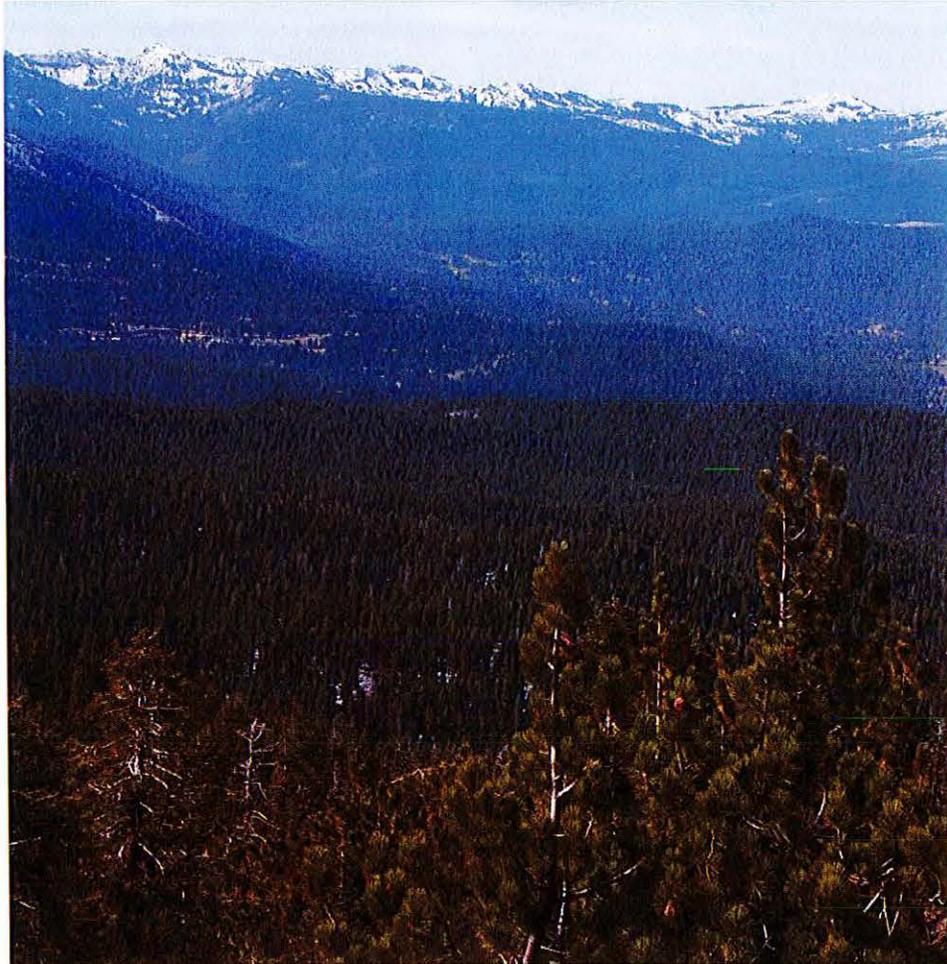


ATTACHMENT K

FOREST MANAGEMENT PLAN
Portion East Parcel
Martis Valley West Project
For Rezoning back into Timberland Production Zone (TPZ)



Danielle E. Bradfield, RPF#2808
North Valley Resource Management
PO Box 1411
Quincy, CA 95971
(530) 927-7095

Adapted from original Forest Management Plan by Douglas Ferrier, RPF #1672

May 2016

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CURRENT SITUATION

The 2003 Martis Valley Community Plan (MVCP), approved by the Placer County Board of Supervisors on December 16, 2003, approved residential development on the East Parcel*, specifically 1,520 residential units and 6.6 acres of commercial on 670 acres. This was subsequently reduced to 1,360 residential units and 6.6 acres of commercial as part of an agreement between Placer County and the Land Owner. At that time, the MVCP referenced the East Parcel project as Martis Ranch, which was part of 6,376 acres of land east and north of Highway 267 and Brockway Summit. In order to allow for the implementation of the MVCP zoning, a ten year rollout from TPZ was started upon approval of the MVCP, and in December of 2013, the 670 acres had its TPZ designation removed.

Since the 2003 adoption of the MVCP, the specifics of the proposed project have changed. Several parties, including agencies, environmental groups and the developer, have agreed to eliminate any potential development located east of Highway 267 and north of Brockway Summit, to reduce the maximum number of units, and to shift development west, across SR 267 and adjacent to Northstar Resort. In short, a new project was created called the Martis Valley West Project (MVWP). The MVWP includes preserving the 6,376 acres as open space, reducing 600 units of density, and shifting 760 units to a western parcel adjacent to the Northstar Resort. Additionally, as part of the MVWP, the 670 acres of land originally to have been developed east of highway would be redesignated TPZ zoning.

Placer County requires that any parcel of land not currently in TPZ, but proposing to be rezoned TPZ, have a forest management plan (FMP) written for it. Placer County Zoning Code, Article 17.16 Timberland Production (TPZ) District requires that the FMP be prepared by a California Registered Professional Forester and include various site specific information,

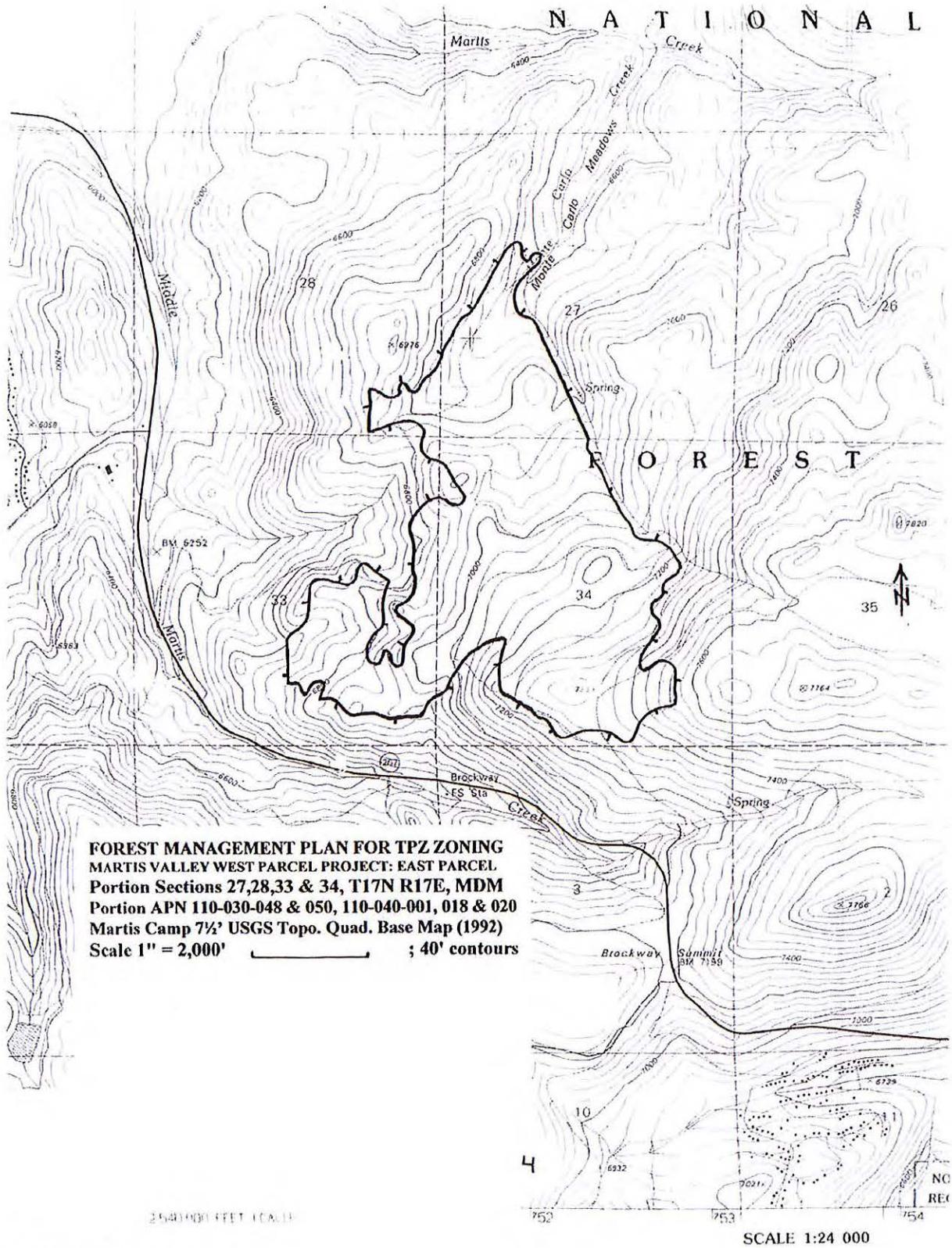
This document is the forest management plan for the 670 acres, allowing for the redesignation of that area as TPZ, which had been the zoning prior to the roll out of it in December of 2013.

PROPERTY SUBJECT TO REZONING INTO TPZ

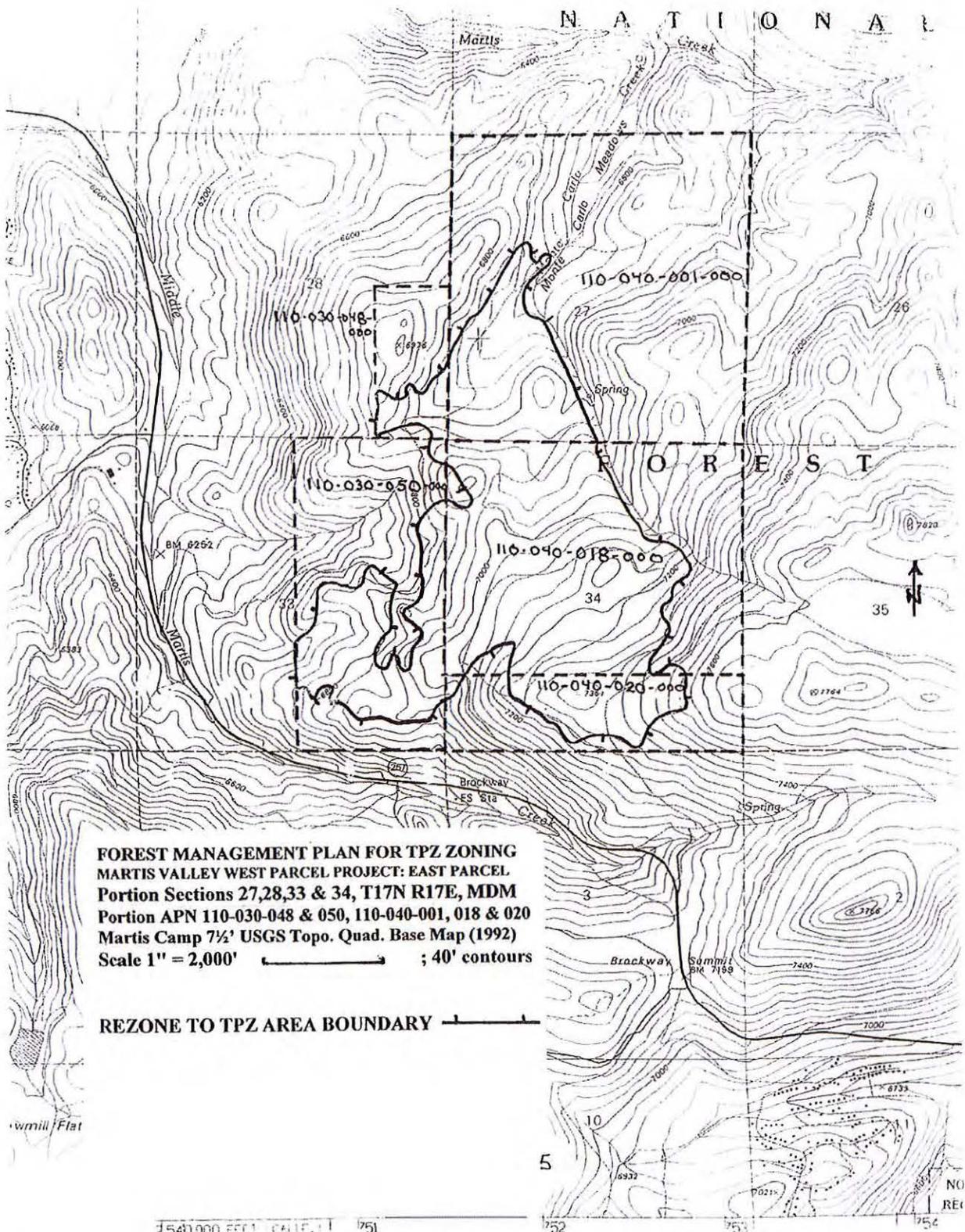
Ownership: Sierra Pacific Industries
PO Box 496014
Redding, CA 96049-6014
(530) 378-8000

Local Office: Sierra Pacific Industries
PO Box 1450
Cedar Ridge, CA 95924
(530) 272-2297

Parcels Portions of 110-030-048-00, 110-030-050-000, 110-040-001-000, 110-040-018-000 & 110-040-020-000. Sectional Description: Portions of Sections 27, 28, 33 & 34 in T17N R17E, MOM & BM in Placer County, CA



Rezone to TPZ Area Map



**FOREST MANAGEMENT PLAN FOR TPZ ZONING
 MARTIS VALLEY WEST PARCEL PROJECT: EAST PARCEL
 Portion APN 110-030-048 & 050, 110-040-001, 018 & 020
 Martis Camp 7½' USGS Topo. Quad. Base Map (1992)
 Scale 1" = 2,000' ; 40' contours**

REZONE TO TPZ AREA BOUNDARY

2540000 FOOT CALIF. 1 751

SCALE 1:24 000

Placer County Assessor's Parcels

PAST TIMBER HARVESTING HISTORY

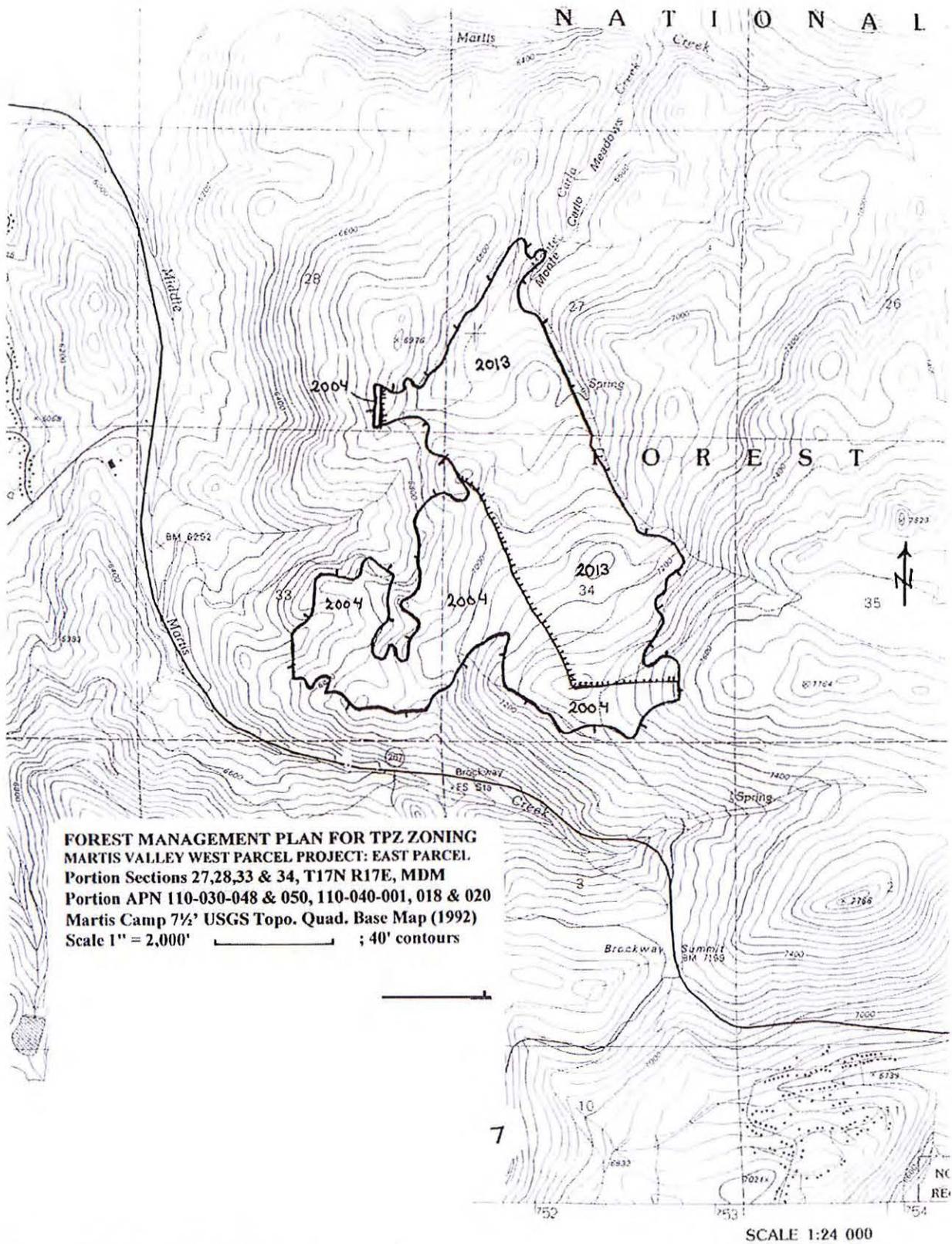
Property is currently owned by Sierra Pacific Industries, an industrial lumber company. Its ownership is committed to forest management and sustained production and harvesting of timber off of their property. Towards those goals, a current Timber Harvest Plan (THP) (2-13-025-PLA(3)), the Eastmart THP, covers a little over half of the 670 acre East Parcel involved in this Management Plan. The Eastmart Plan has been reviewed and approved by the California Department of Forestry and Fire Protection (CAL FIRE), but not yet operated on by the company. The Eastmart Plan expires in 2018. It calls for the Plan area to be harvested using the sanitation/salvage, selection and an alternative prescription silvicultural system. Sanitation/salvage harvests removes those merchantable size trees that have died, or show evidence that they will die in the near future, and highly defective trees that due to disease, insects or mechanical injury do not contribute to forest growth or provide significant wildlife habitat. Selection harvesting removes some trees for better spacing of residual trees to maximize their growth. The alternative prescription in the Eastmart Plan is similar to a clearcut but within the unit retaining some patches of visual retention elements of the forest. Four units of the alternative prescription fall within the East Parcel, totaling about 73 acres. SPI's forest management schedule generally includes varying levels of timber harvest every 10-20 years.

In 2004 Sierra Pacific Industries submitted the WESTMART THP for CAL Fire's review, approval and eventual harvesting by the Company. It included, among other areas, the western portion of the East Parcel that is not included in the 2013 THP discussed above, and has had logging completed on it as shown in Exhibit C, Recent Timber Harvest Plan History. It was harvested under sanitation/salvage and commercial thinning silvicultural systems.

Prior to SPI's purchasing the property from Fibreboard Corporation in the 1970s, the East Parcel has been owned by a series of different lumber companies that have all used the property exclusively for forest management and lumber production since the late 1880 and 1890s. Fibreboard, Crown Zellerbach Corporation, Floriston Pulp and Paper Company, Truckee Lumber Company have all owned timberland in the area of the East Parcel if not the parcel itself.

Evidence on the ground of past land use of timber harvesting can be seen in the range of ages of the tree stumps still visible on the property. The only improvements on the land are the system of native surface roads accessing the various areas within the East Parcel, and a modern cellular transmission tower located near Highway 267.

It is anticipated that under continued SPI land ownership of the East Parcel, forest management and timber harvesting will continue to be the main focus of land use on the Parcel.



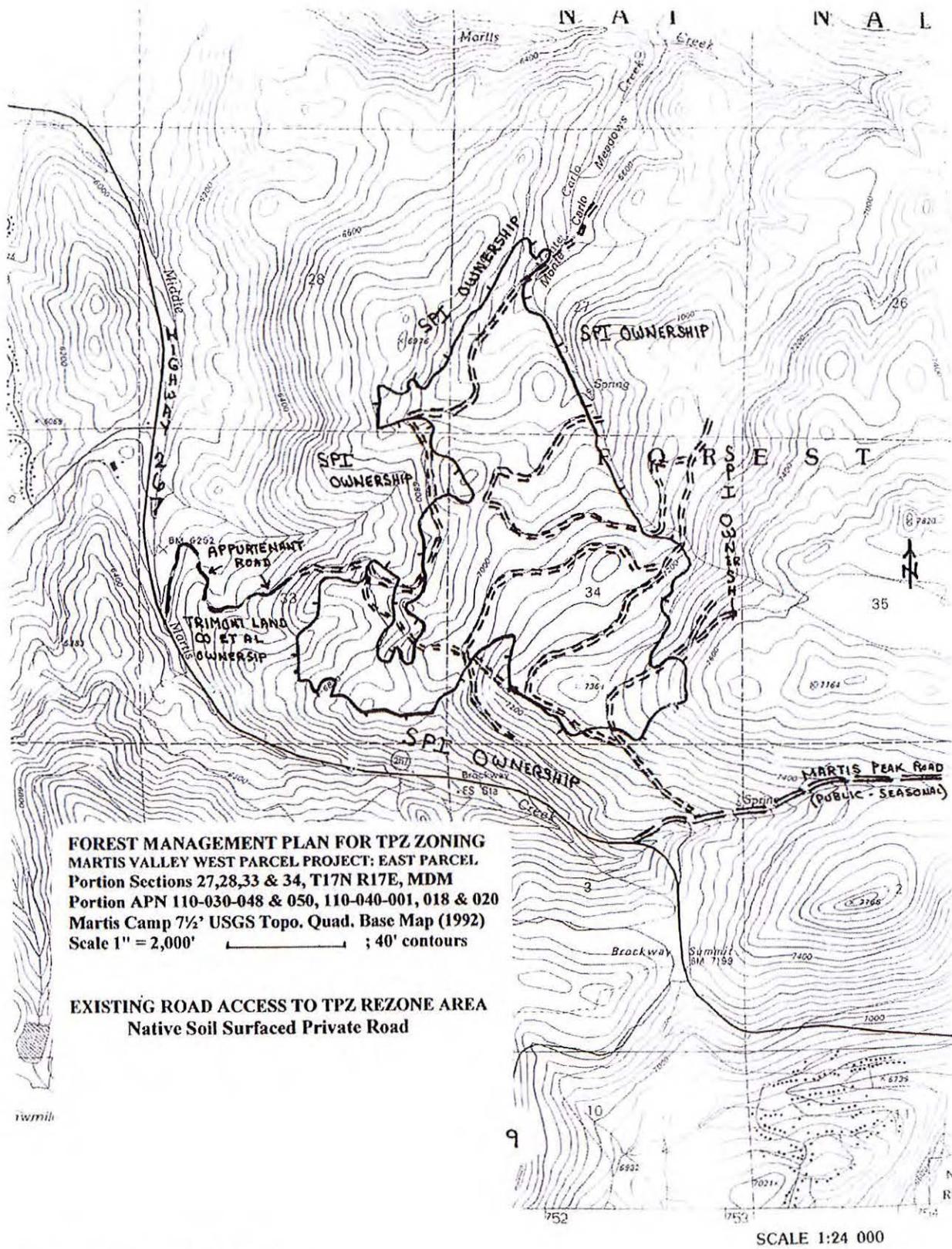
Recent THP Boundaries Map

EAST PARCEL COMMERCIAL ACCESS

As demonstrated in Exhibit D, the East Parcel is bordered on all sides except the southwest, by other parcels owned by Sierra Pacific Industries, and therefore has legal access across those parcels into the East Parcel. In the southwestern corner of the East Parcel, adjacent land is owned by Trimont Land Company et al, but SPI has a legal interest in the road across that ownership from Highway 267 east into the East Parcel.

For management and timber harvesting purposes, there are two main access roads from State Highway 267. The first is Martis Peak Road, a public seasonal road that has SPI owned roads from it northwesterly into the East Parcel. The second is the appurtenant road across Trimont land Company et al land that heads easterly into the East Parcel.

Rolling back the East Parcel back into TPZ will not impact the legal access SPI has to do forest management and timber harvesting on the Parcel.



Existing Road Access Map

DISEASE AND INSECT ACTIVITY AND NEEDED CONTROL WORK

The principal tree species found on the East Parcel are: Jeffrey pine, White fir, Lodgepole pine and Sugar pine. White fir appears to be the one species most prone to having insect activity associated with it, causing dead tops and complete mortality from the fir engraver beetle (*Scolytus Ventralis*). While not causing total mortality, dwarf mistle-toes in White fir and Jeffrey pines (*Arceuthobium spp.*) can cause structural deformity and reduced tree/forest growth. White pine blister rust (*Crownartium ribicola*) can be seen in some of the few Sugar pines found in the southwest corner of the East Parcel.

The current multiple-year drought has caused induced water stress on forest stands within the East Parcel. As normally seen in forest stands following extended periods of drought, there has been a notable increase in the presence of potentially damaging forest insects, including the Pine engraver beetle (*Ips pini*), California five-spined ips beetle (*Ips paraconfusus*) or the Mountain pine beetle (*Dendrodonus ponderosae*). Conifer mortality resulting from insect infestation appears to currently be at endemic levels normally experienced by Site Class III stands. Should the drought continue, localized pockets of conifer mortality beyond endemic levels could be expected.

Because current land management direction of SPI on its ownership is to have return intervals 10 to 20 years for some form of timber harvesting, it is anticipated that they will continue to harvest any merchantable size dead/dying trees using the sanitation/salvage silvicultural system. The use of selection and commercial thinning harvesting techniques allows for better spacing of residual trees so that they can use their natural defenses to combat any increases in bark beetle activity and potential mortality. Removal of heavily infected diseased trees helps to control the spread of any disease. Disease and bark beetle activity are all part of a normal forest, but by using the above described harvesting methods, increased impacts can be controlled and managed. No additional control work is anticipated on Parcel, based on past management and field inspection of current property conditions.

APPROPRIATE SILVICULTURAL WORK

As previously mentioned, the current THP covering a portion of the East Parcel contains logging by the sanitation/salvage, selection and alternative prescription silvicultural methods. The first two methods result in a forest that is composed of a mixture of trees of various sizes well-spaced to take advantage of optimum growing space. Problem trees impacted by disease, insects and/or mechanical damage are removed to allow greater spacing for residual trees. The third method is similar to clearcutting, with four units being between 13 and 20 acres in size. Within these units, most of the existing trees are harvested, except for small groups of undisturbed trees up to an acre in size, left for visual and wildlife purposes. Harvest areas are site prepared after harvesting with logging slash being piled and burned, and new seedlings planted from nursery grown seedlings from seeds of naturally occurring good genetic stock collected in similar type growing conditions as the East Parcel. One of the reasons for clearcutting these units is to return area to a more naturally occurring Jeffrey pine dominated forest, as opposed to the current forest that due to past harvest history and fire suppression, has resulted in more White fir in it than what it was like in the early

1800s. Jeffrey pine is more able in the long run to withstand drought, fire and disease, than White fir can. Follow-up may also include herbicide spraying for temporary brush control, to allow newly planted seedling to get a jump on growth and stay above future in-growth of brush, forbs and grasses.

It is economically impractical to remove slash from the area after harvesting, or to broadcast burn it, as more damage to residual vegetation might occur due to the burning. State regulations require that all logging slash within 50' of any private seasonal and 100' of any public seasonal road be lopped so that no portion of it is more than 30" above ground. SPI in their current THP state that they may also pile and burn logging slash at some selected areas adjacent to public roads. The remaining harvest areas outside clearcuts and away from roads generally do not receive any specific logging slash treatment. In practical terms though, much of the unutilized portion of the harvest trees are at least partially lopped and after going through the first normal winter period where snows lie heavy on the ground at the elevations found on the East parcel, most of the logging slash ends out lying flat on the ground. No reason to change this approach to treating logging slash was observed on the ground within the East Parcel. Current conditions of slash found on the ground in the 2004 THP area, as well as in the areas to be logged under the 2013 THP do not indicate other treatments are needed.

Over the past 10 to 20 years, it has been found that pruning of lower bole limbs to increase the potential lumber quality has been found to be uneconomical. Sufficient gains in quality were too small to justify the cost of pruning. This is anticipated to continue to be the case for the foreseeable future. Conifers, especially pines, will self-prune through time in an effort to concentrate photosynthesis to more productive branches with better solar exposure located higher in the tree. This self-pruning occurs in response to site conditions, specifically inter-tree competition, and will successfully continue without manual pruning occurring.

One of the problems with past timber harvesting and fire exclusion on the East Parcel under prior ownerships has been when stands of trees were opened up, deer brush (*Ceanothus integerrimus*) and manzanita (*Arctostaphylos sp.*) had become more abundant in the openings. While not preventing harvest areas from meeting State mandated minimum post-harvest tree stocking standards, in some localized areas, it has prevented complete utilization of the site by trees. Current ownership is addressing this by doing some clearcutting and treating the areas for brush reproduction reduction. Also they are keeping more existing trees growing on site to eventually shade out the brush. These practices should be continued.

FIRE PROTECT PLAN AND FUELS MANAGEMENT

As stated previously in this Management Plan, the majority of the forested area of the East Parcel is not adjacent to roads and therefore does not receive specific slash disposal treatment. However, looking at the surrounding area of SPI ownership that have been harvested in the recent past, excessive slash buildup does not appear to be a problem.

Current ownership keeps most of its property closed to the general public by having locked gates at

access points to various parcels, the East Parcel being one of those that has gates at its main access points. The reason for the gates is to control unauthorized trespassing on the land, which can result in damage to the forest resources on site, and potential liability for any wildland fire that might occur as a result of any unauthorized use. As it is, several mountain bike trails over portions of the East Parcel appear to have been built by unknown people over the last 10 years, with resulting use by bicycles during summer and fall periods. Most of these trails have no erosion control features on them and can impact water quality areas and adjacent road drainage features. Ownership has put up no trespassing signs but they appear to have little impact, and any blocking of trails can easily be gotten around by mountain bikes. This is a potential land use problem that needs to be monitored to see if it results in any significant adverse impacts to the forest.

The main feature of a fire management plan for the Parcel is a well-developed system of low maintenance access roads within it that would allow fire-fighting, equipment and manpower to easily access the Parcel to combat any wildland fire. In reality, should a wildland fire threaten the Parcel, or start within the Parcel, aerial drops of water/retardant would probably be the main tool in fighting it, followed up by potential back fires areas or building containment fire lines. Recent fires, such as the Government Fire (2013), the Rim Fire (2013) and the King Fire (2014) show that under high to extreme weather conditions, it is the weather driving the fire, not man-made efforts trying to control it. It is only when the weather moderates and appropriate fire control resources are directed at a wildland fire that it acts predictably and can be potentially controlled.

This Management Plan only recommends that the current road system be maintained like it has been to be available access to fire-fighting personnel should a wildland fire threaten the area.

EROSION CONTROL ON CURRENT ROAD SYSTEM AND SKID TRAILS

As the primary land use of the East Parcel is forest management and timber harvesting, the rules and regulations of the State Board of Forestry and Fire Protection govern at a minimum must be done before, during and after any timber harvesting on the private forested lands within California.

Immediately after any timber harvesting, waterbars must be installed on any logging skid trail at specific minimum distances, based on type of soil, slope %, amount of rock in soil, vegetation cover and potential rainfall intensity. The portion of the East Parcel that was logged under the 2004 THP showed on the ground that these waterbars were installed as required, and CAL FIRE accepted them when they signed off on the work completion report for the plan. These same requirements are included in the approved 2013 THP that has not yet been operated on.

For existing seasonal private roads on the East Parcel, a combination of out sloped road surface and rolling dips at appropriate intervals have been used to control potential erosion off the roads. All roads were driven during the field inspection for this Management Plan and rolling dips were fully functional with little or no rutting observed on any road surface. The only observed "problem" with the existing roads was that adjacent brush plants were starting to grow into some of the air space of road surface edges. This was most evident in the 2013 THP area, as opposed to the 2004 THP area.

This will be addressed by the timber harvesting that will occur when the 2013 THP is operated on and roads will be widened back out to their original width with no overhanging brush. The adjacent road brush is actually not a problem for erosion control, as it allows runoff from road surfaces to hit it and sink slowly into the ground, as opposed to concentrating runoff into a few channels.

lack of erosion problems seen during Parcel inspection indicates that current management practices of installing rolling dips combined without sloped roads where appropriate work to minimize potential erosion.

REFORESTATION OF UNDER STOCKED LAND

As a result of field inspection of the East Parcel, combined with looking at various color aerial photography of the area, and a review of past and current THPs in the area, only three small unstacked areas were found on the Parcel, two being rocky outcrops and one being a portion of Monte Carlo Meadows as shown in Exhibit E, Areas Not Supporting Fully Stocked Timber Stands. A total of 6 acres are included in these three areas and none lend themselves to being converted to future forest land. The remainder of the Parcel currently significantly exceeds the minimum stocking standards set forth in Public Resources Code 4561 in regards to the Northern Forest District. This was confirmed by physical inspection of the Property and CAL FIRE sign off on the work completion of the 2004 THP and their review and approval of the 2013 THP, that combined cover the entire East Parcel.

COMMERCIAL TIMBERLAND AND SITE QUALITY

Based on soil mapping of the area by Tahoe National Forest, physical inspection of the East Parcel, and review of past and current THPs covering the area, except for the non-timbered areas described above, all other areas of the parcel qualify as commercial timberland with a site quality measured and rated as Site Class III. The concept of "site" refers to an area considered in terms of its environment, particularly as it determines the type and quality of vegetation that an area can support. Soil nutrients, solar exposure, temperature regimes, and water availability are all variables that contribute to the overall "site" quality of an area. In regards to forestry, a site is measured to identify the potential productivity of forest stands, both in the present and in the future. Site quality is also used to provide a frame of reference for determining appropriate land management prescriptions and treatments. Site quality is known to significantly affect tree height, so measuring tree height in relation to tree age has been found to be the most practical and consistent indicator of site quality. Established mathematical formulas are used to correlate tree height at a given age to a "Site Class" determination ranging from Site Class I to Site Class V. Site class I is the highest quality/most productive site, and Site class V represents lands of the lowest quality. The East Parcel forestland is of Site Class III, a normal and widespread site classification throughout the Sierra Nevadas. Exhibit F, East Parcel Soil Type Map, has been included for reference of soil types present within the subject area. Exhibit G demonstrates all referenced parcels by Assessor's Parcel Number, Acreage and Site Class.

SUMMARY AND RECOMMENDATIONS

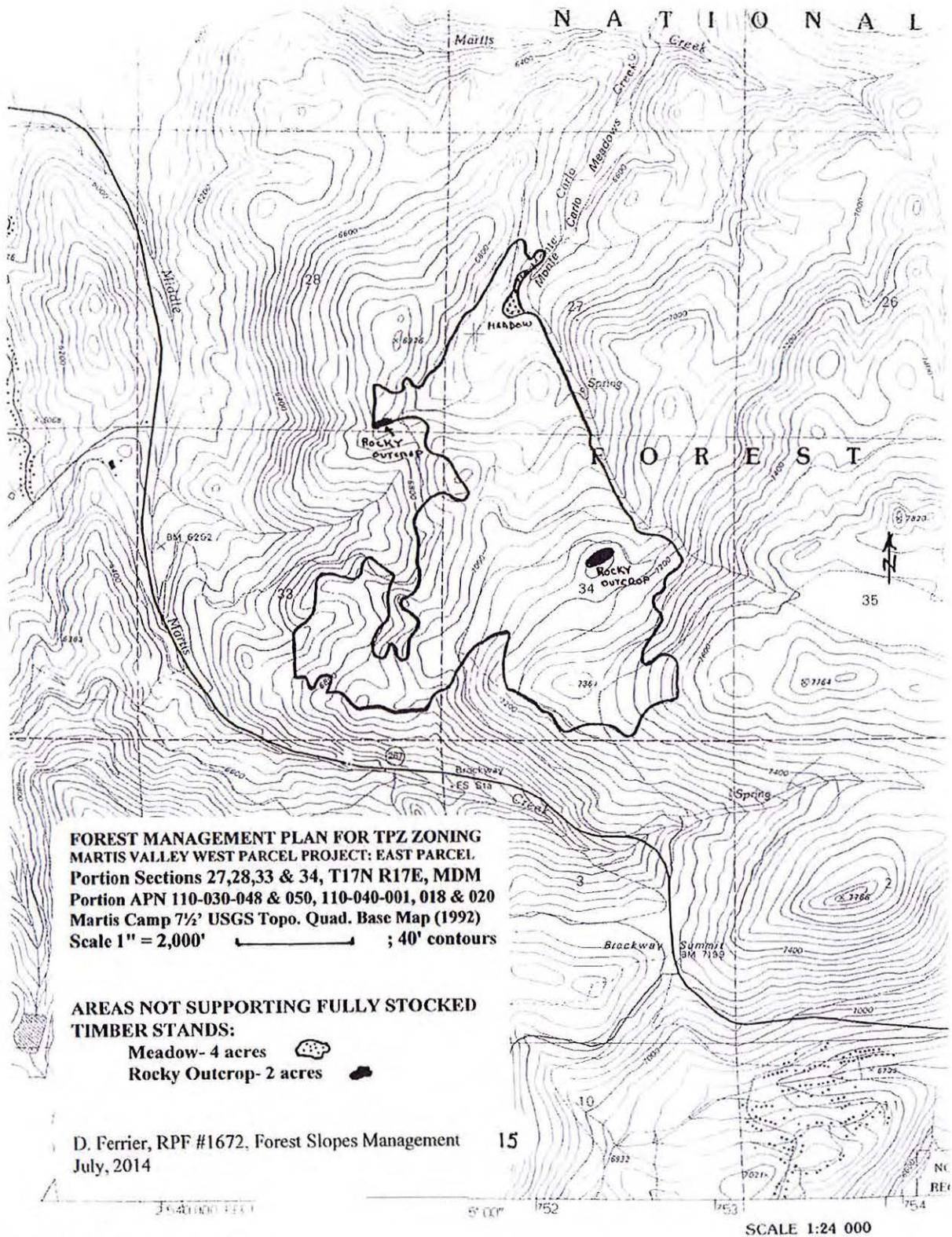
As described in this report, site conditions of the East Parcel support the goals and objectives of Timber Production Zoning. The timberlands within the East Parcel were previously held in Timber Production Zone and used for industrial timber management since the late 1800's. Forest management infrastructure has been developed to support over a century of land management, including access roads, landings, and skid trail networks. To date, this extensive forest management infrastructure remains in place and viable. Forest management and timber harvest can continue without significant infrastructure improvements or construction.

Maintaining the existing road system is of significant importance to the overall management of the parcel. Necessary maintenance activities include maintaining effective surface drainage on the roads, such as critical dips, the slope of the surface of the road, and keeping any inside ditches and drainage structures cleared. A stable and passable road system is integral to supporting fire suppression efforts, should they be needed in the event of wildfire. This continued maintenance is also of utmost importance for reducing potential erosion of the roadways over time.

The East Parcel is bordered by other parcels owned by SPI, which provide for legal access into the subject area. Legal access is also held for the sole access road owned by Trimont Land Company. The rezone of the East Parcel into TPZ will not affect legal access into the parcel, nor is forest management prevented by lack of access.

Continued efforts to control damage from insect and pathogen is recommended. Previous sanitation/salvage harvests have successfully captured infested and diseased trees, thereby keeping potential insect and disease infestation levels to the feasible minimum, and enhancing overall stand health. Continued efforts to remove suppressed and infected trees from the timberlands is recommended to protect current and future forest health.

To ensure continued timber production, brush should continue to be treated as feasible with current and future forest management activities, when necessary. Reducing brush where it presents a threat to conifer regeneration will provide for continued timber production. Further, continued periodic thinning will redistribute tree growth onto fewer stems per acre, providing for hastened average tree growth. Larger tree canopies will eventually provide shade, the most effective, long term tool for controlling brush.



Non-Stocked Land Map

