venture for a part time residence on the West Coast.

Nothing could be further from the truth and we are taking this time to do a quick review of the history of the Rileys and our project so that we may set the record straight.

Kathy and I are both native "West Coasters" by birth. I was born in Oregon and Kathy in California. We were married in San Francisco in 1963 while I was voluntarily serving in the U. S. Navy. Over the next nine years we had three children. I completed my naval service, worked and went to school at night graduating, first in my program, with a degree in engineering from California State University at San Jose in 1972. At that time my best job opportunity required us to move to Pennsylvania, which we did. However, even then, it was our intent to return to California at our first chance.

We spent the next eighteen years working hard and contributing both time and money to various community projects while we raised our children to be responsible, contributing members of society. This was accomplished through the sacrifice of vacations and other personal luxuries, and the concerted efforts of our three children. Beth, our eldest, graduated from Brown University, is in a management position with H. J. Heinz Corp. and is currently two-thirds of the way through her masters program in international business at Carnegie Mellon University with a 4.0+ average. Sara graduated from Emory University in three years, is happily married with two children, is a

part-time teacher and volunteers twenty to thirty hours a week at her daughters' school. Dav graduated from Kent State University, is happily married, is a pilot, a FAA flight instructor graduated with a 4.0+ average from the University of Minnesota graduate program air traffi control school. He is currently an FAA air traffic controller at Cleveland Center. Having completed these obligations, Kathy and I could realize our long held dreams.

In 1990, we sold our business and began to plan our return to California, figuring that it would take two to three years. We knew that we wanted to settle in Northern California because our best friends were all there. On our first trip we rented a car and drove 4,500 miles in three weeks, surveying from Monterey to Tahoe to Leggett. Even on that first trip we, by chance, spent a night in Gualala. We determined on that first trip that we were most comfortable on the North Coast and would concentrate our search on Marin, Sonoma and Mendocino coastal communities. We were hoping to find a house and had no interest in building. However, having engaged four real estate agents, it became apparent that most homes constructed along the coast are designed for temporary not permanent residence. After two years of searching, we were in Gualala looking at a house on Robinson Reef Drive and our realtor pointed to the terrace on Robinson Landing and said that there were two pieces of property there if we were interested. Although we did not want to build, we decided to take a look.

The moment we walked onto this lot we knew we had found our home. This realization did not cause us to jump into a long distance construction project without giving due consideration to the potential problems. The first question we addressed was why this property had not be previously built upon. After investigation, the answer was quite simple. It had previously been railroad property and the Federal Government has a very tedious procedure required to release railroad property for private use. Our parcel was not released until the late 1980's at which time it was purchased but could not be built upon because there was insufficient space for a septic tank and leach field. In 1992, when we were shown the property the sewer system was under construction and the last obvious roadblock was removed.

We then decided to make an offer but it was made with a large list of contingencies, the most significant of which was a satisfactory geologic study. This property represented a significant financial and emotional investment and we certainly could not afford to buy a beautiful piece of property upon which we could not live. Our intent was to build a home that is the culmination of three decades of working hard, planning and saving.

After extensive research we selected Bace Geotechnical to do that study, based upon their considerable coastal experience and reputation. We wish to point out that they were selected prior to our purchase and our purchase offer was contingent upon a satisfactory report. There was no motivation for Bace Geotechnical or anyone employed by them to shade their findings in our favor as has been implied by the appellant on numerous occasions. Quite to the contrary, they are at considerable liability to us if their findings were incorrect since we paid them over $5000 to make their study. While Bace was compiling their report, Kathy and I concentrated on the availability of sewer, water, electricity, phone, propane, and even cable. We also checked with CDF to be sure there was no undue fire hazard At the same time we investigated the Coastal Permit process to be sure we would be in compliance.

Having obtained satisfactory results we then purchased the property outright in 1992. We had decided to build a log home because we like the style and it would be the most seismically stable structure we could build. We interviewed a number of local architects and designers, including

Ralph Matheson, to see if anyone had experience with log homes. Unfortunately, none did. We then embarked on an 11,500 mile trip through the northwestern United States and Canada to see log home manufacturing techniques and to obtain leads for designers. The only northern California designer we could find was Hart Engineering in Truckee. For the next eighteen months we worked on the design and the permit process, culminating in a building permit approved for issue. There were no appeals to our coastal permit at this time since the appellant's father was still living.

It was clear to Kathy and myself that we would need a local representative, since we live in Pennsylvania, our designer was in Truckee, CA and the log home builder would be out of state. We decided the structural engineering, especially for the wind loads on that property, indicated that we should find an engineer to fill that position. We settled on R. Kurt Menning, whose reputation for honesty and sound structural design were second to none. We retained Mr. Menning in 1992 to check all structural engineering calculations and be our project manager and construction inspector. He has been deeply involved with our project almost since its inception. This phase of the project culminated in putting the project out for bid resulting in a low bid 100% over budget.

We were so discouraged we took 1995 off and worked as attendants in the new children's zoo at the Pittsburgh Zoo. We had volunteered at the zoo for a number of years and this opportunity gave us a distraction which we enjoyed and allowed us to contribute something worthwhile at the same time.

In early 1996 we renewed our relationship with Ralph Matheson and began the project anew with local design style and materials. Mr. Matheson also has an excellent reputation in the area and even designed the appellant's house for her father. Mr. Menning had also agreed to be the engineer for this structure. The resulting two bedroom, 2-1/2 bath 2814 square foot structure is almost six feet shorter than the previously approved structure -- and has a significantly smaller footprint. It is also similar in style, materials and size with many of the homes in the area.

This is the project which is before the Commission for permit approval. It is not the ill conceived notion of someone with too much money and no idea of the conditions. Kathy and I agree that this particular property is not right for everyone but every time we walk on the land we know why we are going through all of this trouble. It is right for us!

In the meeting in August 1997 the Staff only found fault with the county finding on view lines from the local park. Although we disagreed with this conclusion and have provided a panoramic picture taken from the center of the park to refute this claim, it is on the record at the County and the August 1997 Commission hearing that we would comply with the wishes of the Commission.

That, however, was not the end of the issue. We were ambushed with a last minute report at the Commission meeting, allowing no preparation time for rebuttal, from the appellant's geologist. A geologist who, to this day, has not provided a CV to the Commission, nor has Bace Geotechnical been able to discover any example of Mendocino or Sonoma coastal experience. Fearing an attack of this nature, Kathy and I paid Mr. Erik Olsborg of Bace time, travel and per diem to attend this meeting. This was not sufficient for the Commission and we were required to hire a "third party" geologist to settle the dispute and the matter was continued.

I would like to clarify the process used to select Dr. David Rogers for this arbitration. Bace Geotechnical submitted a list to the appellant's geologist which included every geotechnical firm listed in the Mendocino and Sonoma county phone books and the complete list of approved

geologists registered with Mendocino County. The only limitation was that the firm selected must have a state licensed engineering geologist on staff. The appellant's geologist selected Dr. David Rogers from that list and voiced no protest of which we are aware about the selection procedure. The result is a report which in all substantial issues supports the original Bace findings and a bill for $3025.

We would also like to point out that the appellant spent considerable time trespassing on our property during the field work portion of this study and took every opportunity to address Dr. Rogers on any subject she felt pertinent. It can be safely assumed that Dr. Rogers was made aware of all opinions the appellant may have, while we have never communicated in any way with him other than hire him and to issue the check.

As a result we were placed on the March 1998 agenda, seven months after the first hearing, with all technical questions supposedly put to rest. We again paid Erik Olsborg to be present to address any lingering doubts in the minds of the commissioners.

We have made every effort from the beginning to show due diligence and respect for the process in our project. We believe that the Staff will support our statement that we have not at any time tried to avoid or circumvent the coastal permit process in any way. We recognize the difficult position in which both the Staff and Commission are placed.

However, the personal opinions, no matter how well intended, of the individuals involved should have no bearing on the final decision. The appeals process has already taken over one year based on issues which we had addressed prior to our purchase of the property. We purchased property designated as residential with full intent to build a home and live out the remainder of our lives. Due consideration was given to all of the unique aspects of this property and we concluded that this was our destiny. We would appreciate an end to this process. It is impossible to hit a target when someone moves it every time we take aim.

What may not have been obvious in the beginning, but should certainly be evident at this point, is that the worst case scenario envisioned by the opponents of the California Coastal Act has occurred: One landowner attempting to use the Act and the Commission as a weapon to prevent another landowner from proper and legitimate use of their property. This is, in fact, what has happened in this case and the only real issue for the Commission to deliberate. The appellant wants a "free front yard" and we want to build a home and live on our property.

Respectfully submitted,

David C. Riley

Kathryn A. Riley

EXHIBIT NO. 22
APPLICATION NO. A-1-MEN-97-46
Letter From Applicants
Page 4 of 4
California Coastal Commission

FACT: Erik Olsborg of Bace Geotechnical, with twenty-five years of Mendocino and Sonoma coastal experience, states that this is the most studied piece of property he has seen. The only dissenting opinion was provided by the appellant's geologist, who happens to be the only one of the six for whom we have not been able to document any coastal experience. We cannot understand why this Commission finds it necessary to ignore both the opinions of state licensed professionals and the conclusions of their own Staff and repeatedly insist on describing this project as "the worst they have ever seen". One wonders why an applicant is required to pay for these studies if the Commission is going to ignore the results.

Regarding the issue of "public access", there are two irrefutable points. First, there is no documented data indicating that the public has used this property and second, there is no indication that the public is even aware that the property is there since it is out of sight from the Scenic Highway and the town of Gualala. The "path down to the rock bench" indicated by the appellant at the March 1998 hearing is a hoax.
FACT: There is *no* path down to the water and the last twelve feet requires one to climb down a rock face. We have done this ourselves and it is very dangerous. The alleged "picnic spot" is regularly washed by waves at high tide and subject to "sleeper waves" at any time. We do not believe that the State of California would want to assume the liability by declaring this a place for the public to enjoy a picnic. All of this is supported by the conclusions of the Mendocino County Board of Supervisors when they found no public access issue with the property in the first level of the appeals process! This finding was concurred with by the Coastal Commission Staff in the second level.

The only actual evidence of a drainage and soil erosion has occurred at the often referred to "cusp". It should be made clear that this is simply a temporary topsoil erosion caused by an improperly designed and installed access road constructed by the previous owners to make the lot more salable.
FACT: A correctly designed driveway will control and properly disperse the runoff and this problem will no longer exist! The delays caused by the current appeals process is exacerbating this problem.

The last issue to be addressed has to do with heartwarming concern expressed by the appellant regarding the risk we may be subjected to from salt spray and "overt splash damage" from large waves and debris.
FACT: There has been no evidence provided regarding any large debris or driftwood ever found on the terrace and no damage reported by the owners of the other three parcels on the same terrace with homes already in existence (APN(s) 145-191-09, 145-161-31, and 145-161-33). It is certain that if such documentation existed the appellant would surely have referenced it.
FACT: The National Weather Service has indicated that *this* winter has produced some of the worst storms to hit the California coast in recorded history. However despite this there is *no* sign of damage, debris or driftwood anywhere on the property. Just to set everyone's mind at ease, Kathy and I wish to place in the public record that should such a large wave ever occur we accept the responsibility for repairs of our home. We do not expect the local, county, state or federal governments to be responsible for us or our property.

We have chosen to ignore, for this letter, the dozens of more frivolous claims made by the appellant in this action. This is a simple case of one selfish, unkind and unethical individual using the California Coastal Act, this Commission and her position as a reporter for a weekly newspaper to preserve the "free front yard" which she seems to think she inherited from her father along with the house in which she dwells.
FACT: In the first and only conversation we ever had with the appellant, in August 1996, her last statement to us was "There was nothing there when my father bought the property and built his house and that is the way I want it to stay!" The appellant has focused on no particular issue and continues to toss up anything she can think of. This should make her plan painfully obvious! *It is time to bring this charade to an end!*

We would also like to address several of the "special conditions" which this Commission app on our project.

EXHIBIT NO. 23
APPLICATION NO. A-1-MEN-97-46
Letter From Applicants
Page 2 of 4
California Coastal Commission

Special Condition 1. - Assumption of Risk:
The requirement to record a deed restriction acknowledging "extraordinary hazards from landslides, slope failure, and erosion" when the conclusions of five out of six state licensed geologist/engineers belie those facts is an unwarranted punishment to us. To waive any claim of liability on the part of the Commission, etc., when they are fully protected by the Coastal Act and public service legislation also serves no other purpose than to place a cloud over the property. **Kathy and I hereby state, for the record, that we hold no government, organization, or individual responsible for our decisions or actions and we never have!** This condition accomplishes only one objective, which is to reduce the value of the property and inhibit our ability to borrow against it.

Special Condition 2. - Driveway Relocation (as amended):
The requirement to move the driveway so far that a retaining wall must be constructed is contradictory to the expert geological engineering opinion. **Mr. Erik Olsborg has clearly stated that the only erosion along the driveway route is caused by uncontrolled runoff from the improperly designed and installed temporary access road.** This erosion has only affected the surface topsoil and has had no impact on the structure or stability of the sandstone terrace. A properly designed access road and driveway will mitigate these conditions and control the runoff safely for significantly less cost and impact on the site than the retaining wall option. Since Kathy and I will be living on the property, the worst case scenario is that we may have to move the driveway at a much later date. To require this relocation at this time simply adds unnecessary costs to the project.

Special Condition 3. - Final Foundation and Site Drainage Plans:
We have no objection to this condition, however it seems to duplicate the efforts of the County of Mendocino.

Special Condition 4. - Landscaping Plan:
We have provided photographic evidence to show that this condition is unnecessary but we acknowledge room for differing opinions. We would remind the Commission that the views from the county park are dominated by the commercial structures in the town of Gualala and the residential structures which directly face the park. Our home, the bulk of which is naturally screened by the existing grove of coastal pines and contours of the land, will hardly be noticed. This view will be further reduced when our neighbor to the south, APN 145-191-081, builds his home and provides a tree screen. In spite of our feelings on this subject, **we have gone on the record and repeat here that we will comply with the Commission's judgment in this regard**. We do strongly object to the specification of a number of trees (10) at this point in time when nobody can be sure what is really needed. We would request that the number and location of trees be determined after construction and that this plan be acceptable to and under the control of the Executive Director. We find it ironic that the appellant has falsely claimed that our home will restrict her views when this condition resulting solely from her actions truly will!

Special Condition 5. - Design Restrictions:
We do not object to this condition.

Special Condition 6. - Tree Removal (as amended):
We do not object to this condition.

Special Condition 7. - Archaeological Resources:
We do not object to this condition.

EXHIBIT NO. 23
APPLICATION NO. A-1-MEN-97-46
Letter From Applicants
Page 3 of 4
California Coastal Commission

Special Condition 8. - Denial of State Responsibility (as proposed):
This condition was proposed in three parts. First, **the State would not be responsible for removal of the structure in the case of catastrophic loss**. We fail to see how the State could be held responsible, making this an superfluous restriction. Second, **the State would not be required to fill sea caves**. Since the only danger presented by sea caves might be by those located directly under our home, two geologists investigated this possibility and concluded that there were none. Therefore, there is no danger and this restriction is also unnecessary. Third, **the State would not be responsible for construction of a sea wall in front of our**

property. Before a restriction of this nature is imposed, the purpose for sea walls should be investigated. Sea walls are used to protect sand or soil beaches or escarpment from the erosion caused by wave action. They are not used to protect sandstone cliffs. Therefore, this restriction is inappropriate.
It must be made completely clear that Kathy and I purchased this property, designated as residential, in 1992 with every intention of building a home in which to live the remainder of our lives. We have invested our life savings in this project and do not have the money to walk away and abandon it. The actions of the appellant have placed our "backs against the wall" and we have no option but to do whatever it takes to bring this matter to a successful conclusion for us.

To date, we can document over $30,000 expended in the appeals process alone. That combined with the construction cost additions and the reduction of property value has placed our project in financial jeopardy. **All for no reason!** We have also had to take living expenses from this fund while the project is held in limbo. Now, due to the actions of the Commission at the March 1998 meeting, we will have to pay to travel from Pennsylvania to California again, with all the associated expenses.

We cannot find the words to indicate the amount of emotional as well as financial strain which we have endured all because of one selfish individual. If we did not have an extremely strong thirty-five year marriage, our relationship would not have survived the stress. The appellant has even abused her position of employment to publicly heap scorn upon both our project and us, personally, in the local weekly paper in which she has either written or controlled a total of three articles and two "letters to the editor" which were thinly disguised articles. Suffice it to say, Kathy and I never have nor ever would do to another human being what this appellant has done to us! We simply want to build our house and live out our lives in peace.

Finally, our attorney advises us that the detailed information requested by Ms. Ginsberg in her letter of March 31, 1998 is not appropriate or desirable for us to submit if the Attorney General is trying to find a way that the Commission can deny this application and not be liable for "taking" our property. He states, moreover, that the California Supreme Court has expressly rejected the idea that "all" use must be precluded before a "taking" can be found.

We request the commissioners to simply vote on the true merits of the case. We have fully complied with all requirements of the Coastal Act and the LCP with a positive and cooperative attitude and deserve to be released to complete our project.

Respectfully submitted,

David C. Riley

Kathryn A. Riley

EXHIBIT NO. 23
APPLICATION NO. A-1-MEN-97-46
Letter From Applicants
Page 4 of 4
California Coastal Commission

Mr. & Mrs. David C. Riley
520 Edgehill Drive
Gibsonia, PA 15044-9221

April 22, 1998

Ms. Jo Ginsberg
Members and Staff
California Coastal Commission
North Coast Area
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

RE: **PROPOSED RILEY RESIDENCE, 38868 SEDALIA DRIVE, GUALALA, MENDOCINO COUNTY, CALIFORNIA, COASTAL DEVELOPMENT PERMIT APPEAL NO. A-1-MEN-97-46**

Dear Ms. Ginsberg:

Kathy and I have come to the realization that full compliance with the requirements of the California Coastal Act and LCP and total cooperation with the Staff is not enough for this Commission. It, therefore, seems necessary to present the significant allegations and actual facts together so that the true issues of our application and the subsequent appeal are unmistakable.

First, as to the grave concern expressed by the appellant and a few commissioners regarding the landslides which have occurred recently along the California coast such as Pacifica, Gleason Beach, Humboldt County and even Coral Court in Gualala. While we do not wish to minimize the danger and the heartbreak suffered by the affected landowners, the common thread between all of these occurrences must be recognized. All of these slides happened on lots located on soil and/or fill hillsides or escarpments. (The Coral Court landslide area was widely known to be a mill landfill area). To our knowledge, all of the structures were built before the current setback and water runoff management requirements were mandated.
FACT: Our project is located on a sandstone terrace with the foundation on bedrock. The constant comparison of our proposed project and these slides is incorrect. It is the proverbial "apples and oranges" case and has no place here. Maybe the appellant should spend some of her excess time looking at water runoff management on her own property so that her dwelling does not become a danger to ours.

The next issue has to do with the general safety and stability of the terrace upon which we wish to build.
FACT: The picture supplied by the appellant, reproduced from the Annette White Parks "Gh-awala-li", shows the terrace approximately 130 years ago and it is relatively unchanged today. The vertical support for the cable chute shown in that picture, which was located on the outermost promontory at the time, is still there today over 130 years later on the lot adjoining ours. That one fact, alone, proves the stability of the terrace. The appellant has conveniently overlooked this point.

The appellant also referred to this book to state that Robinson Landing was used only for a short time because it was unsafe, implying that the terrace was unsafe.
FACT: The referenced book makes it clear that the landing was abandoned because the anchorage was unsafe and unprotected. No reference was made to the terrace as unsafe, another point conveniently missed by the appellant.

Now, as to the overall geologic stability of this project, **five out of six** state licensed geologists have independently studied this parcel and have come to essentially the same conclusions.

matheson design

Post Office Box 321
Gualala, CA 95445
Phone/Fax 707 884-3712
matheson@mcn.org

April 29,1998

California Coastal Commission, North Coast Area
45 Fremont, Suite 2000
San Francisco, California 94105-2219

RE: **David & Kathryn Riley, Gualala, CA**
Mendocino County Appeal No. A-1-MEN-97-46

Dear Ms Ginsberg, Staff and Commissioners:

After having worked with the Commission various times since 1972 I am not totally unfamiliar with how it works and I am shocked that this project, first brought before the Commission in August of last year -- almost a year ago -- has not be approved in a timely manner. These needless delays have caused a great deal of expense and emotions for my clients and I feel compelled to state why **this project should be approved without further delay.**

- The Staff has consistently recommended approval.
- This project will **not** have an adverse affect on the Coastal Resources, The Coastal Act, or Federal Coast Management Act of 1972.
- It complies with the intentions of building a single family dwelling on this site which is residential, single-family zoned.
- This property has been studied by five state licensed Geologists and Geological Engineers and one state licensed Structural Engineer -- all of whom find the site to be sound and buildable and see no problems with the proposed home.
- The subject terrace has a total of 5 residential lots -- and 3 of those lots have existing homes. And, the Riley home is smaller than some of them.
- This property is **not** situated on a cliff over the ocean, but on a terrace with the ocean waves hitting on sandstone rocks which are downward and some distance from the actual building site.
- This site is **not** listed as in a highly scenic area according to the County of Mendocino Planning.
- This parcel is **not** highly visible from any public land as only a small portion of the house will be seen and no precedent will be set upon its approval.
- The "sea caves" are **not** directly under the building site, but in the sandstone cliffs that ramble up to the terrace level. And, some of the "sea caves" seen in photos are not, in fact, sea caves but fractures from the wave action over hundreds or thousands of years according a state-licensed geologist.
- Geologist, Erik Olsberg has stated repeatedly that in his professional, experienced opinion that he sees no problem with the present location of the driveway. He has also stated that it would be far less impact to leave the driveway approach as designed rather than create further disturbance in that area.

- Prior to going to the Commission, the Mendocino County Board of Supervisors approved this project **unanimously** with a 5-0 vote (!!!)
- The neighbors closest to the site are on record to not opposing this project.

As I presented at the March 11th Commission meeting, by placing a computerized drawing on clear film of the house on the site, the home will be nestled in the existing trees from the public beach view shed. This site is 1.2 miles from the Sonoma County Park's Visitors Center. Remember, as a beach visitor walks closer to the beach and onto the beach, the bluffs of that terrace rise in their view and the eyes are able to see less and less of what is actually on the terrace.

Visit the beach and I will guarantee you two things: you will be looking westward towards the ocean and the sand, not eastward to the bluffs, the trees and the hills, and if you might happen to look eastward at the bluffs, the existing commercial buildings by far dominate the bluff.

It happens that I designed the Verran home which the appellant inherited this past year upon the passing of her father. I want to be very clear about the process of designing for Roger and Shirley Verran 25 years ago. The Verrans and I discussed the site below, what is now the Riley site, and Roger felt that at some time the railroad property would be released for sale and there would be homes on the terrace below him. While any home built on this terrace would be well below the Verran's outward view, we decided to place the fireplace on the west wall towards the ocean and angle two large windows beside it at 45° angles to direct the view to the beautiful coastal views to the south and north, focusing away from the view downward to the terrace.

I am at a loss to understand why this project has not been approved. I feel there must be some clarification needed regarding the neighborhood; the land form, how this project relates to the existing homes, etc., and that is why I have drawn the enclosed sketch. It is just a sketch but in my opinion I feel it represents the neighborhood, with locations of existing homes, approximate square footage of those homes, and most importantly, the "lay of the land, which I feel needs clarification.

Why is Ms. Verran so terribly opposed to this project? If something is so wrong, where are all the other neighbors? The few people agreeing with her people simply want no growth -- even though Gualala has long been designated as the commercial and growth center of the coast by the Commission. No home can be built high enough to block her westward view to the ocean, nor would it in any way block her north and south coast views. This home's impact on the view from the distant public beach is absolutely minimal, and especially when considering the whole picture -- the existing development in Gualala and this neighborhood of the town of Gualala.

The Rileys are very nice people who seem to make friends easily and would be good neighbors. They love animals and know a great deal about nature and wildlife. They obviously love the property a great deal and would do everything within their power to take care of the property and their home. They certainly have no interests or hobbies which would make them undesirable as neighbors.

While we realize that the appellant has obviously strong feelings, they are, nevertheless, not good reasons to deprive someone of property they have paid for, paid taxes on, invested money in, and that has been, and continues to be, a sound building site

with a design that meets the all criteria in an approved, developed residential area for the county of Mendocino and the State of California.

My clients have been absolutely direct and honest, as have geologist Mr. Olsborg, engineer Mr. Menning, and as designer, myself, with all our dealings with the Staff and Commission. **Each of us have dealt with facts and professional opinions based on years of experience,** not unfounded statements, half-truths and personal opinions. It is important to the viability of the Commission that they not be misled by the appellant's desire to not see any change in her neighborhood and to keep the "free front yard" which she seems to feel is her property.

To date, the actions of the Commission regarding this project is exactly what the people who opposed Proposition 20 were afraid of -- that one neighbor, for personal reasons, could keep another from building their home. Don't let that happen!!!

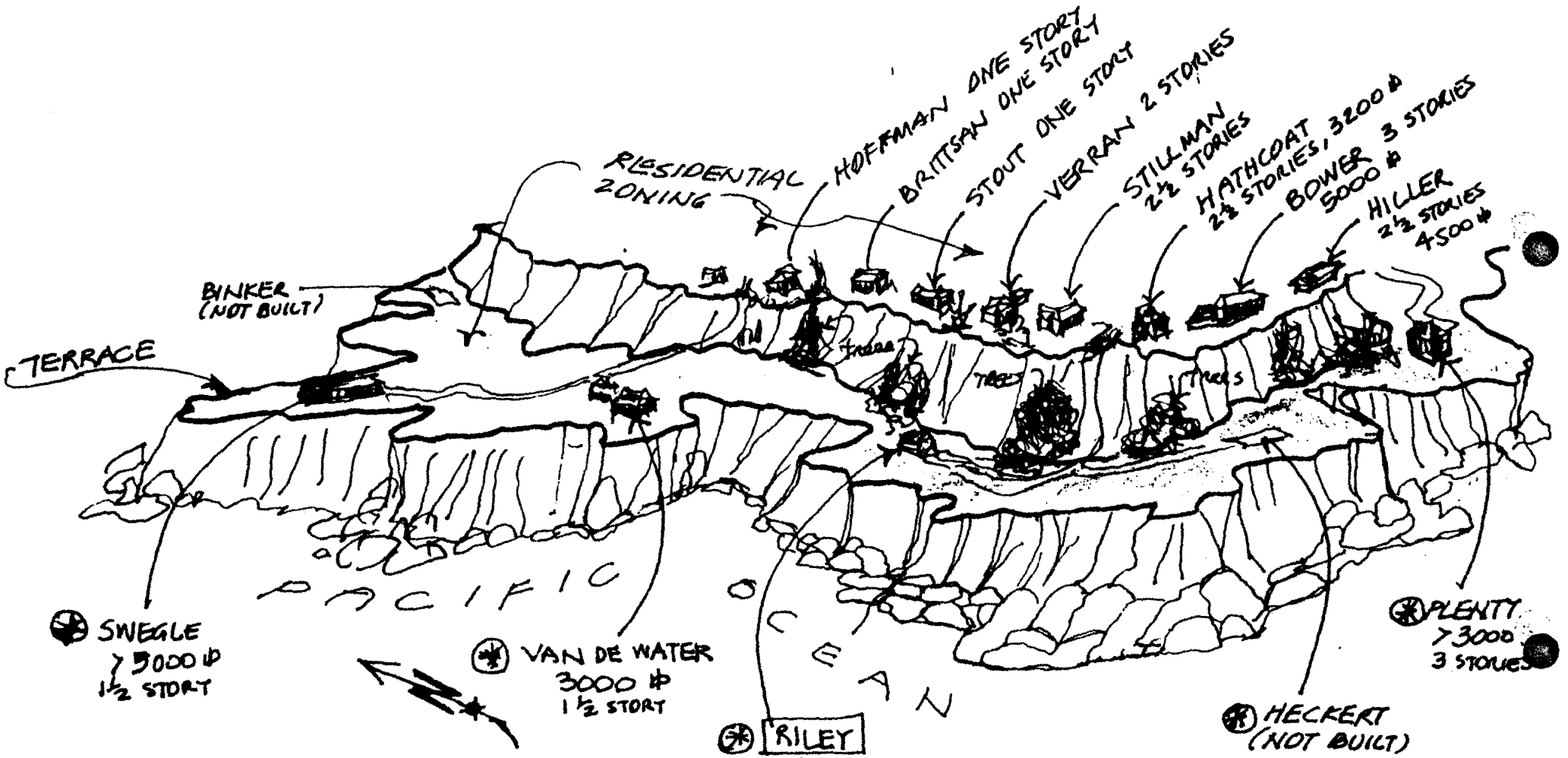
As I understand it, the Staff exists to do all the legwork, research and to make an experienced, knowledgeable recommendation to the Commission based on the facts. The Staff has consistently recommended **approval** of this project after thorough study of all matters relating to the project.

Sincerely Yours,

Ralph J. Matheson

cc: David & Kathryn Riley
Olsborg
Menning
Heckert
State Assemblyman
State Senators

TO: STAFF + COMMISSIONERS



TERRACE VIEW LATOUT

N.T.S

RILEY

A-1-MEN-97-46

EXHIBIT NO. 24
APPLICATION NO. A-1-MEN-97-46
Letter From Agent
Page 4 of 4
California Coastal Commission

J. David Rogers, PhD, RG, CEG, CHG
Patrick L. Drumm, RG, CEG, CHG
Fred H. P. Chin, PhD, PE
http://www.geolith.com

GEOLITH CONSULTANTS
Consultants in the Applied Earth Sciences
396 Civic Drive Pleasant Hill, CA 94523
(925) 682-7601 (925) 682-7605 fax

Monday July 13, 1998

California Coastal Commission
North Coast Area
45 Fremont St., Suite 2000
San Francisco, CA 94105-2219
Attention: Ms. Jo Ginsberg
Coastal Planner

RE: Engineering geologic review of sea caves
38868 Sedalia Dr., Gualala, CA
Coast Devel. Permit No. A-1-MEN-97-46 (Riley)

Dear Ms. Ginsberg:

In accordance with your request of 31 March 1998 in a letter to Ralph Matheson on behalf of the coastal development permit being promulgated by David and Kathryn Riley, I am herewith addressing the issue of "sea caves" on their property at Robinson's Point in Gualala, CA, in south Mendocino County.

Previous Work

I previously authored a report titled *"Engineering geologic peer review, 38868 Sedalia Drive, Gualala, CA, Mendocino Co. APN 145-181-01"* dated November 28, 1997 while employed by Rogers/Pacific, Inc. This report made an attempt to scientifically address rates of sea cliff retreat, as well as mechanisms, in the vicinity of Robinson's Point. This report was the result of considerable effort and research, networking with al those scientists who have evaluated sea cliff retreat along the northern California coastline over the past 35 years.

Exploration of "sea caves"

On page 17 of the November 28th Rogers/Pacific report, the subject of **sea caves** was discussed. On this site, the term "sea caves" is a colloquial expression used by the area residents to describe localized wave-induced undercut erosion, along regional systematic joint clusters in the exposed

cliffs. Joints are regular-aligned tension cracks that pervade most every rock type. Joints are usually grouped in "suites" which are preferentially aligned in a given direction, with a narrow range of dip (angle of inclination). Regional systematic joint suites, mutually orthogonal to the bedding, are common in sedimentary strata, such as exist on this site.

The action of wave wash causes abrasion of the exposed rock and suction of small particles which become dislodged. Joint clusters are localized zones within which several joints are closely spaced, instead of regularly spaced. Joint spacing is usually a function of unit lithology (rock type), material stiff ness (how brittle, and able to absorb elastic strain energy), and in sedimentary strata, the thickness of individual units (beds).

On this site three such "sea caves", or localized zones on wave undercutting along joint clusters, were originally noted by Dr. Eugene Kojan in his report for Ms. Julie Verran in August 1997. Two of these were observed and the third was actually explored by the undersigned on October 17, 1997, using ropes. The northernmost "caves" were selected for study because they appeared to be the most pervasive, extending furthest into the cliffs, and are situated closest to the proposed house site on the Riley parcel.

The "caves" were found to extend below mean low tide level, but their terminus could be observed from a height of about 5 to 6 feet above mean low low tide, when positioned in the seaward end of the opening. The most revealing aspect of the exploration, however, was the observation of cross-cutting joints, presented in Photos 13 and 14 of the November 28, 1997 Rogers/Pacific report. The cross cutting nature of the "master" joints creates a physical situation that promotes the formation of rock "wedges", shown in Photo 14. The wedges prevent further collapse of the opening, until such time as the surrounding country rock disintegrates.

Conclusions regarding "sea caves"

1) Although the largest of the so-called "sea caves" extends as much as 30 feet beneath the exposed cliff face, these openings are only a few feet wide. Wave action is concentrated within such openings, causing wave-induced abrasion and exerting considerable suction, which can easily remove loose particles of rock. However, the roofs of these openings do not exhibit evidence of imminent collapse, but will likely retreat with the exposed cliff face, over a period of hundreds of years.

2) Exploration of such features is best accomplished through direct entry and observation.

3) The width of the caves (openings) varies between 6 feet (below mean low low tide) and about 2 feet, in two distinct layers: the lower caves being from -6 ft to approximately +15

feet; and the "upper caves" (openings), between +20 and +30 feet above mean low tide. Both openings average about 3 feet wide (see attached Photos 13 and 14).

4) The physical position of the caves, between 35 and 75 feet below the grade of the exposed terrace (building site), is such that is extremely doubtful these features pose any real threat to a structure designed for a 75-year lifespan.

Warranty and Closure

This letter has been performed as an addendum to the Rogers/Pacific's report of November 28, 1998 for David and Kathryn Riley regarding this same parcel. This review has been performed at the request of the California Coastal Commission, and our choice as independent peer reviewer was agreed to in writing by engineering geology consultants for the Rileys (BACE Geotechnical) and Ms. Julie Verran (Dr. Eugene Kojan). Our services have been limited to the review of the documents identified in the November 28, 1997 report, by a visual reconnaissance of the site, and engineering geologic analyses made afterwards based upon this information. We have no control over the future construction on this property and make no representations regarding the precise evolution of physical conditions thereupon.

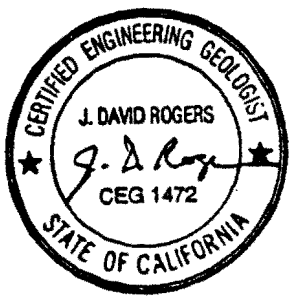
We have employed accepted engineering geologic procedures, and our professional opinions and conclusions are made in accordance with generally accepted engineering geologic principles and practices. The contents of this letter are valid as of the date of preparation. However, changes in the condition of the site can occur over time as a result of either natural processes or human activity. In addition, advances in the practice of engineering geology may affect the validity of the this letter. This warranty is in lieu of all other warranties, either expressed, or implied.

We hope this letter provides you with the information you require to proceed. If you have any questions, please feel free to give us a call.

Very truly yours,

GEOLITH CONSULTANTS, Inc.

J. David Rogers, Ph.D., R.G., C.E.G., C.HG.
Principal



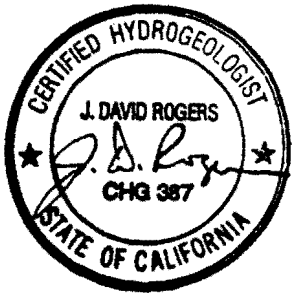


Photo 14: Lower sea cave, extending from below mean low tide (stage shown) and approximately +15 feet. It appears that the floor of the cave is never above water. This cave is situated just south of third promontory, and opposite the proposed house site. Note the worn tumbler blocks on floor, which serve to abrade the walls during periods of high surf. Also note the large wedged-shaped block(s) forming the roof, which separates this chamber from the upper chamber shown in Photo 13.

ROGERS/PACIFIC Consultants in the Applied Earth Sciences	RILEY PARCEL 38868 Sedalia Drive, GUALALA, CALIFORNIA		
	PROJECT NO. PR3057	DATE November 1997	PHOTO NO. 14

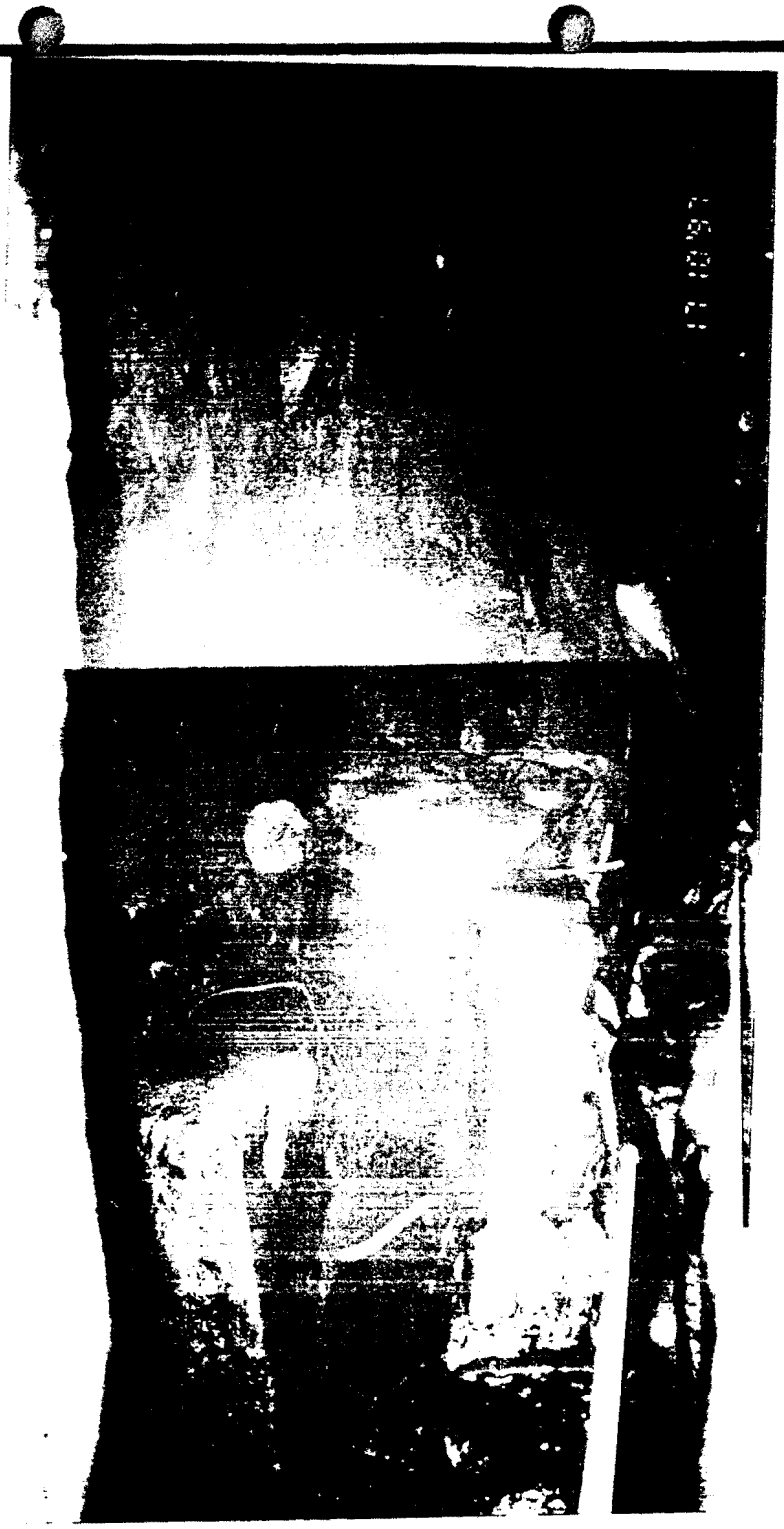


Photo 13: Upper sea cave, between +20 and +30 feet, situated just south of third promontory, and opposite the proposed house site. Surf action only enters and affects this chamber during high tide or high sea stands, such as those associated with storms. Note flotsam, loose blocks and sea weed. White pipe at lower right is 15 feet long plastic probe.

ROGERS / PACIFIC Consultants in the Applied Earth Sciences	RILEY PARCEL 38868 Sedalia Drive, GUALALA, CALIFORNIA		
	PROJECT NO. PR3057	DATE November 1997	PHOTO NO. 13

SIERRA CLUB

REDWOOD CHAPTER
Office: (707) 544-7651 Fax: (707) 544-9861
632 Fifth Street, Santa Rosa, CA 95402
Mail: P.O. Box 466, Santa Rosa, CA 95402-0466

Mr. Robert Merrill
Ms. Jo Ginsberg
California Coastal Commission, North Coast Area
45 Fremont St., Suite 2000
San Francisco, CA 94105-2219

July 16, 1998

EXHIBIT NO. 26
APPLICATION NO. A-1-MEN-97-45
Correspondence
Page 1 of 2 California Coastal Commission

RE: Appeal A-1-MEN-97-46

Dear Coastal Commission,

The Redwood Chapter of the Sierra Club supports Julie Verran's appeal of the proposal by David and Kathryn Riley to build a large house on a significant headland at the north side of the mouth of the Gualala River. The owner of the other lot on the headland has joined forces with the Rileys, so approval would lead to development of the entire promontory, visible from town, the highway, and from Gualala Point Regional park, recommended by the Sonoma County Grand Jury for addition to Salt Point State Park.

The appeal raises issues of concern to the Redwood Chapter including the need for an assessment by a Coastal Commission staff geologist, the need for a statewide building setback of at least 50 feet on oceanfront properties, and the need for attention to problems caused by former industrial uses of coastal lands. Ms. Verran has learned that in at least one instance at Big Lagoon, the hazard restrictions in the coastal development permit were not carried forward with the deed. The Commission needs to look at the efficacy of such restrictions.

Dr. Eugene Kojan, whose work is well known and respected on the North Coast, examined the headland and established bluff retreat rates at several points, based on a set of historic aerial photos going back to 1942. He found a soil scarp retreat of 37 inches per year on the southern part of the headland, and 6.9 inches per year above the sea cave located in front of the proposed Riley house. We are concerned that the Commission staff recommended approval with a 31.5 foot setback that was not based on the examination of aerial photos and 75 year economic structure life required by the Mendocino County LCP.

A 1995 landslide located a few hundred yards north of the Riley property carried two garages, one with a motor home inside, into the ocean near the mouth of the

Gualala River, a coho and steelhead stream. No cleanup was done and hazardous materials entered the fragile marine environment. One of the Riley experts, J. David Rogers, states in his report that the proposed house would be subject to wave splash. This implies contamination to the ocean. The access road is dangerously steep, and located at the center of a 20 foot county drainage easement, so there is also risk to the marine environment from vehicle fluid contamination or worse.

The headland is a refuge area for wildlife and a traditional fishing access. It also has remnants of a mid-19th century railroad and of loading chutes for timber schooners. Public acquisition would be an equitable solution. We urge you to treat this appeal with care and to deny development of this headland.

Sincerely,

Josh Kaufman
Conservation Chair
Redwood Chapter, Sierra Club

cc: Julie Verran

All enclosures previously sent to staff.

J. Verran
38864 Sedalia Drive, P.O. Box 382
Gualala, CA 95445-0382

July 18, 1998

Ms. Jo Ginsberg and Commissioners
California Coastal Commission, North Coast Area
45 Fremont, Suite 2000, San Francisco, CA 94105-2219

EXHIBIT NO. 27
APPLICATION NO. A-1-MEN-97-46
Correspondence
Page 1 of 3
California Coastal Commission

RE: my appeal # A-1-MEN-97-46

Dear Ms. Ginsberg and members of the California Coastal Commission,

Since my appeal is scheduled again for August in Huntington Beach, I am sending out some materials to refresh the memories of the Commissioners, and to support my concern that the Riley project, if built, could seriously damage my home and other houses situated on the bluff above the Riley land.

Sea Caves. The July, 1998, Rogers report on sea caves is inadequate because it does not address the shore-cliff caves of unknown extent which penetrate the overhanging face of the Riley property north of the "third promontory" (as defined by Dr. Rogers). Mr. Olsborg presented a schematic approximation of the position of these caves to the Mendocino County Board of Supervisors in June, 1997, which I sent on to Commission staff before the August hearing.

The new Rogers report specifically states it was not based on any new look at the caves. The one he discusses is the only one he looked at on October 17, 1997, before rising waves and growing darkness stopped further exploration. The undercut cliff is shown on the enclosed photo which locates the approximate site of the Riley house. The caves are behind the waves in this photo; it looks like the openings funnel the waves upward.

Dr. Kojan conveyed comments on the Rogers report to me; I summarize and quote with his permission. He says his aerial photo analysis is valid because he used a recent survey which shows locatable points that are visible in the photos, and he did not carry the analysis north of the "third promontory" because there was image distortion in that area. (Photographs become distorted as they near each edge of the image.)

Dr. Kojan also said there is no theoretical basis for the retreat of sea-cliffs; it is episodic and site-specific. In his report submitted for the August, 1997, hearing Dr. Kojan made a distinction between the soil scarp and bedrock retreat, but Rogers does not. He gave the bedrock retreat at a key point in front of the house as 2.6" per year, and the soil scarp retreat as 6.9". He says the soil scarp retreat is the one that is significant for siting the proposed house.

With respect to sea caves, Dr. Kojan says it is not sensible to rappel down and probe a sea cave with a long pole, as Rogers did, because water can work into the rock joints and the cave can open up again beyond view. He still recommends narrow borings along known joints. He says there are also several remote sensing techniques that would work, but they are very expensive.

Defining the threat to the houses at the top of the railroad bank, Dr. Kojan says that the railroad was built so long ago that the slope "must be viewed in all cases as a natural angle of repose." The hillside has stabilized, but any disturbance can cause renewed sliding as natural processes seek to re-establish the angle of repose. There was a new slide in 1998 to the north of

my house just opposite the place where waves splashed up highest and wind drove the salt water against the slope. The vegetation was denuded and a slide occurred. Dr. Kojan says this was an example of that process.

At the March, 1998, Commission hearing in Monterey, a supplement was provided at request of applicants, including old geological reports which I had also submitted in support of my appeal prior to the August, 1997 hearing. These documents clearly show that no examination of aerial photos, as required by the LCP, was ever performed for these properties until I hired Dr. Kojan to do this. Recent local inquiries have found that the method Dr. Kojan used is commonly accepted and used by other consultants in the county, though not in all instances.

Public access: The same set of documents also shows how long the properties remained in ownerships which did not bar the public from two vertical shoreline accesses. Rileys bought the land in 1992. They or the Hathcoats or the Schmitts put a chain across the drive but did not deny or hinder foot access to the fishing area. People who used it parked on the street instead of driving down (and sometimes having to back up or get towed because of the steep grade.) In July, 1997, at a Sedalia neighborhood block party, Dave Riley said he would keep the fishing access open if he built his house. That's five years; so there is a public prescriptive right. This March, he and/or Heckert posted a No Trespassing sign halfway down the road.

The century-old traditional horizontal bluff-top access along the RR was blocked in several places north and south of the Riley / Heckert lands during the '70s, & '80s. Another access was from the Heckert parcel to the riverbar, which is all in Sonoma County and thus in the park. A switchback trail there fell in years ago, but at the angle where the river makes its final turn out to sea, there is a steep trail where people used to fix a handline to a bolt. Sometimes this goes down to the sand, sometimes to the estuary / lagoon, depending on the position of the river-mouth bar. This access is reached from Sedalia Drive via the same steep access road as the Riley parcel. The Schmitts, who owned that parcel until last June, also owned it for five years without hindering public access, so there is a public prescriptive right.

I am researching the history of these accessways, especially in relation to Gualala Point Regional Park.

Drainage. Look at the enclosed photo taken from Whale Watch Point in the park. Above the Riley / Heckert lands is a row of houses, including the three or four that appear to be threatened by the Riley project's potential to undermine the bluff they occupy. Above those houses is a forested slope. The trees conceal another row of houses. All drainage from that hillside debouches onto the Riley / Heckert lands via two recorded county road-drainage easements (county parcel maps showing these drainage easements were submitted to staff prior to the August, 1997, hearing.) No adequate study has been done of this drainage situation by the county, to my knowledge. It appears to increase the likelihood of slope failure above the Riley property and drainage problems on the site. Long-standing problems exist; the previous owners of the Stillman house, which is above the proposed Riley driveway, had a sump pump installed under the house more than 15 years ago. The "subterranean" part of the proposed Riley house would probably violate FEMA guidelines in such a wet, oceanside site.

Environmental concerns. Also enclosed is a January, 1998, letter to staff outlining ould look at and environmental concerns. The area is clearly a refuge for wildlife,

things they should look at and environmental concerns. The area is clearly a refuge for wildlife, and the Heckert parcel south edge borders the river or the estuary / lagoon, depending on season, and thus borders Sonoma County. (The application for Heritage River status for the Gualala was withdrawn.) This letter was the basis for the March 11 slide show – a tour of the issues.

Recent bluff retreat. There was retreat of the soil scarp over the past winter in the areas that were already scalloped inward. There was probably also retreat of the bedrock and further undercutting of overhangs. The map used by applicants dates from at least as far back as 1992, and perhaps from 1989. It does not show the current bluff top configuration. Enclosed is a county map which shows only an approximate bluff top for the Riley parcel. No current survey was required of the applicants by either Mendocino County or the Commission, despite my repeated requests. There is no way to determine whether a particular setback will allow the currently proposed house to be built without encroaching on the required 20-foot rear setback, or even on the parcels to the east, which extend to the RR grade.

Hazard Conditions. If the proposal is recommended for approval, hazard conditions should be imposed. The proposal should be recommended for denial, because hazard conditions are now known to be ineffective. My co-worker, Jackie Norton, lost her house site at Big Lagoon earlier this year, though she was able to get the modular home on the property moved to the street. She had never been apprised of the hazard conditions, though this was a fairly recent CDP. Her attorneys are sorting out fault in the matter. There are several interfaces where hazard conditions may not carry forward: between the CDP and county records; between county records and title companies; between title companies and real estate agents; between them and their clients. This is such a perilously tenuous chain that I conclude "hazard conditions" are but a cruel sham. Concern for the lives and property of others requires denial of permits where hazards exist.

Respectfully,

Julie Verran