COUNTY OF SANTA CRUZ PLANNING DEPARTMENT Date: February 24, 1999 Agenda Item: No. 6 Time: After 1:30 p.m. 588

#### STAFF REPORT TO THE PLANNING COMMISSION

APPLICATION NO.: 98-0666 APN: 100-151-01

APPLICANT: Joe Culver

OWNERS: Huy Q. Lam and Catherine L. Lam

PROJECT DESCRIPTION: Proposal to rezone Assessor's Parcel Number 100-151-01 from the Agriculture ("A") zone district to the Timber Production ("TP") zone district. Requires a rezoning.

LOCATION: 100 Bernita. The east side of Branciforte Drive at approximately 2 miles north of the intersection of Branciforte Drive and Happy Valley Road.

FINAL ACTION DATE: Exempt from the Permit Streamlining Act (Legislative Action)

PERMITS REQUIRED: Zoning Ordinance Amendment

ENVIRONMENTAL DETERMINATION: Statutory exemption from CEQA per section 1703

COASTAL ZONE: yes XX\_no\_APPEALABLE TO CCC: yes XX\_no

#### PARCEL INFORMATION

PARCEL SIZE: 45 acres

EXISTING LAND USE: PARCEL: Rural residential and timber production. SURROUNDING: Rural residential, agriculture and past timber harvesting.

PROJECT ACCESS: Private driveway and private right-of-way (Bernita Drive) off of

Branciforte Drive.

PLANNING AREA: Carbonera Planning Area

LAND USE DESIGNATION: "R-M" Mountain Residential and "R-R" Rural Residential

ZONING DISTRICT: "A" Agriculture SUPERVISORIAL DISTRICT: First

#### **ENVIRONMENTAL INFORMATION**

<u>Item</u>	<u>Comments</u>
a. Geologic Hazards	a. Mapped questionable Cooper-Clark landslide feature on and
	immediately below the ridge top at the eastern portion of the
	parcel. Possible dormant landslides noted in the Timber
	Management Plan identified by aerial photographs.
b. Soils	b. Predominantly Nisene-Aptos complex, Soquel loam,
	Bonnydoon loam
c. Fire Hazard	c. Mapped in Critical Fire Hazard area
d. Slopes	d. Generally 30 to 60 + %
e. Env. Sen. Habitat	e. Perennial watercourse - Branciforte Creek
f. Grading	f. Minimal proposed - most logging roads are existing **
g. Tree Removal	g. Future Timber Harvest Proposed **

Joe Culver for Lam, et. al. Application No.: 98-0666

APN: 100-151-01

h. Scenic h. None mapped

i. Drainage
j. Traffic
j. N/A
k. Roads
k. N/A
l. Parks
l. N/A

m. Sewer Availability m. Septic in place n. Water Availability n. Well, in place

o. Archeology o. Mapped resource area, no resources noted during Timber

Harvest 5-84-16 SCR

#### **SERVICES INFORMATION**

W/in Urban Services Line: <u>y e s</u> X X n o Water Supply: Private Well

Sewage Disposal: Septic

Fire District: Branciforte Fire Service District

Drainage District: None

#### **ANALYSIS & DISCUSSION**

#### **Background**

In August 1997, the Board of Supervisors was informed that the County had the authority to regulate the location of timber harvesting through its zoning ordinance. As a result, the Board adopted Interim Ordinances 4476 and 4469 allowing timber harvesting only in the following zone districts: Timber Production (TP), Park and Recreation (PR), Mineral Extraction (M-3), and Special Use (SU) provided the SU zoned property is also located within a designated Timber Resource area. As a result of these actions, a number of properties with commercially viable timber resources could not be managed and harvested as timber producing properties. The County's General Plan Policy on Timber Resources is to "encourage timberland owners to apply for Timber Production Zoning where appropriate." In order to facilitate rezoning timberlands in non-timber harvesting zone districts to Timber Production, the Board of Supervisors adopted a resolution on April 14, 1998 establishing a flat fee of \$750 to process a rezoning to the Timber Production zone district.

On September 24, 1998, the County Planning Department accepted this application for a rezoning to Timber Production (TP). This is a proposal to rezone a 45 acre parcel from the Agriculture (A) zone district to the Timber Production (TP) designation. County Code Section 13.10.375 (c) zoning to the TP district specifies the six criteria which must be met in order to rezone to TP. This project qualifies for a statutory exemption (Exhibit F) in accordance with

<sup>\*\*</sup> Report was required - Timber Management Plan (Exhibit H)

Joe Culver for Lam, et. al. Application No.: 98-0666

APN: 100-151-01

o 590

the California Environmental Quality Act and the County Environmental Review Guidelines (Article 17, Section 1703).

#### **Project Setting**

The project site is located in the Carbonera planning area with access off of Branciforte Drive just north of the intersection of Branciforte Drive and Happy Valley Road (Exhibit A). The subject parcel is roughly 45 gross acres and is currently developed with three dwelling units. The three dwellings (a residence adjacent to Branciforte Creek and a duplex located about 600 feet up Bernita Drive) are located adjacent to Bernita Drive on small level to sloping pads. The dwellings are located in areas which will have negligible impact on future timber management and harvesting of this property. All three dwellings are legal, although the two extra dwelling units are nonconforming. Approximately one-half acre of the parcel is utilized for residential related uses. Several small storage sheds had been constructed without permits. These sheds have been demolished under permit #120262 and inspected by Code Compliance Officer, Richard Nieuwstad (Exhibit J). The property slopes upward to the east away from Branciforte Creek. The topography, except at the home sites, is predominantly steep with slopes of 30 to 60+%. Three ephemeral drainages are located on the property which drain directly into Branciforte Creek. The drainages are heavily shaded by redwoods and lack characteristic riparian vegetation. A skid road crosses one of these drainages, Branciforte Creek runs through the western end of the parcel adjacent to Branciforte Drive.

The lower three-quarters of the property is heavily forested with second growth redwood interspersed with live oak, bay trees and a few Douglas firs. The redwood forest thins on the upper slopes becoming predominantly oak and madrone woodland at the eastern end of the parcel. The oak woodland comprises about 14 acres on or just below the ridge top. This parcel was clear cut around the turn of the century. No old growth redwoods are found on the property. This site was logged a second time in 1984 under a State timber harvest permit (THP) 5-84-16 SCR. A thirty acre harvest was approved under this permit, but only 15 acres along the southern end of the parcel was harvested. All of the timber logging roads and landings shown on the Timber Management Plan are already in place from these previous harvests. The skid road crossing one of the class III watercourses, however, needs culvert repairs and improvements. In general, the roads appear to be stable. The main access road, which provides access to another residential property to the north, is paved and well maintained. This property is capable of producing 15 cubic feet of timber per acre annually, although in some areas the stocking is a little thin due to the prevalence of hardwoods.

The parcel is bordered on the north, west and south by "A" zoned properties. The property (APN 100-121-05) immediately north of the subject parcel is also served by Bernita Drive. Fourteen acres on APN 100-121-05 were logged in 1985 under THP 5-85-22. The property located to the east of the subject parcel is zoned "CA". The Zoning Map for the subject

Joe Culver for Lam, et. al. Application No.: 98-0666

APN: 100-151-01

591

parcel, APN 100-15 1-01, and the surrounding parcels is included as Exhibit C.

#### General Plan & Zoning Consistency

The project site has a 1994 General Plan land use designation of Rural Residential and Mountain Residential. The majority of the property is located within a mapped Timber Resource designated area (Exhibit D). The area of the parcel located outside of the Timber Resource area is abundant redwood forest. The oak forest is located inside the Timber Resource limit to the east. This parcel is currently zoned Agriculture. In general, the parcel is too steep for most agricultural uses. The Agriculture and Timber Production zoning districts implement the Rural Residential and Mountain Residential General Plan designations, as specified in Section 13.10.170 of the County Code. The group of three dwellings, while legal, are nonconforming with both the Agriculture and Timber Production zone districts.

In accordance with County Code Section 13.10.375, Special Standards and Conditions for the Timber Production (TP) District, the applicant has met all of the criteria to have the property rezoned. A Timber Management Plan (TMP) dated October 19, 1998 prepared by Joe Culver of Webster and Associates Registered Professional Foresters (Exhibit H) has been reviewed and accepted by the County Resources Planner as meeting minimum standards (Exhibit I). The parcel meets the timber stocking standards as set forth in Section 4561 of the Public Resources Code and Forest Practice Rules adopted by the State Board of Forestry. In addition, the parcel meets the definition of timberland (Chapter 13.10.700-T) in that the land is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre, and the majority of the parcel lies within a mapped Timber Resource designation.

#### Conclusion

All of the criteria have been met for rezoning this parcel to the Timber Production zoning designation. All required findings can be made to approve this application and the rezoning is consistent with the General Plan policies and land use designations.

Please see Exhibit E ("Findings") for a complete listing of findings and evidence related to the above discussion.

#### **RECOMMENDATION:**

Staff recommends that your Commission adopt the attached Resolution (Exhibit G), sending a recommendation to the Board of Supervisors for approval of Application No. 98-0666 based on the attached findings (Exhibit E) and approval of the determination that the project is statutorily exempt from CEQA (Exhibit F).

# ATTACHMENT. 5

Joe Culver for Lam, <u>et</u>. <u>al</u>.

Application No.: 98-0666 **592** 

APN: 100-151-01

#### **EXHIBITS**

- A. Location Map
- B. Assessor's Parcel Map
- C. Zoning Map
- D. Timber Resource Map
- E. Findings
- F. Notice of Exemption from CEQA
- G. Planning Commission Resolution
- H. Timber Management Plan (TMP) dated October 19, 1998 prepared by Joe Culver, Webster and Associates Registered Professional Foresters
- I. TMP Review Memo dated November 20, 1998
- J. Memo from Richard Nieuwstad dated December 24, 1998

SUPPLEMENTARY REPORTS AND INFORMATION REFERRED TO IN THIS REPORT ARE ON FILE AND AVAILABLE FOR VIEWING AT THE SANTA CRUZ COUNTY PLANNING DEPARTMENT, AND ARE HEREBY MADE A PART OF THE ADMINISTRATIVE RECORD FOR THE PROPOSED PROJECT.

Report Prepared By:

Cathleen Carr

Santa Cruz County Planning Department

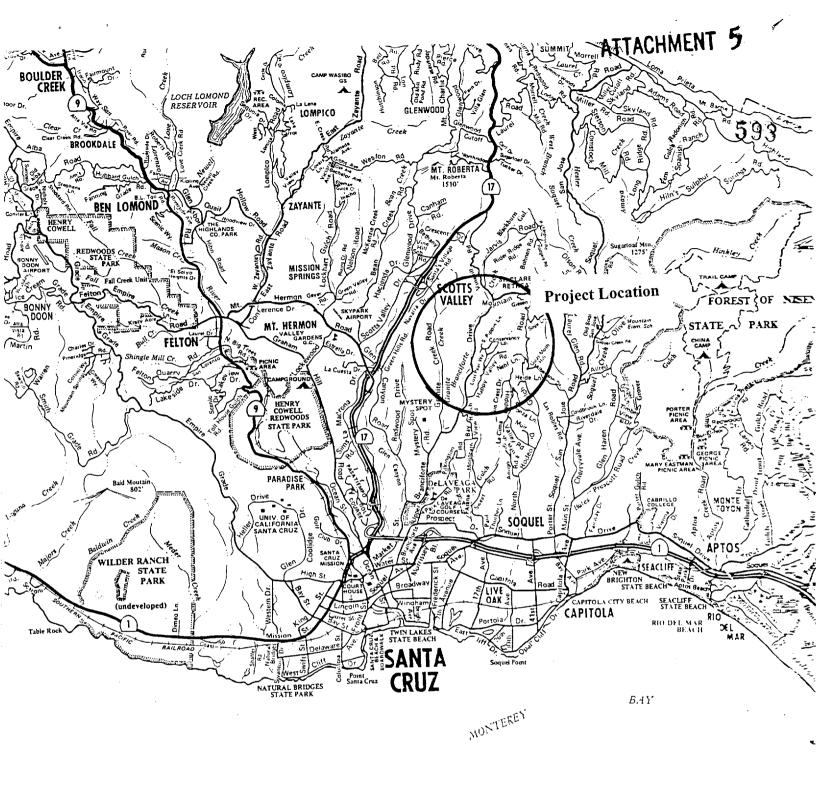
701 Ocean Street, 4th Floor Santa Cruz CA 95060

Phone Number: (831) 454-3225

Report reviewed by:

Martin J. Jäcobson, .AICP

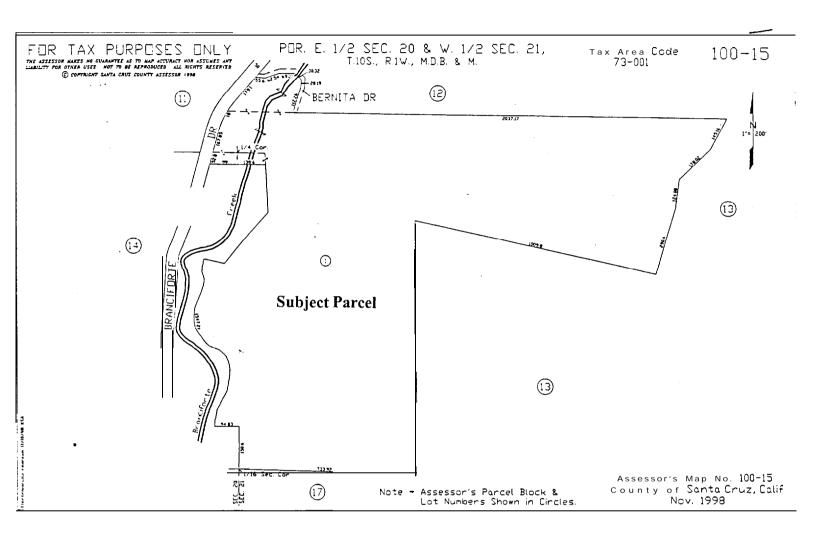
Principal Planner Development Review



**LOCATION MAP** 

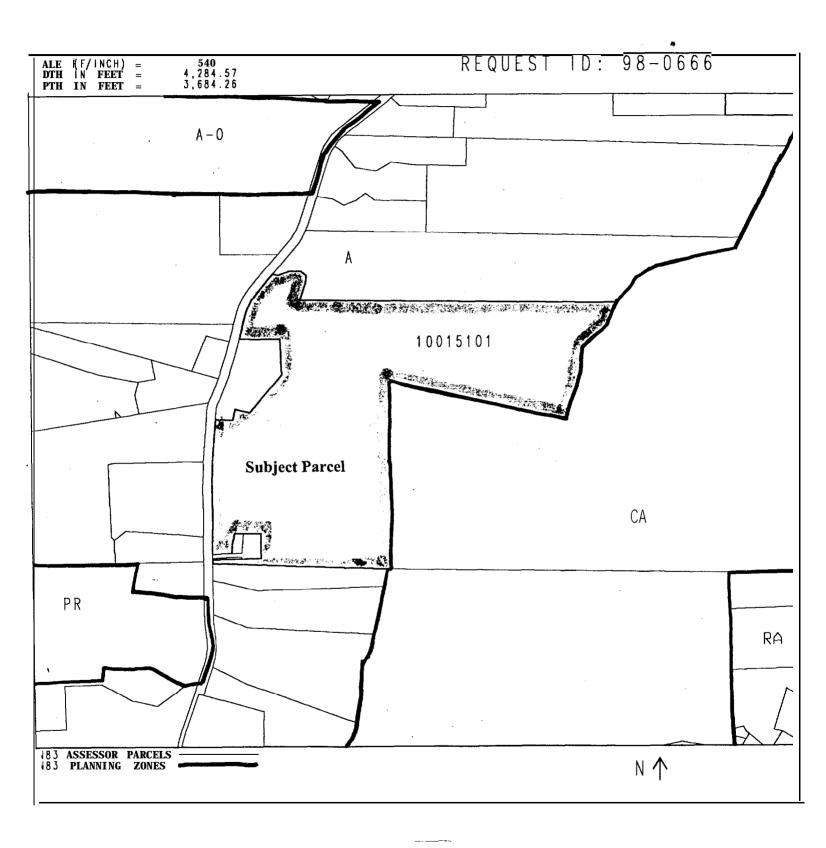
# ATTACHMENT 5

594

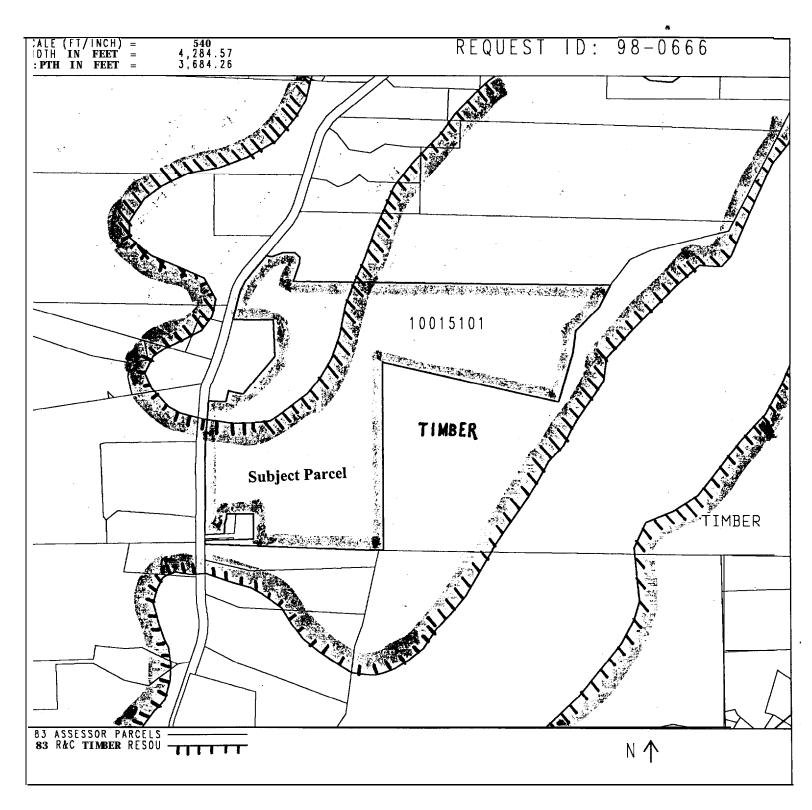


ASSESSOR'S PARCEL MAP

EXHIBIT B



**596** 



TIMBER RESOURCES MAP



Timber Management Plan

Lands of Lam

4995 Branciforte Dr Santa Cruz County

Portions of Sections 20 & 2 Township 10 South Range 1 West Mount Diablo Base & Meridian

> Report Prepared By Webster and Associates October 19, 1998



# AITACHMENT 5 598

### Index

Preface	1
Property Description	1
Property Resources	1
Water	1
Vegetation	1
Soils	1
Geology	2
Timber Harvest History	2
Management Objectives and Goals	2
Recommended logging systems	2
Stand Conditions and Growth models	3
Harvesting Cycles, Management Units	2 3 3 3 3
Forest Improvement	3
Snags and Downed Woody Debris	3
Ancient Tree mapping	4
Fish and Wildlife Management	4
Cultural Resources	4
Fire protection plan	4 5 5 5
Recreation	5
Urban Interface issues	5
Erosion Hazard inventory and plan	
Proposed Future Development	6
Appendix	
Geographic Location Map	6.1
Plan Map	7
Vegetation Map	8
Soils Map	9
Geologic Map	10
Landslide Map	11
Erosion Hazard Rating Worksheet	12
Timber Cruise Volume Data	13
1984 Timber Harvest Plan	15
Assessor Parcel Map	27

#### **PREFACE**

In July, 1998, Roy Webster, Consulting Forester, was commissioned by Santa Cruz Timber Company, LLC to prepare a Timber Management Plan for parcel #100- 15 1-O1, owned by Catherine and Huy Lam. The 44 acre parcel is located off of Branciforte Drive in Santa Cruz County. The property is located in the Laurel Quadrangle on portions of sections 20 and 21, Township 10 South, Range 1 West. This plan incorporates fieldwork and currently available resource data.

#### GENERAL PROPERTY DESCRIPTION

The property is located in the Branciforte Creek Watershed approximately five miles north of Santa Cruz City limits. Most of the property is located west of Branciforte Creek on east facing slopes of generally 30-60%. Property elevation ranges from 200 feet in the southwest comer to 680 feet in the northeast comer.

Access to the property is **from** Bemita's Drive via Branciforte Drive. Bemita's Drive is a **graveled** and oiled year round road and Branciforte Drive is a paved county road.

#### PROPERTY RESOURCES

Water Resources: Branciforte Creek flows through approximately 500 feet of the property. Branciforte Creek is a year round class I watercourse that flows south into the San Lorenzo River before flowing into the ocean. Three class III watercourses flowwest through the property into Branciforte creek. The class III watercourses generally run in the winter period during and after heavier rainfalls. A spring in the southwest comer of the property is being used for a surface water uptake.

Vegetation types: Redwood forest is the dominant vegetation type on the property. Approximately 30 acres of redwood forest is distributed on the lower slopes of the property and along the various watercourses. The redwood forest gives way to hardwoods on the upper slopes of the property.

On the lower slopes of the property, the redwood is interspersed primarily with bay and live oak. Redwood is the dominant tree type in the lower slopes. Further up the slope, **tanoak** and **madrone** are introduced into the hardwood forest. On these **midslope** elevations, redwoods are **typically** found in scattered groves interspersed by hardwood patches.

The remaining 14 acres of the property is comprised primarily of hardwood. Most of this acreage is found on the upper slopes of the property where redwood gives way almost entirely to a hardwood forest of live oak, bay and **madrone** and some brush.

Soils: Three soil complexes underlie the property. The Soquel loam and Nisene-Aptos complex both support redwood forest. The redwood is growing on site III lands.

#### Bonnvdoon loam (SCS #116) .5 acres

This is a shallow somewhat excessively drained soil formed in residuum derived from sandstone, mudstone, or shale. Weathered sandstone is at a depth of 11 inches. Permeability of the soil is moderate and runoff is medium to rapid and the hazard of erosion is moderate to high. This soil type is not suitable for timber management of for homesites.

#### Nisene-Aptos complex (SCS #156, #158) 36.5 acres

This soil is deep and well drained and formed in residuum derived from sandstone, siltstone, or shale. Permeability of the complex is moderate and runoff is runoff is rapid and the hazard of erosion is moderate. This complex is well suited to the production of redwood and Douglas-fir.

#### Soquel loam (SCS\_#171) 5 acres

This very deep, moderately well drained soil formed in alluvium. Permeability of the soil is moderately slow. Surface runoff is slow to medium and the hazard of erosion is slight to moderate. The soil is well suited to the production of redwood and Douglas-fir. The main limitations of this soil for homesites are moderately slow permeability and moderate slope.

Geology: The following text is drawn from a geologic review done on the property for the 1984 THP.

The plan area is underlain primarily by marine sandstone, siltstone, and mudstone of the Pliocene Purisima Formation. Flat benches in the northwest comer of the plan are underlain by alluvium and, possibly, older stream terrace deposits. Granodiorite boulders were observed in the stream channel of Branciforte Creek, west of the plan area. According to Roth (1983), rocks of the Purisima Formation are poorly consolidated and highly susceptible to landsliding. Although loosely-consolidated sandstone was observed along existing roadcuts, most of the area was well vegetated and showed little evidence of surface erosion.

Examination of aerial photographs indicates the presence of two, large dormant landslide features within or adjacent to the THP (see appendix). Aside from several small debris slide scars along 100 percent slopes in the northern part of the plan, no evidence of recent landsliding was observed within the THP or along existing roads. All areas of previous sliding were well vegetated. One minor cutbank slump was observed along the existing road in the northeast comer of the plan, but, in general, the road shows little erosion and appears to be stable throughout its length.

#### TIMBER HARVEST HISTORY

The old-growth redwood logging in the Santa Cruz area, including this property, occurred around the turn of the century. As was common throughout the area, these heavy cuttings were often followed by fire, usually intentionally set to burn bark and slash. This burning was not only used to facilitate log removal from the woods, but was also a means of converting cut-over forest to livestock pasture. Fire scars on the old-growth stumps are evidence of this fire activity.

In 1984, a Timber harvest plan was approved to log the 30 acres of redwood forest. Only about 15 acres of the property in the southern portion of the plan was logged. The seasonal road, the existing landing, and most of the skid trails on the property were constructed during this harvest. Logs were hauled down Branciforte Drive during the 1984 THP. This THP (5-84-16SCR) is appended onto the management plan.

#### MANAGEMENT OBJECTIVES AND GOALS

The overall goal on the property is to develop a multiple-use sustained-yield forestry program. The intent is to not only produce high quality forest products, but also to protect and enhance the related values of aesthetics, wildlife, and recreation.

The goal is based upon the following objectives:

- 1. Prescribe and implement a forest improvement program to improve stocking, increase tree vigor and maximize growth.
- 2. Maintain a healthy and vigorous forest of well-spaced trees growing at the highest rates feasible considering the other values of the forest.
- 3. Maintain a high degree of aesthetic consideration during all aspects of forest management.
- 4. Improve wildlife habitat as part of continuing forest management.
- 5. Develop a conifer sustained-yield program based on a harvest cycle of 10-15 years.

Recommended logging systems: The recommended logging system for this property is to use ground based logging equipment such as tractors and log skidders. The road and trail system is generally in place from the previous harvest. Another landing most likely needs to be constructed somewhere in the northeastern portion of the plan area.



One concern with tractor logging the property is damage to the permanent road accessing the neighboring property north of the subject property. The gravel road was oiled during the summer of 1998 and the surface would not hold up well to traditional log skidding. A timber harvest on the property will either have to avoid skidding on the oiled road, or include damage repair in the cost of the THP.

Present and Future Stand conditions: General stand conditions were assessed on several property visits during preparation of the management plan. On August 17, 1998, a 5% timber cruise was conducted to determine conifer volume per acre, basal area, size class distribution and stand growth.

The 30 acres of redwood forest have the following stand conditions:

Basal Area 194 square feet per acre

volume per acre 32,610 Bd ft overall property volume 978,295 Bd. ft.

species composition 92% Redwood, 8% Douglas fir

The volume per acre and property volume are gross volumes. In general, the net volume for redwood will be about 10% less, and the Douglas-fir, about 15% less. The complete timber cruise results are found in the appendix.

#### Statistics

Since the timber cruise was conducted on one twentieth of the timberland, a discussion on the volume estimates is appropriate. A statistical analysis showed a sample error for total conifer volume of 12.2%. This establishes the mathematical range from the computed mean within which the true but unknown mean of the total population is likely to fall 95.4 times out of 100. Therefore with a probability of 95 times out of 100, it is expected that the present gross conifer volume on the property falls within 978,295 Bd. ft. plus or minus 12.2% (within 860,900 Bd. ft. to 1,095,690 Bd. ft.).

Present and Future Growth models: Stand growth was determined by increment boring a representative number of trees per size class and measuring the tree growth over the last ten years. Through this procedure, the present growth of the stand was determined to be 2.7% per year. As the stand was harvested in 1984, and the owner's objective is to continue to harvest every 10 to 15 years, the present stand growth is also a good indicator of future stand growth.

At a yearly growth rate of 2.7%, the timberstand grew 50% from the last time the property was harvested 15 years ago. Therefore, a sustainable harvest would allow the removal of 326,100 bd. A. every 15 years.

A harvest of approximately 50% of the present volume is allowed under current forest practice rules. Following this initial heavier cut, future harvests would have to be lighter, in the order of 30-35% of growth every 15 years, to promote sustainability.

Harvesting Cycles: The property was last harvested in 1984. The property will presumably be harvested again in 1999. In general, future harvests should occur every 10-15 years. Santa Cruz County does not allow a property to be harvested within 10 years of a previous harvest.

Management Units: The entire property will be considered one management unit.

Forest Improvement: Timber should be marked for forest health and growth while maintaining and enhancing the current wildlife value of the timber stand. Marking of redwoods should focus on thinning of groves. Trees growing on their own should generally be left uncut to maintain forest cover. Trees with defective tops or other obvious health concerns should be removed unless significant wildlife habitat exists in those trees.

Snags and Downed Woody Debris: During the timber cruise a rough inventory was conducted concerning snags and large woody debris. The property contains two hardwood snags per acre and one softwood snag

602

per 2 acres. Snags should be **left** standing unless they are an obvious fire hazard to an existing structure. Downed woody debris is mostly present in the form of highly deteriorated hardwood left from the last harvest. Some larger cull logs from the 1984 harvest, and old growth cull logs from the original harvest are also scattered through the property. This large downed woody debris should be left in place.

Ancient Tree mapping: The property was **clearcut** around the turn of the century. No old growth conifers were observed on the property during preparation of the management plan.

Fish and Wildlife Management: As discussed above, snags and downed woody debris should be left whenever possible. Waterbars and slash should be used on skid trails and seasonal roads whenever possible to reduce erosion. The western property line is generally 50 feet offset from Branciforte Creek. This offset will allow larger leaning trees to naturally fall into Branciforte Creek.

Federally threatened steelhead trout were observed in Branciforte Creek during preparation of the management plan. The Natural Diversity Database Maps did not report any sightings of the federally threatened Coho **Salmon** or the Red legged Frog. Branciforte Creek does provide habitat for both of these species.

Cultural Resources: During field work a cursory survey of the property was made for archaeological sites and none was found. The two westernmost structures appear to be approximately fifty years old and may qualify as historical structures. Any logging activity would have to preserve these structures.

Fire protection Plan: Fire Protection is provided by the Branciforte Fire Department located approximately three miles south of the project area. Bemita's drive is an oiled year round road that accesses much of the property. The road is kept clear of brush and limbs and appears passable at all times by a standard fire truck.

#### Timber Harvesting

During any timber harvest the following standard fire fighting rules should be adhered to. Each piece of heavy equipment shall have a fire fighting shovel and a fire extinguisher or a shovel shall accompany each chain saw. A fire tool box shall be located on each active landing and contain shovels, McCleod's, and a pump style fire extinguisher filled with water. The logging foreman shall observe the active logging area at the beginning and the end of each day for signs of ignition. If a fire is ignited during timber operations one employee shall be deployed to contact the local CDF Fire Department and all other personnel shall work to extinguish the fire.

To reduce fire hazard following the timber harvest, logging slash should be lopped prior to April 15 of the year following timber harvesting. Lopping should reduce the height of the logging slash to at least 30 inches **from** the ground. The timber owner can obtain additional clean-up by personally making **fuelwood** from remaining dead and down material.

#### Areas of High Fire Hazard and Hazard Reduction

More stringent fire prevention standards along the permanent road should be followed. The roadside treatment is very important because that is where most fires start. A critical fire hazard level exists within 100 feet of the permanent road. Fuels in the form of branches, tops, chunks, and similar materials may need to be treated by removal, safe piling and burning, chipping, or burying. Snags not being used for nesting by rare and important birds within the same road zone should be felled. Snags are dangerous because lightening strikes can start fires in them, and when aflame for whatever reason, snags can throw sparks out over a wide area. An on-site evaluation of the potential fire danger from the permanent road should be made prior to every fire season.

A similar protection zone around the two homesites should be established. All dead large woody material should be removed **from** a zone of at least 100 feet from the house. Evergreen shrubs and grasses should be encouraged in this zone.



EU 3

#### **Fuel Loading**

Generally speaking, two different fuel levels exist on the property. Where the property was logged in 1984, there is a higher level of ground fuels caused by knocked over hardwoods, redwood tops and branches, and increased sunlight resulting in higher ground vegetation. This portion of the property is slightly more susceptible to a ground fire. The **fire** danger of the ground fuel is reduced every year as the material breaks down and decomposes into the soil.

The portion of the property that has not been logged has a denser canopy, continuous crown coverage, and more suppressed and broken topped trees creating a fuel ladder. This portion of the property is more susceptible to a catastrophic crown fire. If future logging is to occur on the property, suppressed and broken topped trees that are not providing significant wildlife habitat should be removed whenever possible.

Recreation: The subject property is private, as are all surrounding properties. Several of the skid trails are in excellent shape and appear to be used as hiking trails for people living on the property. There are no other known recreational uses on the property.

Urban Interface Issues: The haul route will most likely travel down Branciforte Drive towards Santa Cruz. Single home residences are scattered along Branciforte Drive. Happy Valley Elementary is located off of this potential haul route. A water pick-up in the southwest comer of the property provides water to at least one neighbor.

Erosion Hazard inventory and plan: Erosion Hazard rating for the property is high with slopes on the property averaging near 50% (EHR worksheet in Appendix). Gentler slopes are found near Branciforte Creek and the upper elevations of the property, while some midslopes approach 100%.

#### Impermeable surfaces

Currently, there are no apparent erosion problems on the parcel. The impermeable surfaces on the property that result in accelerated runoff and must be monitored are the permanent road through the property and the two homesites.

The permanent road through the property is well maintained with cleaned inside ditches and culverts and an oiled surface to prevent surface erosion. Culverts dram road runoff into well vegetated locations and show no signs of significant erosion. Maintaining the culverts is important in controlling road runoff. Prior to every winter period, the road should be walked and inside ditches should be cleaned out. The road system should also be inspected during larger winter rainstorms to insure all culverts are functioning properly.

The two homesites create small impermeable areas slightly increasing runoff outside the roofline. There are currently no obvious erosion problems caused by the accelerated runoff. During larger winter storms, roof drainage patterns should be inspected. Any erosion created by the runoff should be treated by either moving the location of the drain, or filling the eroded area with drain rock, or large woody debris.

#### Timber Harvesting

Following the 1984 timber harvest, skid trails and the seasonal road were waterbarred to Forest Practice Rule standards. The trails and seasonal road are now well vegetated and have no apparent erosion problems.

To keep erosion to a minimum during future timber harvesting existing trails should be used whenever possible. New trails should be located on slopes less than 50% wherever possible. Trails not used between harvests should be slashpacked and waterbarred. All trails and roads should have proper drainage facilities before the winter period. Exposed soil, particularly near any watercourse, should be **strawed** and seeded, or slashpacked, prior to the winter rains.

604

#### Future Grading, Site activity

Large areas of bare soil created on the property from any activity should be treated prior to October 15 by **strawing** and seeding, or covering with slash. Straw mulch should be applied at the rate of one bale per **400** square feet, with at least 90% ground coverage. This rate is equivalent to a three inch depth of straw over 400 square feet. Grass seed should be applied at the rate of 100 lbs. per acre. Consult with the County Planning Department prior to any grading activities to determine if the work requires a County Grading Permit.

#### PROPOSED DEVELOPMENT ON THE PROPERTY:

No development is proposed on the property. The management plan is primarily being completed in order to zone the property to Timber Preserve.

Structures: Two inhabited structures are located on the property

Clustering: The structures are located in the northeast portion of the plan within 600 feet of each other.

Roads: Bemita's Drive and an unnamed driveway both access the property off of Branciforte Drive. Bemita's Drive continues through the property to a house north of the subject property. The graveled road was oiled during preparation of the management plan.

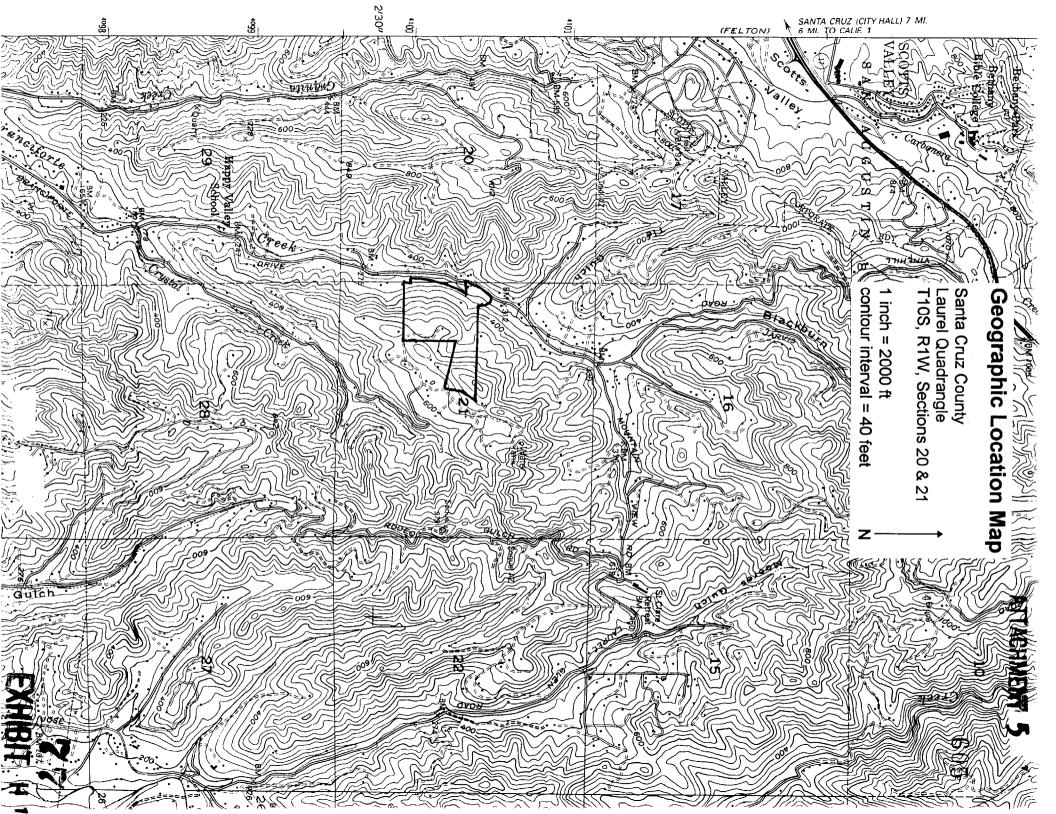
Future Development: No future housing development is proposed for the property. If future development is proposed, building sites should be located on flatter portions of the property outside of the redwood forest vegetation type or in an area that does not require the removal of redwood trees. The existing landing site should not be used as a housesite as it would interfere with harvesting the property.

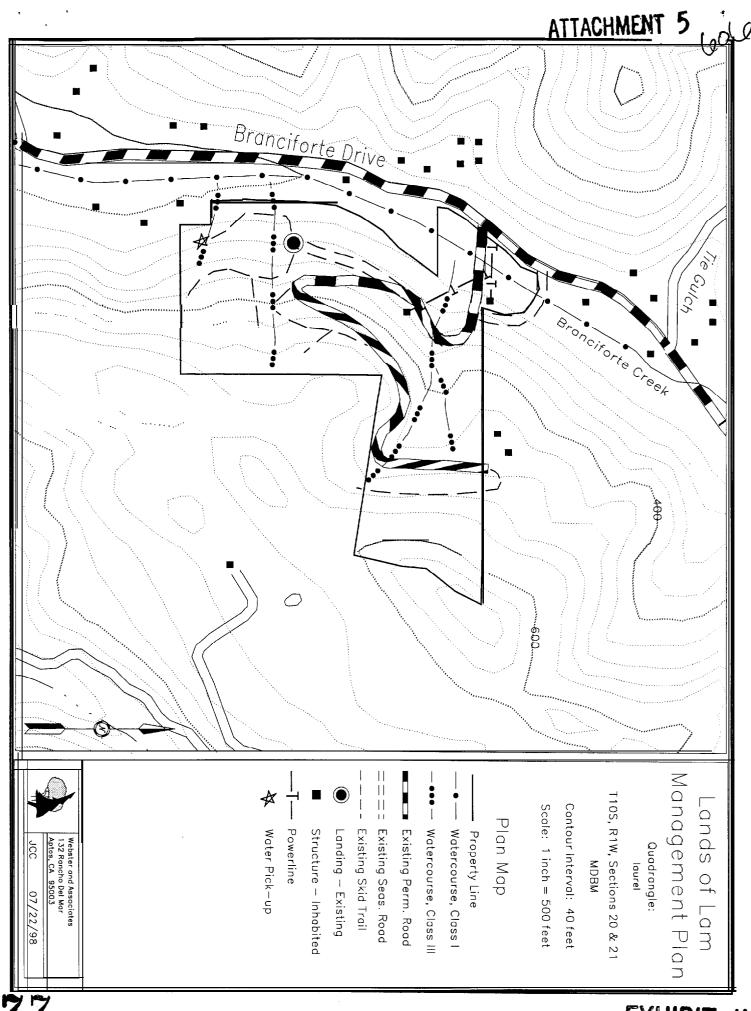
Management Plan Prepared By:

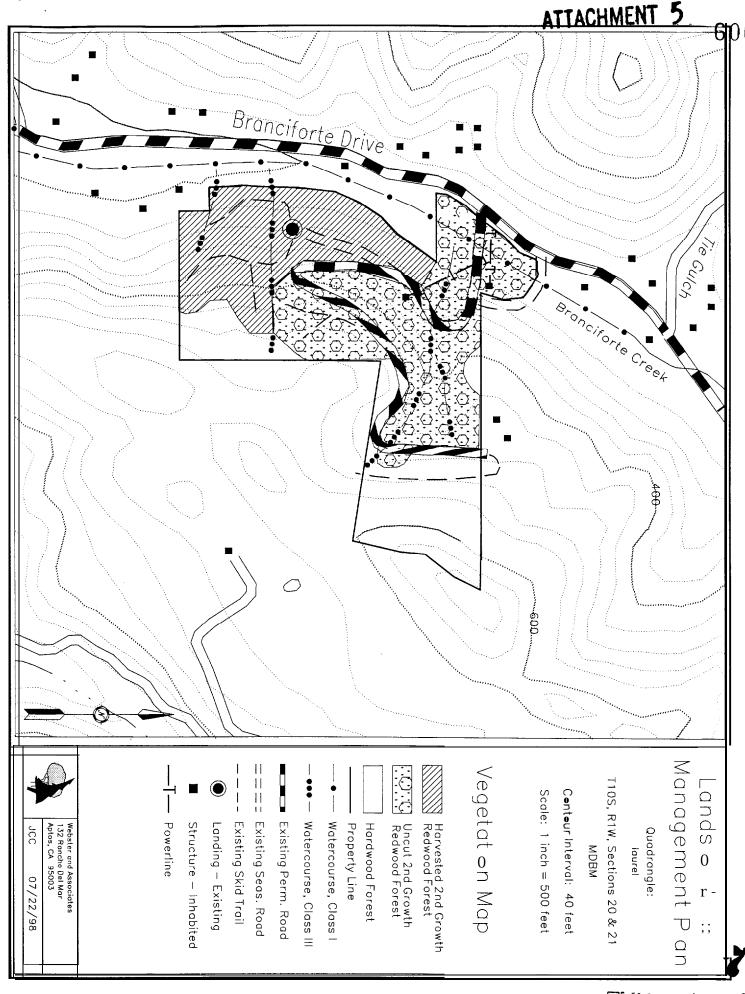
Roy Webster RPF #1765

L. Webster

Asenh Culver Associate Forester







### Management Plan Lands of Lam

laurel Gnaqtaudje:

WDBW T1OS, R1W, Sections ZO & 21

Contour Interval: 40 feet

Scale: 1 inch = 500 feet

#### Soils Map

moolnoobynnoB(811) (171) Soquelloam eofqA-enesiN(8&f)

-- Property Line

— • — Watercourse, Class I

— · · · — Watercourse, Class III

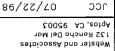
Existing Perm. Road

 $\equiv$   $\equiv$   $\equiv$  Existing Seas. Road

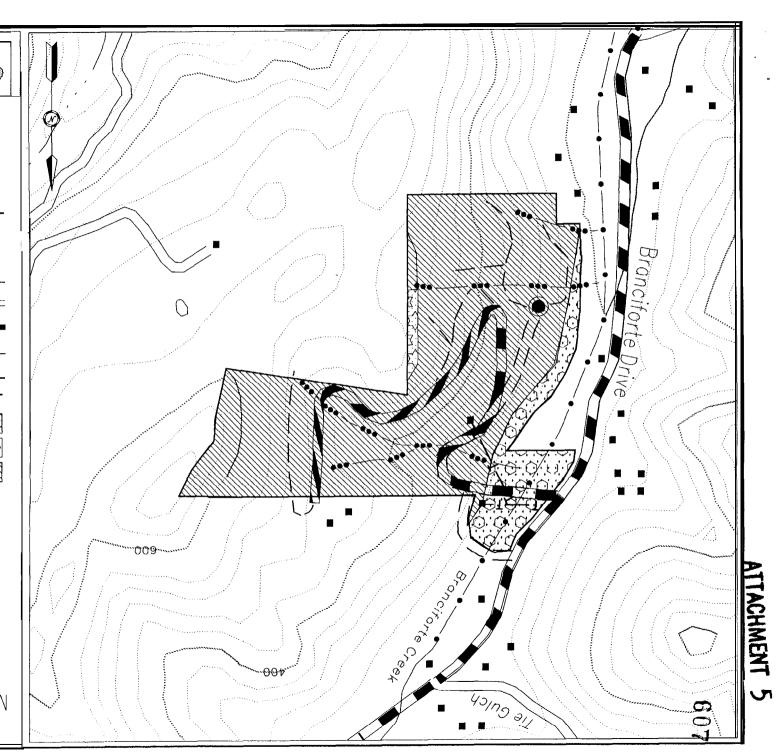
Landing - Existing — — — Existing Skid Trail

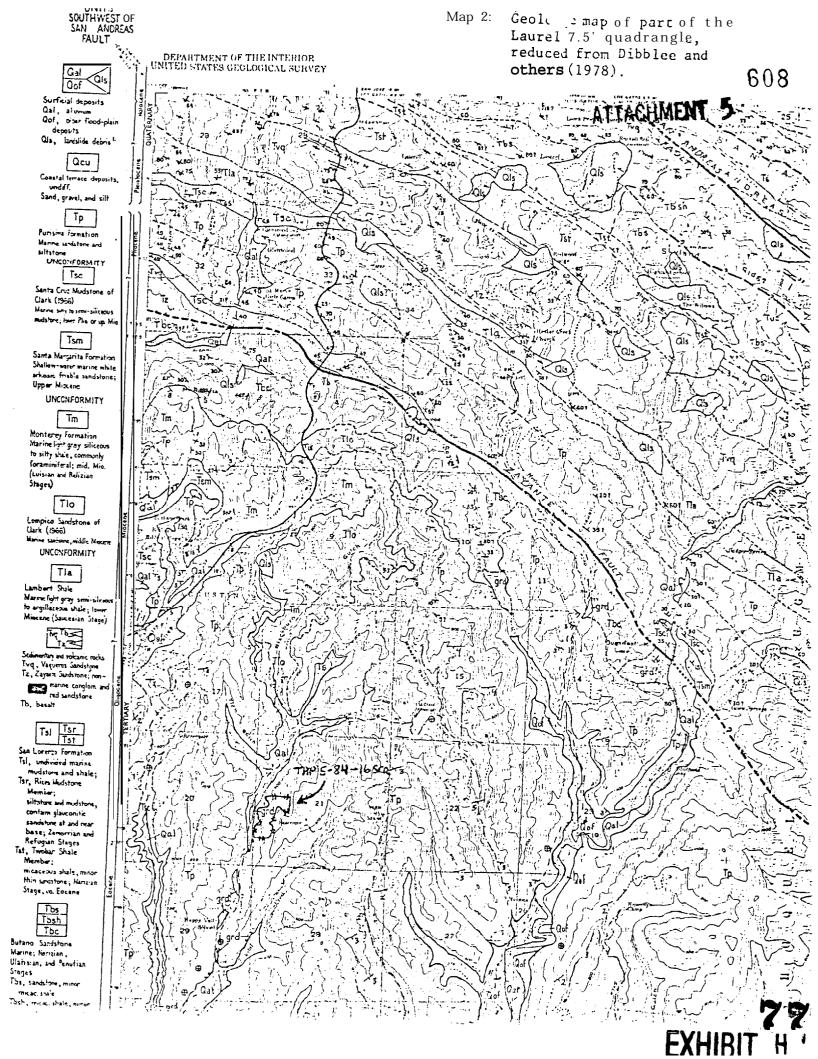
Structure - Inhabited

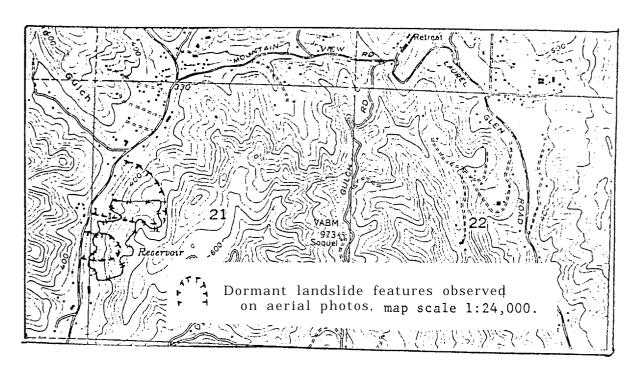
- Powerline

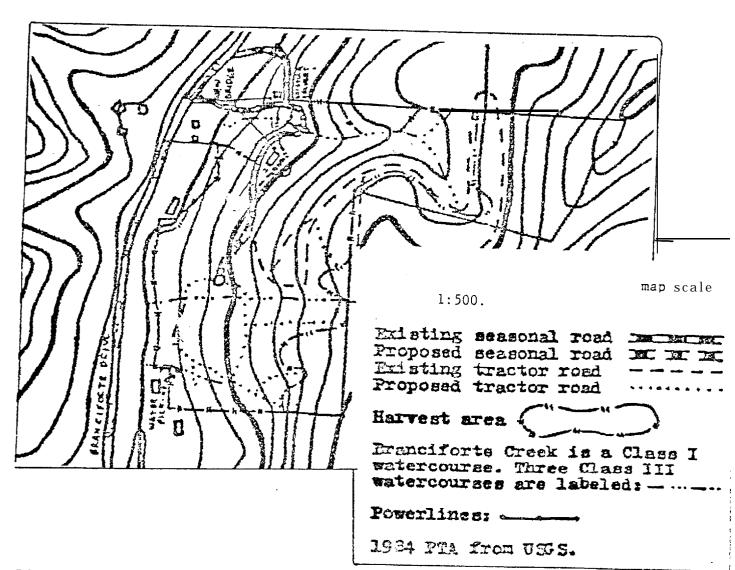












610

07175 05 04	LICODANA							1	
STATE OF CA			Timelean	Managan	ant Diam	. Doot De			
BOARD OF FO	DRESTRY		IIMber I	vianagen	ient Pian	: Peet Pr	орепту		
ESTIMATE	D SURFAC	CE SOIL		Soil Types	1: (116) Bo	onnydoon lo	am		
EROSION						58) Nisine-A		olex	
LICOIOIC	117 (27 (17)					oquel loam	.p.100 00p		
I. SOIL FA	CTORS				,	FACTOR			
ŀ						RATING			
A. SOIL TE	XTURE	FINE	MEDIUM	COARSE	1	2	3		
1. DETACHAB		LOW	MODERATE	HIGH					
	RATING	1-9	10-18	19-30	17	20	17	1	
2.PERMEABIL	.ITY	SLOW	MODERATE	RAPID					
	RATING	5-4	3-2	1	2	1		1	
B. DEPTH	TO REST	RICTIVE LA	YER OR B	EDROCK					
			MODERATE						
		1"-19"	20"-39"	40-60"(+)					· · · · · · · · · · · · · · · · · · ·
	RATING	15-9	8-4	3-1	4	4	4	1	
C. PERCE	NT SURFA	CE COARS	SE FRAGM	ENTS GRE	ATER THA	N 2MM			<del></del>
IN SIZE IN	CLUDING	ROCKS OF	STONES						
		LOW	MODERATE	HIGH					
		(-)1-39%	40-70%	71-100%					
	RATING	10-6	5-3	2-1	10	10	10		
		SUB TOTA	AL		33	35	33		
II. SLOPE	FACTOR						1	2	3
SLOPE	5-15%	16-30%	31-40%	41-50%	51-70%	71-80%			
RATING	1-3	4-6	7-10	11-15	16-25	26-35	16	16	14
III. PROTE	CTIVE VE	GETATIVE	COVER R	EMAINING	AFTER DI	STURBANG	E		
	LOW		MODERA	ATE.	HIGH				
	'0-40%		'41-80	%	81-100	%			
RATING	'15-8		'7-4		'3-1		4	4	4
IV. TWO-Y	EAR, ONE	HOUR RA	INFALL IN	TENSITY (	HUNDREDTH	S OF AN INCH	1)		
			LOW	MODERATE	HIGH	EXTREME			
			(-) 30-39	40-59	60-69	70-80			
		RATING	1-3	4-7	8-11	12-15	15	15	15
				TOTAL SU	JM OF FAC	TORS	68	70	66
			EROSION	HAZARD	RATING				
			<50	50-65	66-75	>75			
			LOW	MODERATE	HIGH	EXTREME	1		
			THE DET	ERMINATION	ON IS		Н	I H I	Ĥ

Page 1

08-18-1998

branciforte

RW - sawtimber (0.20 Acre PLOT CRUISE)

(SCRIBNER FC BD.FT.-V Top)

	Pe	r Acre.			30 Acres
DBH	TREES BASA	L AREA	bd.ft.	TREES	bd.ft.
12	4.3	3.4	132.80	129	3,984.03
14	8.6	9.2	587.69	257	17,630.71
16	9.3	13.0	1,052.44	279	31,573.18
18	2.1	3.8	393.30	64	11,798.95
20	3.6	7.8	993.79	107	29,813.56
22	5.0	13.2	1,698.66	150	50,959.68
24	4.3	13.5	2,064.06	129	61,921.88
26	2.9	10.5	1,755.20	86	52,656.08
28	6.4	27.5	4,827.56	193	144,826.80
30	4.3	21.0	3,951.63	129	118,548.80
32	5.0	27.9	5,606.66	150	168,199.72
34	2.9	18.0	3,679.12	86	110,373.70
36	2.1	15.1	3,247.34	64	97,420.13
TOTA	L 60.7	183.9	29,990.24	1,821	899,707.25

DF - sawtimber (0.20 Acre PLOT CRUISE)

(SCRIBNER FC BD.FT.-V Top)

DBH	TREES	Per BASAL		bd.ft.	TREES	30 Acres bd.ft.
28 42	0.7 0.7	<b></b> · ·	3.1 6.9	565.03 2,054.58	21 21	16,950.83 61,637.27
TOTA	L 1.4		9.9	2,619.60	43	78,588.11

the	Dir	ector of Forestry As required by State laws and regulations, The plan dment may be reviewed at the following office:
	135 P.O. Sant	ifornia Department of Forestry  Ridgeway Avenue  .Box 670  ta Rosa, CA 95402  7) 542-1331  California Department of Forestry  1000 Cypress Street  P.O. Box 2238,  Redding, CA 96099  (916) 246-6311
	123	ifornia Department of Forestry 4 East Shaw Avenue 2221 Garden Road 2221-3714 Monterey, CA 93940 (408) 649-2801
		California Department of Forestry 2524 Mulberry Street Riverside, CA 92502 (714) 781-4140
Асс	ppy o	of a plan may be obtained for \$1.00 from the Department of Forestry.
The	foli	lowing is a summary of the information contained in the plan or amendment:
	1)	Plan Submitter: Bernita Kuhns
	2)	Timberland Owner: Bernita Kuhns
	3)	Location of the plan area (county, section, township and range, and approximate direction and distance to the plan area from the nearest community or well-known landmark): Portions of sections 20 and 21, township 10 south. range 1 west. MDB&M. Approximately one mile north of Happy Valley School. 4995 Branciforte Drive.
	4)	Name of nearest perennial blue line stream flowing through <b>Or</b> downstream <b>from plan area:</b> Branciforte Creek.
	5)	&proximate acres in plan: Thirty acres.
	6)	Silvicultural methods proposed: 913.8(a) Southern Subdistrict Rules
	7)	The estimated earliest date for the Director's determination on the plan (this date is 25 days from date of receipt of the plan by the Department):  April 25, 1984

DEPARTMENT OF FORESTRY ADMINISTRATIVE USE ONLY

Date Received: 3-27-84 THP Of Amendment #: 5-84-16SCR

THE	RESOURCES	AGENCY	
DEPA	RIMENT OF FO	ORESTRY:'	:

#### TIMBER HARVESTING PLAN

Number 5	-84-16SCR
Date Received	3-27-84 6
Date Filed A	TACHMENT 5
Date Approved	I
Copy to RPF	yesno
Copy to LTO	ves no

127.27.291

This limber Harvesting Plan (THP) form, when properly completed, is designed to comply with the Forest Practice Act (FPA) and Board of Forestry rules. See separate instructions for infoimstion on completing this form. NOTE: The form must be printed legibly in ink or typewritten.

Timber (	Owner(s): Name $B_1$	ernita K <b>uhns</b>		
Address_	1	833 Palo Santo	Drive	
City	Campbell	State <sup>C</sup> alif	•zip 9 5008	Phone 408-379-4734
Timber 1	Landowner(s): Name	Same as in i	tem # 1 abov	re.
Address_				
				Phone
Timber	Operator(s): Name_	Peter Twight		
Address	5552 Freedom I	3lvd.	License	# A6994
City	Aptos	StateCali	f.zip 95003	Phone 408-688-2127
				e.
Address				
				Phone.
If the submit p	Plan Submitter is d plan:	ifferent from 1,	2, or 3, expla	ain authority to
Person operation	to contact on-site	who is responsibl	e for the cond	duct of the
Name	Peter Twight A	ssociates Inc.		
Address	5552 Freedom B	lvd.		
City	Aptos	State Calif.	<b>zip</b> 9500	3 Phone 408-688-212

6.	RPF preparing the THP: Name Lark Hannon ATTACHMENT 5.
	Address
	City AptosState_Califzip_95003Phone 408-688-2127
7.	Expected commencement date of timber operations: - April 15, 1984
a.	Expected completion date of timber operations: April 15, 1987
9.	Forest products to be harvested: Sawlogs, poles, firewood, split products
0.	The timber operation is to be within: (check appropriate box)
	Coast Forest District Northern Forest District Southern Forest District  and, if applicable, one of the following special districts: Southern Subdistrict of the Coast Forest District High-Use Subdistrict of the Southern Forest District  Eastside Subdistrict of the Southern Forest District
1.	Location of the timber operation by legal description:
	Base and Meridian:  X Mount Diablo Humboldt San Bernardino
	Section" · Township Range Approximate Acreage County
	oportifin3 :
	20 & 21
	TOTAL ACREAGE: 30 acre3
	(NOTE: Additional sheets may be necessary; parcel numbers are optional additional information which may be provided)  APN 100-151-01
2.i	$\mathcal{M}$
3.1	Yes Is there a <b>THP</b> on file with CDF for any portion-of the plan area for E 1 No which a report of satisfactory stocking has not been issued by CDF?

THP NO. S-84-163CK
ATTACHMENT

A	TT	AC	HM	IE1	TV	5
---	----	----	----	-----	----	---

4.	No Regional Planning Agency jurisdiction, or a county which has special 1 rules
	If yes, identify the special area:
SILV	VICULTURE_
L5.	Check the methods or treatments which are to be applied, and provide any other information required by the rules on an addendum:
	clearcutting shelterwood, preparatory cut shelterwood, seed cut shelterwood, removal cut seed tree, seed tree cut seed tree, seed tree removal cut selection - designate basal area stocking standard(s) to be met: 100 square feet of basal area per acre (site II timberland).
	8 commercial thinning - designate basal area stocking standards(s) to be met:
	9 Cl sanitation salvage - when will stocking be met:
	special treatment areas rehabilitation of understocked areas alternative prescription (provide necessary information on an addendum)
	(Note: Timberland site(s) must be shown on the map where the level of stocking is based upon timberland site.)
16.	1 Yes Are any exceptions to the standard silvicultural methods or $2   Ex   No$ treatments permitted in the rules proposed for this plan? If yes, explain and justify the exception on an addendum.
17.	Yes Are broadleaf or optional species proposed for management? No See item 18
18.	Yes Will broadleaf or optional species be used to meet stocking No standards?  If the ansver to items 17 or 18 is yes, list the species and provide the information required by the rules:

# ATTACHMENT 5

#### HARVESTING PRACTICES AND E'ROSION CONTROL

19.	Ind	icate	type o	f yarding systems to be used on this plan:	617		
1 2 3 4 5 6 7	Х	tractor, skidder, forwarder balloon, helicopter cable, ground-lead cable, high-lead cable, skyline animal other					
20.1 <b>2</b>	X	Yes Will tractor constructed layouts be used?					
21.1 <b>2</b>	X	Yes Will tractors be used for direction tree pulling? No					
	Che	ck it	ems 22	through 25 that apply with tractors.			
22.		1 2 <b>x</b>	Yes No	Operations on unstable soils or slide areas?			
23.		1 2 <sub>E</sub> × <sub>1</sub>		Operations on slopes over 65%?			
24.		1 2 <b>[x</b> ]	Yes No	Operations on slopes over 50% with high or extreme EHR?			
25.		1 2 <sub>を1</sub>	Ye8 No	Operations within cable yarding areas?			
		_	of <b>items</b> by the	3 22 through 25 are answered yes, explain and justify as rules			
26.	Ind	licate	e Erosio	on Hazard Rating(s) present on this THP:			
		Low	,	Moderate, High, X Extreme			
27.	erc	sion	control	stabilization measures to be implemented or any additional measures proposed in this THP where required by the rules: l bared by timber operations which could erode int			
	wa	terc	ourses	will be mulched with slash or straw and seeded it	f		
	nec	cessa	ary.				

		— 1		ATTACITIVIL	411 J
28.	2	Ye No	ha pr	re any alternative practices or exceptions to the standard arvesting or erosion-control practices permitted in the rules coposed for this plan?  Sin and justify:	618 —
	_				<u> </u>
29.		Ye Lxl No	. ]	Are timber operations proposed for the winter period?  If yes, provide a winter period operation plan as an addendum, except for cable, helicopter, or balloon yarding.	_
ROA	DS	AND L	ANDING	<u>s</u> .	
30.	1 2	X Ye	)	l any roads or landings be constructed or reconstructed?	
			If	yea, check items 31 through 37 that apply:	
31.		1 2 <b>x</b>		Will new roads be wider than single lanes with turnouts?	
32.		2 3		Will any landings exceed the maximum size specified in the rules?	
33.		1 2 <sub>E</sub> >	Yes ¶ No	Are logging road8 or landings proposed in areas of unstable soils or known slide-prone areas?	
34.		1 2 2		Will new roads exceed a grade of 15% or pitches of 20% a distance greater than <b>500</b> feet?	
35.		1 2 <sub>E</sub> 3	Yes <b>T</b> No	Are roads to be constructed, other than crossings, within th watercourse and lake protection zone of Class I or Class II watercourses?	e
36.		1 2		Will roads or landings longer than 100 feet in length be located on slopes over <b>65%</b> , or on slopes over 50% which are within 100 feet of the boundary of a watercourse or lake	

37. 1 Yes Are exemptions proposed for flagging or otherwise identifying 2 x No the location of roads to be constructed?

protection zone?

38. If any of the items 31 through 37 are answered "yes", explain, justify, and give site-specific measures to reduce adverse impacts or, if there is any additional or special information concerning the construction and/or maintenance of roads or landings if required by **the** rules. Provide necessary information on an addendum.

#### WATERCOURSES AND LAKES

# ATTACHMENT 5 "

	THE THE THE TAX
39.	Yes Are there any watercourses or lakes which contain Class I through No Class IV waters on or adjacent to the plan area? $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	If yes, complete Items 40 through 50.
40.	1 Yes Are any in-lieu practices and/or alternative practices proposed for No watercourse or lake protection:
	If yes, explain and justify:
	any exceptions proposed for the following watercourse and lake protection zone ctices? Check items 41 through 48 that apply.
41.	Yes Exclusion of the use of watercourses, marshes, wet meadows, and No other wet areas, for landings, roads, or tractor roads?
42.	Yes Retention of non-commercial vegetation bordering and covering No meadows and vet areas?
43.	1 Yes Directional felling of trees within the zone away from the 2 $_{\rm E}{\bf x}_{\rm L}$ No watercourse or lake?
44.	1 Yes Increase or decrease of width(s) of the zone(s)? 2 X No
45.	1 Yes Protection of watercourse(s) which' conduct class IV waters. 2 X No (if any)? not applicable.
46.	1 Yes Exclusion of heavy equipment from the zone? 2 $x$ No
47.	1 Yes Retention of 50% of the overstory canopy in the zone?
48.	Yes Retention of 50% of the understory in the zone? No

If any of the items 41 through 48 are answered yes, explain and justify if

required by the rules and provide necessary information on addendum.

7 9

ATTACHMENT 5 --

	no, explain:
	scribe the protective measures and zone widths for the watercourse and lake otection zones that are in the plan area: as per 316.3, 916.4 and
<sub>1</sub> 91	.6.5. Natercourse zone along the east bask of
	canciforte Creek is flagged partly in orange and partly coinci
	ith the property boundary in the southern portion of the harve
ar	rea.
DLIF	
2 I	Yes Are any known rare or endangered species <b>or</b> species of special  No concern including key habitat associated with the <b>THP</b> area? <b>yes,</b> identify the species and the provisions to be taken for protection of especies:
	Yes Are there any snags which must be felled for fire protection or
	No other reasons?  yes, describe which snags are going to be felled:
_ _ _	

THP NO. <u>S-84-16SCR</u>,

#### CULTURAL RESOURCES

# ATTACHMENT \$21

54.	1 2 3 x	Yes Has an archaeological surv No Unknown	vey been made of the areas to be harvested?
55.	1 X	No area to be harvested? <b>Unknown</b>	ogical or historical sites located in the
		es, describe now the sites are	to be protected (if necessary):
IAZZ	ARD RE	DUCTION	
56.	What	type of slash treatment will b	be used in the fire protection zone?
	1 x 2 x 3 x	pile and burn lopping other (specify) crushing in not applicable, no fire protection	Place by tractor.
57.	<sub>2</sub> El	Yes If the clearcutting metho No for site preparation? <b>no</b>	d is used, will broadcast burning be used ot applicable.
58.		iling and burning is to be used onsible for compliance? <b>not ap</b>	for hazard reduction, who will be plicable.
	1 2 3	timber operator timber <b>owner</b> timberland owner	
PUBI	LIC NO	TICE	
59.	1 v		harvested parcel within 300 feet of the plan-boundary which er than the persons executing this plan? that apply:
60.	1 2 3	plan boundary, and the Dep	lished in a newspaper s for ownerships within 300 feet of the partment shall mail the Notice of Intent
61.	1 2	* Notice mailed to Superv Yes A list of the names a E 1 No is attached to the TH	nd address of the adjacent property owners

#### PESTS

62.	Yes Are there any adverse insect, disease, or pest problems of No significance in the plan area?
	If yes, describe mitigation measures, if any, to improve the health and productivity of the stand:
	productivity, or one beam
ATTA	CHMENTS -
63.	Check if attachment is included with the plan:  Notice of Stream Bed Alteration to Department of Fish and Game  Estimated Surface Soil Erosion Hazard Calculations Addendum for Silviculture Alternative Prescription Addendum for Winter Period Operations Plan  Notice of Intent to Harvest Timber  Maps Written Notice of Plans to the timber operator, timberland owner, or timber owner that did not sign the THP  Addendum for item 25 of plan, as needed Addendum for item 38 of plan, as needed  Addendum for item 61 providing the names and addresses, as needed Other
REGI	STERED PROFESSIONAL FORESTER
64.	I have the following authority, responsibilities, and limitation for preparation or administration of the THP and timber operation: I will be
	on the site frequently to assist the timber operator in identifying
	potentially adverse environmental impacts and to identify suitable
	suitable mitigation measures.
65.	In addition to preparing this plan, I have notified the timber owner and the timberland owner, in writing, of their responsibilities for compliance with the stocking requirements of the rules $x$ yes no and for the maintenance of erosion control structures $x$ yes no, and of the marking requirements contained in the rules $x$ yes no.
66.	I will supply the timber operator with a copy of the approved THP $\square$ yes $\square$ no.



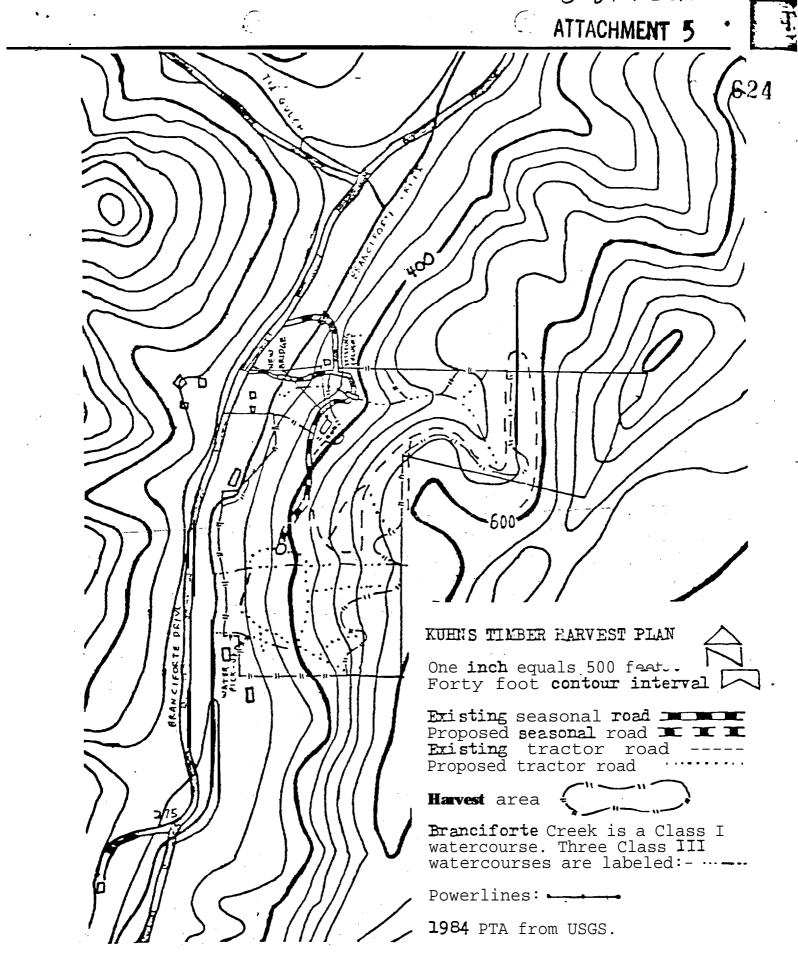
TT NO. <u>5-84-16SCR</u>

67.	Registered Professional Forester:		ATTACHMENT 5				
	Signature: Mid / Linuar	Date	March 12, 1984				
	Registration Number 2035						
68.	CERTIFICATION						
	The above conforms to <b>(my)(our)</b> plan and, upon fill conduct harvesting in accordance therewith. Constitutions of Forestry, his agents and employees, to inspect timber operations and to determine compliance.	ent is ente	hereby given to the r the premises to				
	Timber Owner:  Signature: X 15 22 - Itall Handings I	Date '					
	,	Title_	/				
	Timber Landowner:						
	Signature: MRemital A. Kulms 1	Date	March 18 1981				
	Printed Name Bernita J Kuhns	ritle_	Owner				
	Timber Operator:						
	Signature: Pole / with	Date	3/18/18/				
	Printed Name Pater A Thright	Title_	Owner				
-							
	DIRECTOR OF FORESTRY		`				

This Harvesting Plan conforms to the rules and regulations of the Board of Forestry and with the Forest Practice Act.

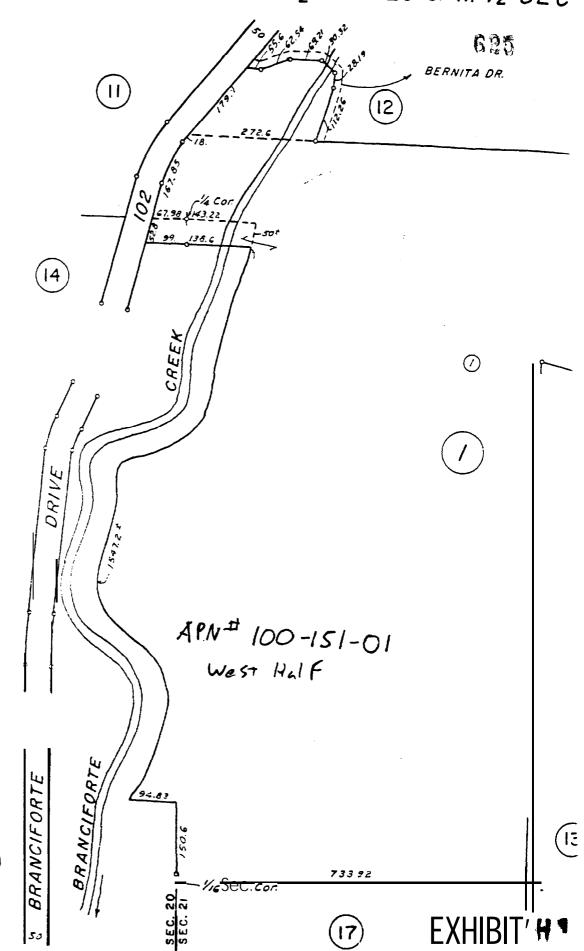
By:		/	
_	(Signature)		(Printed Name)
		/	
	(Title)		(Date)

• :



EXHIBITSH.

ATTACHMENT 5 OR TAX PURPOSES ONLY POR. E. 1/2 SEC. 20 8 W. 1/2 SEC



EUSLIE

ATTACHMENT 5626

Tax Areo Code 100-75

(12)

2037.17

APN # 100-151-01 East Half

?I, T. 10 S., R. I W., M. D. B. & M.

1807

1" = 200'

10090

ATE 2-13-86
OLD MAP NO 100-15

Pag

EXHIBIT

Assessor's Mop No. 100-15 County of Santa Cruz. Calif.

Note -Assessor's Parcel Block & Lot Numbers Shown in Circles.

### ATTACHMENT 5

### **COUNTY OF SANTA CRUZ**

INTER-OFFICE CORRESPONDENCE

DATE:

November 20, 1998

627

T0:

Cathleen Carr, Project Planner

FROM

Dave Hope RPF# 2614 Senior Resource Planner

SUBJECT: Lam Timber Management Plan #98-0666

This Management Plan meets the minimum requirements for Timber Management Plans set forth by the County of Santa Cruz. The site also meets the minimum standards for timber growth of 15 cubic feet per acre per year.

This review is for the adequacy of the plan, further field review of the site is required to verify the information provided. Additional correspondence may follow if needed.

# ATTACHMENT 5

From PLN620 -- SCRUZA To: PLN716 -- SCRUZA

Date and time 12/24/98 09:16:59

628

FROM Richard Nieuwstad CODE COMPLIANCE OFFICER 454-3205 SUBJECT: LAM APPL' N 98-0666

Site inspection 12.23.98 verified that the three sheds between Branciforte Drive and Branciforte Creek have been demolished and the site restored and mul ched.