

CALIFORNIA COASTAL COMMISSION

CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
427-4863



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COASTAL DEVELOPMENT PERMIT APPLICATION REGULAR CALENDAR

Application number 3-00-082

Applicant Norm Pressley

Project location Adjacent to Pescadero Creek in the riparian corridor below unimproved Second Avenue between North Camino Real and Lopez, City of Carmel-by-the-Sea, Monterey County (APN 010-233-006) See Exhibit 1.

Project description Demolition of the remnants of a 392 sq.ft. single family dwelling destroyed by fallen tree in 1995 winter storm and construction of an approximately 1,196 sq.ft., two story single family dwelling on a steep sloping 3,629 sq.ft. lot. See Exhibit 2.

Approvals Received City of Carmel-by-the-Sea, February 23, 2000

File documents Categorical Exclusion E-77-13 for City of Carmel-by-the-Sea; Use Permit 00-04 / DS 99-01, VA 00-04/EA 00-02

Staff recommendation... Denial

Staff Note: The public hearing on this project was opened at the October 11, 2001 Commission Meeting in San Diego. The Commission continued the item pending review of newly submitted materials and responses to outstanding questions on the proposed project. The applicant submitted revised project plans and elevations at the October meeting. The effect of the revisions are to re-site the structure an additional 3' further down the canyon and closer to the stream below, elongate the east-west building lines, and reduce the overall building height by 3 inches. The applicant claims that the changes will result in a 30% reduction in grading. However, staff was unable to confirm this reduction because the applicant did not submit a revised cut and fill plan, nor was a revised cut and fill plan approved by the City of Carmel. Thus, although it appears that grading may in fact be reduced by the proposed revision, it is the original cut and fill plan that has



California Coastal Commission

December 13, 2001 Meeting in San Francisco

Staff: M. Watson, Approved by: *C.W. 11/29/01*

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approval by the City.

The Commission raised questions regarding the classification of the project site as environmentally sensitive habitat and whether or not the presence of riparian vegetation constitutes ESHA. Questions regarding the stability of soils, fire hazards, and jurisdictional issues were also raised along with impacts to public views of the project on the Redondo Trail. These issues are discussed within the context of the staff report.

Summary

The proposed project is located on the north (down canyon) side of unimproved Second Avenue directly above Pescadero Creek at the northwestern city limits of Carmel. Single family dwellings exist to the south on the slope above Second Avenue. The lot slopes steeply down the south side of Pescadero Canyon. Pescadero Creek flows directly below, roughly 31 feet from the proposed house site. On the opposite side of Pescadero Canyon is the unincorporated Del Monte Forest area of Monterey County. The Applicant proposes to demolish what is left (basically a small section of flooring supported by wooden piles) of a small house (392 square feet) built in 1933 that was partially destroyed by a falling tree in 1995 winter storms. He would then construct an approximately 1,196 square foot, two-story house in its place. The new house is proposed to extend about 19 feet farther toward Pescadero Creek than the pre-existing house. The setback of the previous structure was 50'. The creek flows directly into a coastal wetland at Carmel Beach and into Carmel Bay.

The City of Carmel recently (Feb. 1995) designated all of Pescadero Canyon as an Environmentally Sensitive Habitat Area worthy of protection in a manner that is consistent with PRC Sections 30231 and 30240. The Coastal Act states that the biological productivity of coastal waters shall be protected. It also states that ESHA shall be protected against any significant disruption of habitat values and only uses dependent upon the sensitive habitat itself are allowed. The proposed project requires 240 cubic yards of grading on a very steep slope. The excavation will result in the loss of approximately 410 square feet of previously undisturbed riparian habitat. Additional noise, lights, human activity, and runoff would degrade resource values surrounding the home site. The footprint will intrude further than the previous structure into this riparian corridor, one that the City has been working to protect through land purchases and other efforts. Similarly, the Monterey County LCP designates Pescadero Canyon as a permanent open space resource along the riparian corridor on the opposite side of the creek.

The proposed new development on this highly constrained site also raises concerns regarding geologic hazards, landform alteration, scenic resources, and coastal stream disturbance. Aside from the geologic hazards associated with building on this site, which has a slope in excess of 60%, the increased size and bulk of the proposed project will require significant engineering and landform alteration to develop the site as proposed. As a result, the long-term stability of site will likely be compromised. Public views from the Redondo Trail on the opposite side of Pescadero Canyon (which is very narrow in this area) will also be affected by the proposed new structure.



Thus, for these reasons, the proposed development would degrade sensitive resources, result in significant landform alteration, and impact public views. The applicant has other home design options available which are more consistent with Coastal Act policies. Because such substantial redesign of the current proposal is needed, denial of this particular project is recommended. Other options for an alternative project that would be more in keeping with Coastal Act policies are discussed in the staff report.

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I. Staff Recommendation on Coastal Development Permit

MOTION: *I move that the Commission approve Coastal Development Permit application No. 3-00-082 for the development as proposed by the applicant.*

STAFF RECOMMENDATION OF DENIAL:

Staff recommends a NO vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO DENY THE PERMIT:

The Commission hereby denies the coastal development permit on the grounds that the development as proposed will not conform with the policies of Chapter 3 of the Coastal Act. Moreover, approval of the application would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

II. Recommended Findings and Declarations

The Commission finds and declares as follows:

A. Project Location and Description

The proposed project is located on the north, down-slope side of Second Avenue at the northwestern city limits of Carmel. Second Avenue is an unimproved street cut into the steep riparian corridor above Pescadero Creek, providing driveway-like access to several homes. Through access is not available. The project site itself is located between the Second Avenue road cut and Pescadero Creek within the riparian corridor found there. The lot, on the south side of Pescadero Canyon, slopes steeply (approximately 63%) down to Pescadero Creek. On the opposite side of the creek is an undeveloped growth of Monterey pines within the Pescadero Canyon area of the Del Monte Forest and within unincorporated Monterey County. This stand of Monterey pine is the largest contiguous pine forested area remaining within Del Monte Forest. Because of the sensitivity of resources here, and based on the results of a Jones & Stokes Associate's report outlining the habitat values of Pescadero Canyon, the City of Carmel designated the entire area as Environmentally Sensitive Habitat (ESHA) in 1995. Pescadero Canyon also functions as an important semi-urban wildlife corridor for deer and other mammals.

The triangular lot associated with this project is 3,629 square feet and is substandard in size according to the City's current standards for building sites (Exhibit 3). The Applicant proposes to



completely demolish a small cottage (built in 1933) that was destroyed by a falling tree in winter 1995 storms (Exhibit 4). Currently all that remains on the site are some deteriorating foundation planking sitting atop timber piers. The Applicant now proposes to demolish what is left and construct an approximately 1,196 square foot house with 350 square feet of walkway and decking in its place (Exhibit 5). The new house is three times as large (square footage), consists of two stories, and would extend about 19 feet farther toward Pescadero Creek than did the previous small house. The proposed footing for the new structure requires 240+ cubic yards of grading. Because of its larger size, height, and bulk, it would be more visible than the pre-existing house. In order to accommodate the additional size and bulk of the structure, City staff granted a variance to the standard front yard setback for new development. As mitigation for the direct removal and substantial disruption of habitat values presented by the project, the City required the Applicant to convey a Scenic and Habitat Conservation Easement over the northern quarter of the parcel (880 square feet), measured from the centerline of the creek. Though the proposed development is located in an urban-rural boundary area that is heavily vegetated, the City's permit did not contain a special condition requiring fire clearance around the development. There is no fire clearance requirements in the City's planning code.

The northern portion of the lot nearest the creek is heavily vegetated with shrub and a small grove of coast redwood. The southern area of the lot is characterized by invasive horticultural species, native shrub, and herbaceous species. The subject lot is part of a larger system that functions as a riparian corridor following along Pescadero Creek. Several Monterey pines are growing on the upper reaches of the canyon just beyond the south property boundary near Second Avenue. At least one coast live oak is growing on site. Dense thickets of native and non-native vines also occur throughout.

A proposal to demolish the remains of the previous small home and to build a new house has been reviewed by the City twice before. After the house was partially destroyed during the winter of 1995, the Applicant submitted an application to the City for a 1,415 square foot residence. The City's Planning Commission denied that proposal based on the size of the proposed house relative to the size and constraints of the site. The Planning Commission's denial was appealed to the City Council, which ultimately upheld the denial. In 1997 the Applicant again submitted an application to the City, this time for an approximately 1,204 square foot house with a 200 square foot parking platform in the public right-of-way. The 1997 project was likewise denied on the basis of the parking platform and design review concerns. Revised plans were subsequently submitted to the City in 1998 and approved in 2000.

B. Standard of Review and Categorical Exclusion E-77-13

The City of Carmel-by-the-Sea lies entirely within the coastal zone, but the City does not have either a certified Land Use Plan or Implementation Plan, although the City is currently working on developing these LCP components. Most new residential development in Carmel does not require a coastal development permit according to the terms of Categorical Exclusion E-77-13 (approved by the Commission in 1977). However, new construction is not excluded in certain areas (such as beach fronting lots) or when a variance is involved. Due to significant site constraints here, a



number of variances are necessary and the proposed project is not excluded by E-77-13. Therefore, the standard of review for the project is the Coastal Act.

C. Environmentally Sensitive Habitat

Coastal Act Sections 30107.5, 30231, and 30240 define ESHA and afford protection of such areas and their associated biological productivity, and state:

Section 30107.5 "Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Section 30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

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

1. Site is ESHA

Several types of environmentally sensitive habitat area (ESHA) occur in Pescadero Canyon. These include native Monterey pine forest, a riparian corridor and a small wetland at the point where the canyon opens onto Carmel Beach. The canyon also functions as a migratory corridor for wildlife. Due to landscaping activities, invasive exotic plants, and development activity, each of these habitats has been degraded in one way or another. However, these natural habitats still dominate throughout the canyon, and where degraded are amenable to site restoration. Accordingly, the overall picture is that Pescadero Canyon remains the largest and least spoiled of the Monterey Peninsula's canyon watersheds.

All of the applicant's small (0.08 acre) parcel lies on the northwest-facing wall of the canyon, at the northern boundary of the City. The entire project site is located on the steep slope of the canyon (in excess of 60%) below the Second Avenue road cut. All of it lies within ESHA. All of it can be



considered as within the riparian corridor of Pescadero Creek. All of it falls within the natural limits of Monterey pine forest. And, all of it is available as habitat for resident and migratory wildlife. Those portions that are nearest the stream support the most riparian species, while the upper slopes have more of the characteristics that are typical within the natural range of the Monterey pine. It was a veteran Monterey pine that fell and destroyed the original cottage on this parcel.

In February of 1995, the City of Carmel completed a detailed study of its environmentally sensitive habitat areas (Jones & Stokes, 1995). At the study's conclusion, the City designated the entire length of Pescadero Canyon, including this site, as an environmentally sensitive habitat area within the meaning of Coastal Act Section 30240 (Exhibit 7). The area was so designated because it supports a variety of habitat values, including wetland, riparian, wet meadow, and Monterey pine forest. The City's report concluded that this area has: naturally-occurring groves of Monterey pine forest that function as habitat for rare or endemic plant or animal species; special value for wildlife due to the presence of snags suitable for cavity-dwelling species, or occurrence with Coast live oak, or native shrub understory; and high aesthetic value due to its location within the public viewshed. The pine forest also functions as an important element in watershed protection and a buffer for Pescadero Creek.

A botanical survey of the site performed by the Habitat Restoration Group in June of 1995 determined that no special status plants were present on the lot, though native blackberry, melic grasses, coffeeberry, and gooseberry were found. Similarly, the Initial Study reported that no evidence of endangered species or special status wildlife or biotic species were found within the project boundaries, during site visits between March and August 1999. The Commission notes, however, that the definition of ESHA in the Coastal Act encompasses more than endangered species or special status wildlife (PRC 30107.5). But the report also finds that the project may require the removal of some native vegetation. On at least two site visits, staff observed the existence of riparian vegetation on and around the subject parcel up to the Second Avenue road cut. Staff also noted the existence of at least 3 Monterey pines growing next to the parcel boundary adjacent to Second Avenue and a small grove of redwoods near the creek.

The following is a summary of more detailed information, based on the staff biologist and field evaluations supporting the determination that the entire parcel comprises ESHA:

a. Riparian habitat. The proposed project is located just 31 feet from a coastal stream that flows directly into a coastal wetland. The Commission generally considers wetlands, estuaries, streams, riparian habitats, lakes and portions of open coastal waters to be environmentally sensitive habitat areas because of the especially valuable role of these habitat areas in maintaining the natural ecological functioning of the coastal environment and because these areas are easily degraded by human development.

Traversing the subject lot at the bottom of Pescadero Canyon is Pescadero Creek. Pescadero Creek is a perennial drainage that conveys runoff from the upper reaches of Pescadero Canyon to a pocket wetland at the mouth of the watercourse on Carmel Beach and into Carmel Bay. The drainage channel varies in width from 3 to 6 feet and is generally unvegetated. Wetland plants occurring along the lower and upper drainage edge include bulrush (*Scirpus microcarpus*), rush (*Juncus sp.*),



watercress (*Rorippa sp.*), poison hemlock (*Conium maculatum*), and horsetail (*Equisetum arvense*). French broom has invaded sandbars along the eastern portion of the drainage. Arroyo willow (*Salix lasiolepis*), bigleaf maple (*Acer macrophyllum*), and dogwood (*Cornus sericeas ssp. occidentalis*) also occur in scattered locations along the drainage. The USFWS classifies the lower creek (downstream of the project site) as a palustrine forested, intermittently flooded wetland (USFWS 1972 National Wetlands Inventory, Monterey quad).

Although staff has observed that streamflows are reduced to a mere trickle during the dry season, the creek can nonetheless be appropriately considered as perennial because water persists in the stream channel (especially in the lower reaches near the beach) throughout the year.

The line between what is ESHA and what is not is sometimes difficult to delineate, especially along urban and open space boundaries. Typically, it is the extent of the habitat that defines the boundary. The upland limit of riparian vegetation, as with the upland limit of a vegetated wetland, is determined by the extent of the vegetated cover. In Southern California, these boundaries are obvious; the riparian vegetation grows immediately adjacent to watercourses and; only extends a short distance away from the watercourse. In Northern California, however, the boundaries are much less distinct; vegetation that occurs alongside a stream may also be found on hillsides and far away from a watercourse—particularly on moist, shady, north-facing slopes.

In this case, all along Pescadero Canyon, riparian vegetation is observed up to and in some instances, beyond the Second Avenue road cut. Specifically, the presence of at least one species characteristic of the riparian corridor (wild blackberry) can presently be observed on the subject parcel in the area of the proposed development and up to Second Avenue. By observation of willow patches on nearby parcels at the same elevation, it is reasonable to assume that this additional riparian species would also (re)occupy applicant's parcel if given the opportunity. Thus, the subject parcel can be considered 100% ESHA because it is located entirely within a riparian corridor with attendant stream and wetland resources.

The presence of non-indigenous invasive plants and landscape species does not alter this determination. While it means that the habitat quality is degraded, this condition is not permanent. Restoration is feasible, and many introduced landscape species can be expected to disappear through natural succession, even without human intervention. Therefore, although presently in a degraded condition, the site is still ESHA.

b. Wildlife corridor. Pescadero Canyon comprises a heavily vegetated, little-developed buffer between the residential neighborhoods of the City of Carmel (and adjacent unincorporated Carmel Woods), and the larger residential estates of Pebble Beach to the north and west. This corridor is centered on Pescadero Creek, which threads its way through the canyon's riparian, Monterey pine forest, and wetland habitats. Wildlife is known to regularly move about the area. Deer and other mammals use the canyon for habitat and as a migratory corridor. Other wildlife such as birds, insects, and reptiles also inhabit the canyon. Commission staff has observed deer, gray squirrels, and a bobcat on nearby parcels.

Because the surrounding areas are already developed, the canyon plays a valuable role both as local



wildlife habitat and as a migration corridor that allows deer, mammals, and other wildlife to move about a semi-urban environment. The contiguous forest habitat along the canyon also provides foraging and nesting opportunities for forest and riparian-adapted raptors. Classifying the parcel as ESHA meets the Coastal Act definition as especially valuable because of its role in the Pescadero Canyon ecosystem, which could be easily disturbed or degraded by human activities and development.

c. Monterey pine forest. The project site is also located entirely within a Monterey pine forest community in Pescadero Canyon. This community has an overstory of Monterey pine, an understory of coast live oak, and shrub groundcover. Monterey pines (*Pinus radiata*) with coast live oak (*Quercus agrifolia*) form a generally open forest canopy along the steep canyon slopes.

The pine forest at this particular site has been degraded by urban development along Second Ave., and by introduced tree species within Pescadero Canyon. At present, mature pines are found along the edges of the property, but not within the proposed building site. Nonetheless, the small lot is shaded by the remaining pine forest canopy and it is reasonable to expect that—through natural regeneration—seedling pines will over time repopulate the site.

The understory is an integral part of the Monterey pine forest habitat. The dense forest understory layer on applicant's parcel is comprised of invasive horticultural species, native shrub, and herbaceous species. Examples of some of the native shrub and herbaceous species present in Pescadero Canyon include California blackberry (*Rubus ursinus*), flowering current (*Ribes sanguineum*), coffeeberry (*Rhamnus californica*), sticky monkeyflower (*Mimulus auranticus*), snowberry (*Symphoricarpos mollis*), bracken fern (*Pteridium aquilinum* var. *pubescens*), melic grass (*Melica* aff. *Imperfecta*), gooseberries (*Ribes malvaceum*) and California hedge-nettle (*stachys bullata*). See Exhibit 6.

Within its native range, Monterey pine is found in just five places in the world, with the main endemic stand mantling the Monterey Peninsula. The Monterey Peninsula groves are threatened primarily by habitat conversion (e.g., housing and resort development, golf course development, urbanization), soil erosion (road grading, recreational overuse), and invasive exotic plants (genista or "broom", pampas grass, acacia, eucalyptus, etc.). Commercial logging was an issue in the past, but today is largely confined to small salvage or sanitation operations.

Pitch canker has spread throughout the main Monterey Peninsula stand of Monterey pine. Due to the threat of this disease, it is widely predicted that much of the native pine stock will eventually be affected. However, recent scientific reports offer hope. While it was originally feared that the disease might be invariably fatal, scientific observation has shown that at least some proportion of the infected trees in natural stands have demonstrated the ability to survive the contagion. (Monterey Pine Ecological Cooperative, meeting of June 26, 2001)

Because the native range for Monterey pine is limited only to the Monterey Peninsula (main) stand and four other isolated places on the globe, the hope for the survival of the Monterey pine worldwide is that there will be enough natural diversity within the native stands so that some trees will have genetic disease resistance or tolerance, that these trees can be used to propagate new trees



for urban repopulation, and that larger tracts of native pine forest can be preserved and managed so that natural regeneration can take place to repopulate pine forest habitat. Monterey pine has been listed as a federal species of concern and a California Native Plant Society's List 1B species ("Plants Rare, Threatened, or Endangered in California and elsewhere"); List 1B species are specifically eligible for state listing. Monterey pine is currently proposed for state threatened list status.

2. Impact of Project on ESHA

Coastal Act Section 30240 (a) only allows resource-dependent uses within ESHA and protects such habitat areas from significant disruption of habitat values. Section 30231 protects the biological productivity of coastal waters and streams. As mentioned above, the subject parcel borders a perennial stream and is located entirely within a riparian corridor, functions as part of a wildlife migratory corridor, and falls within the natural Monterey pine forest habitat.

Applicant proposes to replace the remnants of the demolished small home with a structure that is significantly larger and located to within 31 feet of Pescadero Creek within the riparian corridor. The previous small home was setback 50'. The proposed project would not only result in temporary construction impacts, but also result in long-range cumulative impacts by reducing the available area for the growth of riparian vegetation and native Monterey pine forest. In addition to directly removing ESHA for home development, the project would encroach on the available wildlife corridor along Pescadero Creek and would introduce an intensified urban use within the ESHA.

Construction impacts that can be anticipated, as outlined in the CEQA Initial Study, are those that will result primarily from landform alteration, vegetation removal, and degradation of the coastal stream. The Applicant proposes to make a significant cut to accommodate the new house. Grading of 240 cubic yards of soil on such a steep slope has significant potential to exacerbate erosion, increase site instability, and introduce sediment into Pescadero Creek. Other identified impacts during construction that can be expected are those resulting from the use of heavy equipment. For example, the use of mechanized equipment on a steep slope increases the risk of spills of fuels and other hazardous substances entering into the habitat and stream below. The Initial Study also identified potential "after construction" impacts. These include additional runoff from the larger house roof and hardscape surfaces. Erosion from these sources, if left unchecked, could result in increased siltation of Pescadero Creek.

Pescadero Creek flows directly into a wetland at Carmel Beach and then into Carmel Bay (comprising Carmel Bay State Ecological Reserve, and part of Monterey Bay National Marine Sanctuary). Although the Initial Study acknowledges the interrelationship between Pescadero Creek and the wetland downstream, it does not directly assess the project impacts resulting from erosion and pollutants on the inhabitants of this small but significant coastal wetland. Wetlands are not isolated, independently functioning systems. Rather, they depend upon, and are highly influenced by, their associated watersheds and upland transition areas.

Further impacts will directly result from the house itself. The introduction of noise, light, wastes and general human activities either disturb or threaten wildlife, which migrate through the area.



Trashcans attract certain scavenger species, while others have been known to compete with domesticated pets for their pet food. These encounters with wild animals pose a risk to humans, their domesticated pets, and the wild animals themselves. Wild animals carry disease that can be transferred to humans and their pets. Domesticated animals have the ability to pass on disorders to wild animals. Wildlife has a susceptibility to disease for which they themselves have no natural protection.

As mitigation for the potential impacts to the ESHA, stream, wetland, and wildlife, the City required the applicant to record a Scenic and Habitat Conservation Easement over the bottom quarter of the parcel (880 square feet) as measured from the centerline of the creek. The applicant was also required to submit a Mitigation Monitoring and Reporting Plan addressing habitat protection, erosion control, and landscaping. The MMRP identifies steps to revegetate graded areas and to minimize erosion, slope instability, and impacts on native vegetation. The Plan includes removing non-native plants and revegetating with native species.

The MMRP is to be reviewed annually by the City for the first 3 years and then extended as needed. While the MMRP comprehensive in scope, the steep grade of slope will make it very difficult to achieve the MMRP goals of not introducing hazardous substances, construction materials, and sediment into Pescadero Creek. Central to the concept of providing protection measures, the Plan should specify exactly where the construction staging area will be located and how containment of materials and wastes will be achieved, particularly in light of the fact that the project site is located on such a steep slope.

Thus, the proposed project will remove ESHA for house development and will degrade the habitat values of the site, the biological productivity of Pescadero Creek and the downstream wetland. The degree and intensity of these impacts could be reduced—but not altogether avoided—by a different project design (i.e., a more compact configuration with a substantially smaller footprint). Even with the City required mitigation measures, potential impacts from habitat degradation, erosion, and pollution are not adequately addressed to fully meet Coastal Act standards.

3. Allowable Uses in ESHA

Coastal Act Section 30240 states:

Section 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

As established above, the entire area of the applicant's 3,629 square foot (0.08 acre) parcel is an environmentally sensitive habitat area (ESHA). The subject parcel was originally developed in 1933 with a 392 square foot residence and 350 square foot deck. Despite its substandard dimensions, the City designated the lot a legal building site in 1948.

The proposed development is for an approximately 1,196 square foot single-family dwelling and includes a 353 square foot walkway and deck. This project will require 240+ cubic yards of grading



and will result in a permanent loss (i.e., site coverage) of an additional 410 square feet of environmentally sensitive habitat. It would be located to within 31' of Pescadero Creek.

Accordingly, the type of use proposed—residential—is not a type of use that is dependent on the resources located within the ESHA. Further, because a significant amount of grading would be required, because the building footprint would be larger, and because it would encroach to within 31 feet of Pescadero Creek, the impacts of the proposed new development would be substantially greater than the residential use that previously existed here.

4. Conclusion

The Coastal Act defines ESHA as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. The subject site is located in Pescadero Canyon, a riparian corridor and designated ESHA, which supports habitats that are both rare and especially valuable. These habitats are vulnerable to degradation from development.

The project proposal is for an approximately 1,196 square foot single-family home within an identified environmentally sensitive habitat area. The project as proposed sites the replacement structure on a very steep slope within 31 feet of a coastal stream. A substantial amount of grading and landform alteration is required to place it on its foundation.

This development has the potential to significantly disrupt sensitive habitat by landform alteration, vegetation removal, disturbing wildlife migratory corridors, introduction of hazardous substances, and sedimentation of a coastal stream and wetland. Construction activities have a strong potential to exacerbate erosion, increase site instability, and introduce sediment into Pescadero Creek. Other identified impacts during construction can be expected to result from the use of heavy equipment. The use of mechanized equipment increases the risk of spills of fuels and other hazardous substances entering into the habitat and stream below.

Additional disruptions will result from subsequent residential use of the site. Further impacts result from occupancy and use of the house itself, such as, the introduction of noise, light, and wastes that either disturb or threaten wildlife, which migrate through the area. Because the proposed project does not protect the biological productivity of the Pescadero Canyon riparian corridor, it will contribute to the cumulative degradation of all the site's ESHAs. The proposed residence is not a type of development that requires a location within an environmentally sensitive habitat. As such, the proposed project will have both individual and cumulative adverse environmental impacts, and would result in significant disruption of Pescadero Canyon's environmentally sensitive habitats. Therefore, the proposed development is not consistent with the Chapter 3 policies as set forth in Sections 30231 and 30240 (a) of the Coastal Act.

D. Hazards

Coastal Act Section 30253 requires that new development minimize risk to life and property. It



states in part:

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 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.*

The commission's staff geologist has reviewed the most recent geotechnical reports submitted in support of the project; his review is attached as Exhibit 9.

The project site is located on a steep slope making up the south wall of Pescadero Canyon. The slope averages 63%, and is surficially unstable. As such, it is subject to shallow slumping and landsliding. Further, the site lies in a seismically active region located near several faults and will likely be subject to severe ground shaking during the useful economic life of the development. This ground shaking will further compromise slope stability. The Geology Report prepared by Grice Engineering (10/1995) for the site suggests that ground shaking is one hazard that could reasonably be expected on the site. A Geotechnical Report prepared by Tharp & Associates (00-57, November 2000) also suggests that landslides, rupture, liquefaction, ground shaking, lateral spreading, and differential compaction are other, albeit remote, possibilities on the site. The previous residence at the site was severely damaged by a falling tree. Current and potential future activities affecting the ESHA include: slope destabilization from foot traffic, residential runoff, and residential development resulting in severe gullying and sedimentation in Pescadero Creek." There are at least two gullies within Pescadero Canyon noted in the 1995 Jones & Stokes study, one of which is directly east of the subject parcel.

The previous small cottage was built in 1933 and withstood several large earthquakes including the 1989 Loma Prieta earthquake which measured 7.1 on the Richter scale. The foundation of this house consisted of deep piers.

The Grice Engineering Geology Report states that the soil types in the area of the proposed project will sustain a near vertical slope and are stable at a 2:1 (50%) slope. Although the report indicates that the sandy material is stable in near vertical slopes, no friction angle or cohesion data to support such a statement were provided. The claim also contradicts the Jones & Stokes report prepared for the City of Carmel (February 1995) which states that "the steep slopes support Monterey pine forest and are stable, but show some indications of past disturbances and erosion. The Grice report also is inconsistent with the findings of the Tharps & Associates Geotechnical Report which clearly indicates that the slope comprising the site is greater than 50% and does not meet the generally accepted stability requirements for development.

The steep canyon walls and existing slope configuration was evaluated by Tharp & Associates (#00-57, January 2000) for overall stability and surficial stability. The factor of safety for overall slope stability did not meet minimum standards (>1.5) for development in Monterey County. A



pseudo-static analysis of the overall slope stability, which assesses behavior during earthquake shaking, shows an unstable condition (factor of safety less than 1.0). The surficial static case likewise shows an unstable condition. As a result, the potential for slope failure to occur within the limits of the site and to cause damage to the structure is well above normal especially during seismic activity and when the soils are saturated.

To mitigate for slope instability, the applicant proposes to incorporate a steel reinforced retaining wall with drilled, cast-in-place, concrete shafts (caisson) imbedded into the dense basalt bedrock 12' - 14' below the unstable surface soil layers. Commission staff notes that this is a standard mitigation measure for slope instability, and may very well assure the safety of the structure. However, calculations assessing the stability of the structure with caissons in place were not performed. Furthermore, founding the structure on deep piles or caissons will not mitigate the surficial instability noted in the report. Although a deep foundation system such as proposed would likely resolve upslope instabilities, both surficially and deep seated instability below the structure would not be mitigated by either the retaining wall or proposed caissons.

The results of the Tharps & Associates stability analysis and subsurface exploration also indicate that site stability would be adversely affected by saturation of the subsurface soils. To address this concern, the report recommends that adequate subdrainage be included into the project design to collect excess water and alleviate subsurface saturation of the soils. The applicant has submitted a drainage plan that includes a backdrain with collection boxes, downspouts and collectors, and a subsurface drainage outfall system. The design specifications state that the system is "specifically engineered for drainage in medium traffic areas such as parking lots, school grounds, and walkways." These areas are typically not heavily vegetated. System efficacy will therefore be dependent upon frequent inspection and maintenance over the life of the structure to ensure that the system does not become clogged and fail to perform.

Additionally, it has not been demonstrated how the system will perform on a steep slope. There are three water collection boxes at the surface at the 120' elevation. Additional runoff from the roof surface is added via downspouts midway to the system. All the accumulated water eventually spills to a perforated pipe at about the 99' elevation, just 6" from the surface. Due to the change in elevation and surface area of roof, the accumulated water pressure could be sufficient to overload the system at the drainage outfall and cause a "blow-out." Should a blow-out occur, water will be flowing at the surface downslope of the house and carrying sediment to the creek below. The applicant needs to demonstrate that the leaching system and soil is able to absorb the amount and impact of generated runoff.

The Geotechnical report also calls for erosion-resistant landscaping, ground cover, and continual maintenance to minimize surface erosion. Plants that require minimal irrigation are recommended, as over-watering of the slopes will be detrimental to slope stability. The applicant submitted a restoration and landscape plan prepared by Rana Creek Habitat Restoration on June 5, 2000. The plan calls for revegetation and restoration of the site, maintaining the drainage and hydrology, and establishing slope stability. Although the plan stresses using native plants and grasses, there are no woody riparian trees (i.e., willows) included in the plans. The landscape plant list is comprehensive but does not adequately cover the extensive amount of bare ground that will be created by the



rehabilitation effort. The numbers of rushes and grasses should be increased.

Because of the steep slope at the site, this structure would require significant grading to provide a platform on which to frame the house. The Tharps & Associates Geotechnical Report recommends over-excavation and re-compaction of the near surface soil to ensure uniform settling characteristics and to prevent any potential for differential settlement. As mentioned previously, this construction approach has the potential to significantly contribute to erosion and site instability. The plans submitted to the Commission with the application materials required approximately 240 cubic yards of grading. At the October 2001 meeting, the applicant provided copies of revised plans that were approved by the City of Carmel in January 2001. In its staff report, the City of Carmel-by-the-Sea summarizes the changes as including: moving the structure approximately 3' to the north (down the canyon) and slightly elongating the east/west building lines, a reduction in floor area of approximately two square feet, no change in land coverage or building coverage, and an overall reduction in building height by 3 inches. The applicant contends that the changes result in a 30% reduction in grading. Based on staff's review of the site plans, no reduction in grading could be confirmed. In any case, the grading necessary to provide a level pad on such a steep slope is greater than is customary for many single-family residences.

It is anticipated in the geotechnical report that grading and excavation of on-site soils, as well as drilling and compaction activities will be accomplished with standard earthmoving and trenching equipment. An erosion control plan was developed to alleviate concerns about disruptions to sensitive habitat. Proper implementation of best management practices during construction and grading should minimize the problem, but it will be very difficult to prevent all sediment from entering the environmentally sensitive habitat. Anything less than proper implementation will lead to greater impacts.

In summary, the subject site is located in an area that is prone to potential geologic instability. The proposed project site is located on a steep canyon wall with a slope of 63%. Stability analyses indicate that the slope does not meet the accepted minimum safety standards for development in Monterey County. Although a deep foundation system has the potential to adequately mitigate these concerns, calculations have not been performed demonstrating that this is the case. Further, such mitigating measures do not ensure that surficial instability will not effect the site. Therefore, the Commission finds that the proposed project is not consistent with Coastal Act Section 30253.

As discussed in the Alternatives section below, future application materials should include slope stability calculations assessing the stability of the structures with caissons in place ("post-construction). Calculations should also be performed for grading and foundation systems that minimize the amount of grading and excavation. Drainage plans should include a means of conveying runoff either to the street, or into approved natural or artificial drainage systems such that ESHA will not be adversely affected. The drainage plan should demonstrate the capacity for the leach field to infiltrate the runoff that will be generated. Hydrologic calculations should be performed at the 85 percentile. And finally, the use of natural landscaping plants needs to be more extensive to cover the amount of bare soil and provide adequate erosion control.



E. Visual Resources

Coastal Act Section 30251 states:

Section 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The subject parcel is located north of Second Avenue between Lopez and N. Camino Real at the northern extent of the City of Carmel. The site lies between the first public road and the sea. All roads north and west of the subject property in neighboring Del Monte Forest are privately owned by the Pebble Beach Corporation. The Coastal Act provides for the protection of public views in highly scenic areas.

City planners, attempting to minimize view impacts from Second Avenue, required that the structure be sited further down the slope into the sensitive habitat below. Although there are City ordinances establishing front yard setback requirements for new development, these policies do not necessarily preclude development from being sited in the setbacks if it will mitigate other impacts. However, in this case, the applicant's insistence on a larger two-story structure led to the City's requirement that it be placed further down the canyon. In its proposed location, the new structure would be approximately 28 feet above grade, exceeding the City's height limit by about four feet, but would be below the roofline of the previous house before it was destroyed.

Section 30251 states that new development shall be sited and designed to minimize alteration of natural landforms. The proposed project calls for grading 240 cubic yards of soil, plus an additional cut to facilitate construction of the house. In and of itself, 240 cubic yards of grading is usually not considered to be a sizable amount, but because of the site constraints and configuration, this amount of grading is significant. Alternatives to this type of foundation are available and would significantly reduce landform alterations on this site.

Section 30251 also requires that new development be visually compatible with the character of surrounding areas. With the exception of the house directly adjacent on the west property line and another at the eastern edge of Pescadero Canyon, the balance of the canyon north of Second Avenue to Monte Verde Street is held in open space. To the extent that the development introduces an unnatural obtrusive object in what is a relatively undeveloped open space corridor, the proposal would not be visually compatible with the character of this site.

The Redondo Trail is a traditional part of the Del Monte Forest equestrian trail network, parallel to Pescadero Creek. It runs from Carmel beach to points further inland and faces the subject site directly across the creek. Pebble Beach Corporation collects a toll for vehicles entering 17-mile



drive, but has not exacted a toll for pedestrian access. The trail network is illustrated in the Del Monte Forest Land Use Plan as part of Monterey County's Local Coastal Plan. The originally constructed trail had elaborate rockwork and was very popular with equestrians, but presently is increasingly in a state of disrepair. In time, we might look forward to the trail being rehabilitated as a link in the California Coastal Trail system. The house as it previously existed was visible from the Redondo Trail. The proposed new structure can also be expected to be in view, but because of its additional size and its current proposed location (31' from Pescadero Creek), would have a more significant impact on the trail user experience (Exhibit 8).

Thus, based on the scope of the project and constraints of the site, it may be impossible to site and construct a project of this size and bulk that minimizes impacts to visual resources. As mentioned above, the previous house was visible from the Redondo Trail. However, the proposed new structure will adversely impair the view from the trail. The previous small house was subordinate to its forested setting. Unlike its predecessor, the proposed structure attempts to override the natural features of the site and will become the dominant feature of the site, particularly with the proposed retaining wall foundation. The new structure also requires significant landform alterations and is not visually compatible with the character of the site. Thus, the proposed project is not consistent with Section 30251 of the Coastal Act. As noted in the Alternatives section below, a smaller house sited closer to 2nd Avenue would further minimize view impacts.

F. Public Access and Recreation

Coastal Act Sections 30210-30224 require that public access and recreational opportunities be protected and, where appropriate, provided. Coastal Act Section 30604(c) requires a specific finding of conformance with these policy sections in the case of any coastal development permit issued for a development located between the first public road and the sea.

This project is located on the boundary of Del Monte Forest, a privately-owned enclave with no public roads. Therefore, applicant's site is located between the first public road and the sea. However, there are a substantial number of other residential properties within Carmel City limits that intervene between this site and the shoreline. And, public access already exists nearby, between San Antonio Street and Carmel's municipal beach. Accordingly, there is no need for a public access link on the subject property. Therefore, the proposed development will not block opportunities for public access, and conformance with Coastal Act Sections 30210-30224 is not an issue in this instance.

G. Project Alternatives.

The Coastal Act Section 30010 requires:

Section 30010. The Legislature hereby finds and declares that this division is not intended, and shall not be construed as authorizing the commission, port governing body, or local government acting pursuant to this division to exercise their power to grant or deny a permit in a manner which will take or damage private property for public use, without the payment



of just compensation therefor. This section is not intended to increase or decrease the rights of any owner of property under the Constitution of the State of California or the United States.

As proposed the current project is not consistent with the ESHA, hazards, and view protection policies of the Coastal Act. However, it is understood that the Coastal Act must be applied within the greater context of U.S. Constitutional requirements, particularly with respect to the "takings" issue. Accordingly, if a residential use must be contemplated on the site, there are at least two feasible alternatives that would result in reasonable economic use of the subject parcel, while conforming to Coastal Act requirements to the maximum degree feasible.

Specifically, there are alternatives to the proposed development that would better mitigate the impacts of residential development within the identified ESHAs, and better conform the project with Coastal Act requirements. Both alternatives discussed below provide for a substantially smaller house than that currently proposed. A significant reduction in house size for this site is not unreasonable given the very small size of the lot and the very steep slope. Indeed, a substantially smaller cottage was used for decades on this property. This site is severely constrained and it cannot be expected that anything other than a very small cottage could be constructed. Given this situation, the following alternatives would be more appropriate, although there are likely additional scenarios beyond these alternatives.

Alternative 1—Rebuild Former Residence.

Rebuilding a house similar in size to that destroyed by the felled tree is one option and would not require a coastal development permit. Coastal Act Section 30610 (g)(1) allows for replacement of an existing structure demolished by natural disaster as long as it does not exceed floor area, height, or bulk by more than 10% of previous structure. Thus, the applicant could replace the destroyed 392 square foot cottage structure with a 431 square foot house. Replacement of the pre-existing decking would also be considered under § 30610.

Alternative 2—Revised Plans with Minimal Grading and Site Coverage.

Another reasonable alternative would be a multi-level house design, to allow more floor area with a footprint no larger than 10% greater than the "hardscape" area of the original cottage--provided it was built on piers and sited upslope nearer to Second Avenue and adjacent to the neighboring house there. A two story design within the footprint similar to that of the pre-existing house would allow for a larger structure with less impacts. By placing the house on piers and grade beams without any other foundation structure (i.e., retaining walls) the project would require much less grading and address many of the concerns relevant to landform alteration and disturbance to the riparian and wetland habitat.

The CEQA Study mentions this type of foundation as a common design for siting homes on steep slopes, as it provides for both structural safety and slope stability. This design also provides greater protection to sensitive resources while providing the applicant a residential use of the site. (If a revised smaller project is submitted, the Commission as part of its consideration will also require information from the applicant to allow for an adequate "takings" analysis.)



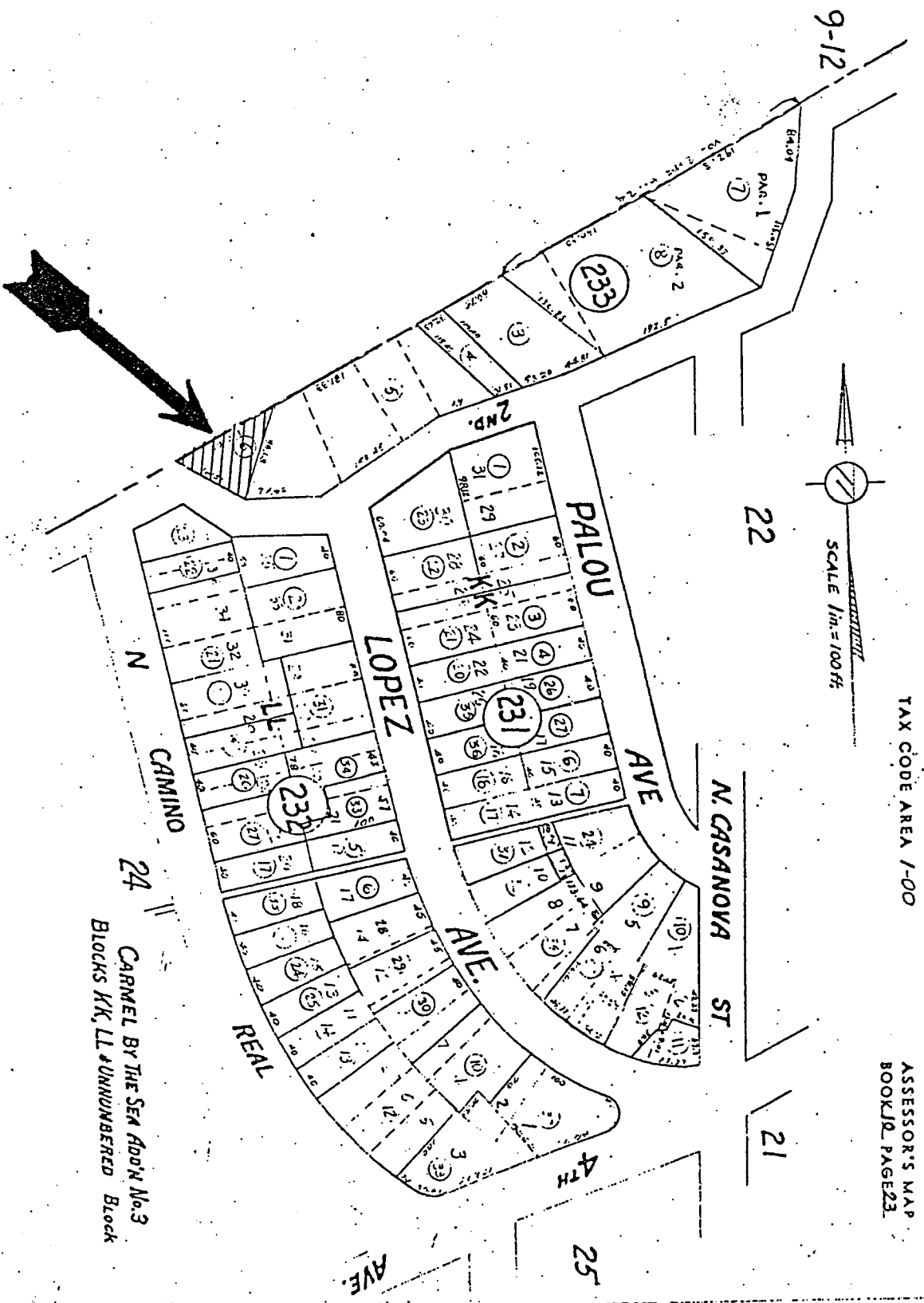
Thus, though the current project proposal is not consistent with the Chapter 3 policies of the Coastal Act, there are feasible alternatives that would better mitigate impacts on ESHA and still provide for a reasonable use of the site. Because of the substantial redesign required to find that the proposed project is consistent with the Coastal Act, the proposed project should be denied.

H. 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 that the activity may have on the environment.

The Commission incorporates its findings on conformity of the permit with the Coastal Act as if set forth in full. These findings address the public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. The City of Carmel certified a Negative Declaration for the proposed project on February 23, 2000. However, as detailed in the findings of this staff report, the Commission has identified environmental impacts of the project that were not effectively addressed by the Negative Declaration. In particular, there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment. As a result, approval of the project would have a significant adverse affect on the environment within the meaning of the California Environmental Quality Act.





9-12

SCALE 1 in. = 100 ft.

TAX CODE AREA 1-00

ASSESSOR'S MAP
BOOK 12, PAGE 23

24
CARMEL BY THE SEA ADDN No. 3
BLOCKS KK, LL & UNNUMBERED Block

EXHIBIT NO. 2
APPLICATION NO. 3-00-082
Parcel Map
California Coastal Commission

PROJECT INFORMATION SITE COVERAGE

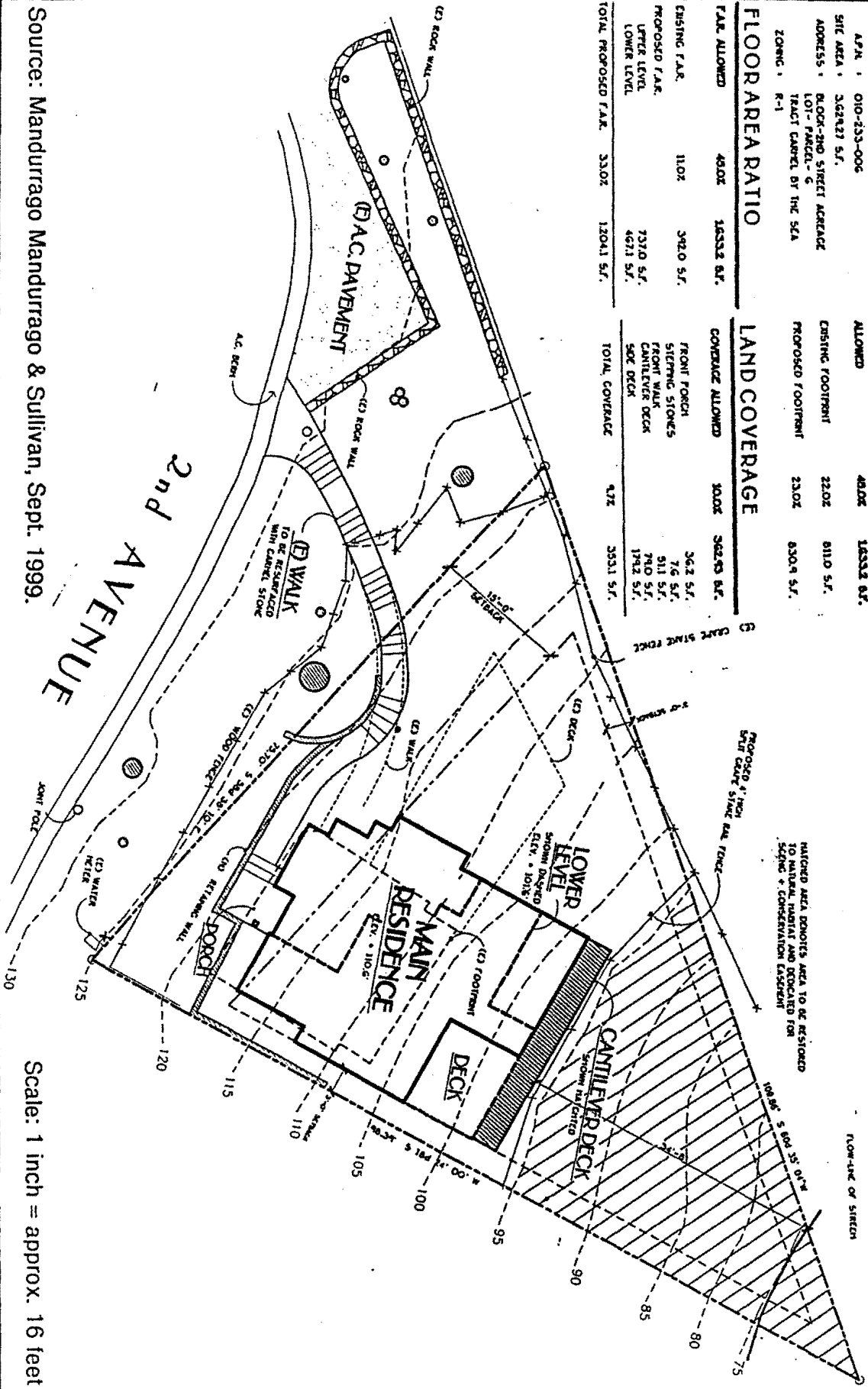
A.P.N. :	010-233-006	ALLOWED	40.0%	16,532 S.F.
SITE AREA :	36,923 S.F.	EXISTING FOOTPRINT	22.0%	8,110 S.F.
ADDRESS :	Block-2nd Street Acreage	PROPOSED FOOTPRINT	23.0%	8,504 S.F.
LOT - PARCEL -	5			
TRACT CAPREL BY THE SCA				
ZONING :	R-1			

FLOOR AREA RATIO

F.A.R. ALLOWED	40.0%	16,532 S.F.
EXISTING F.A.R.	11.0%	3,920 S.F.
PROPOSED F.A.R.		7,310 S.F.
UPPER LEVEL		4,671 S.F.
LOWER LEVEL		2,639 S.F.
TOTAL PROPOSED F.A.R.	23.0%	12,041 S.F.

LAND COVERAGE

COVERAGE ALLOWED	30.0%	36,293 S.F.
EXISTING COVERAGE		3,623 S.F.
PROPOSED COVERAGE		7,611 S.F.
UPPER LEVEL		4,671 S.F.
LOWER LEVEL		2,940 S.F.
TOTAL PROPOSED COVERAGE	47%	35,311 S.F.



Source: Mandurrage Mandurrage & Sullivan, Sept. 1999.

Scale: 1 inch = approx. 16 feet

Proposed Site Plan


EXHIBIT NO. 3

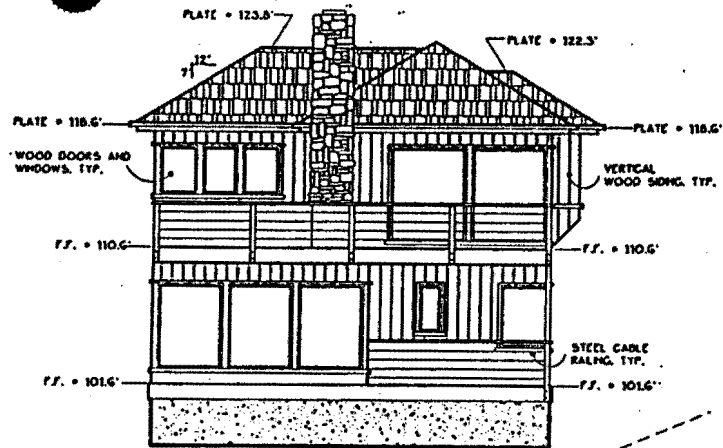
APPLICATION NO. 3-00-082

Project Site Plan

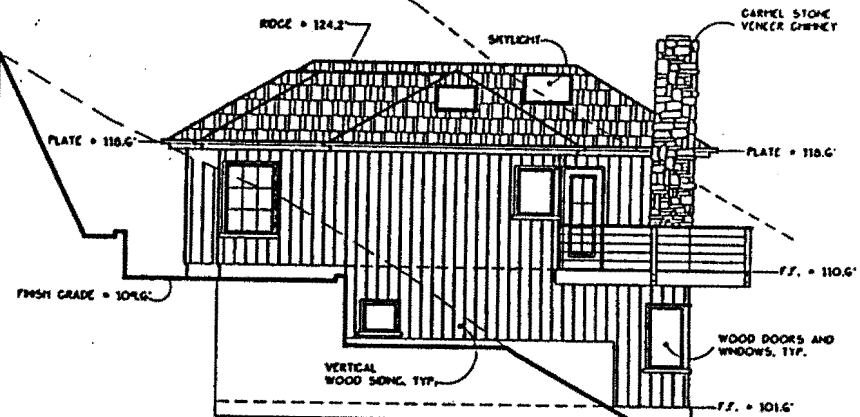
California Coastal Commission



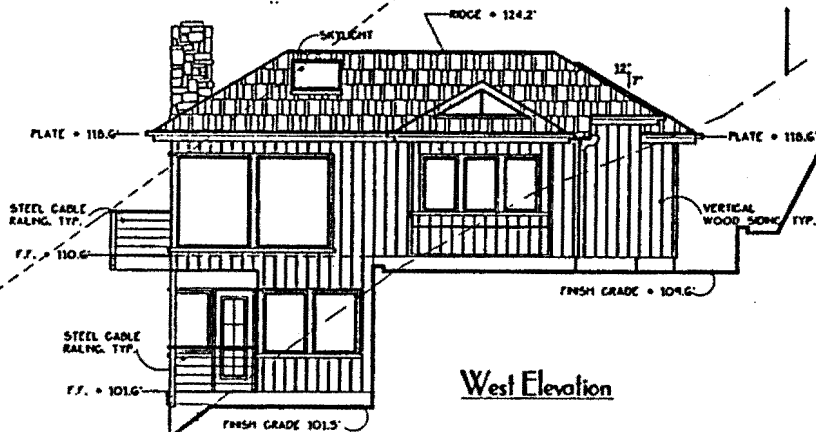
EXHIBIT NO. 4
APPLICATION NO. 3-00-082
Site Photo
 California Coastal Commission



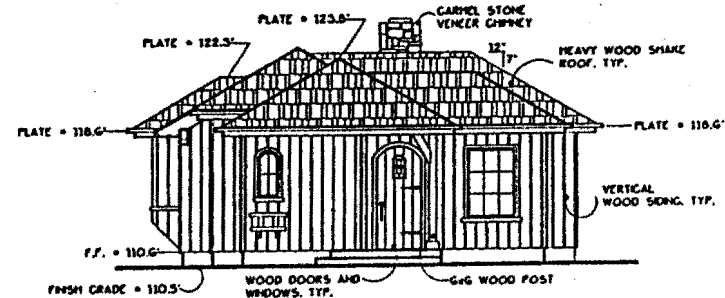
North Elevation



East Elevation



West Elevation



South Elevation
FRONT

Scale: 1 inch = approx. 19 feet

Source: Mandurrage Mandurrage & Sullivan, March 1999.

Proposed Building Elevations

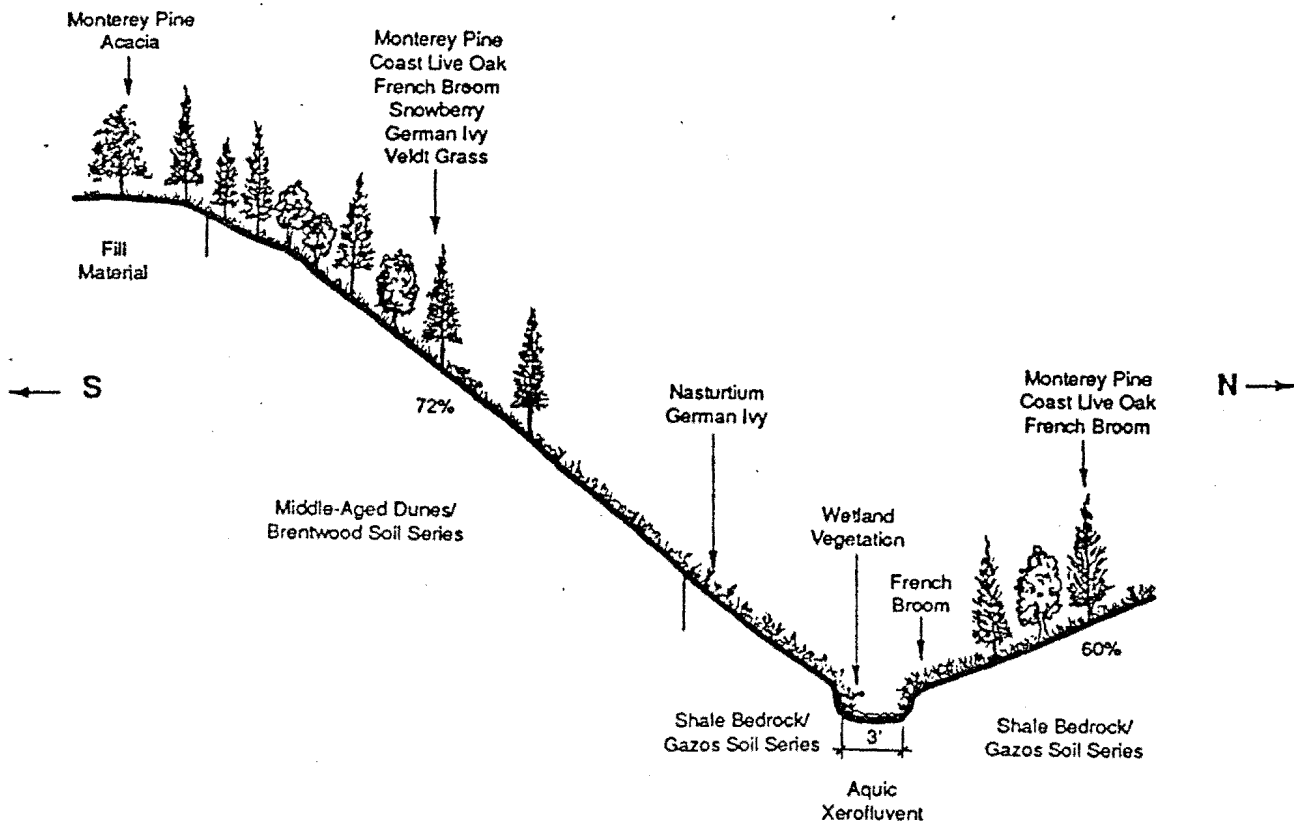
EXHIBIT NO. 5

APPLICATION NO.
3-00-082

Proposed Elevations

California Coastal Commission

Cross Section 1



Cross Section 2

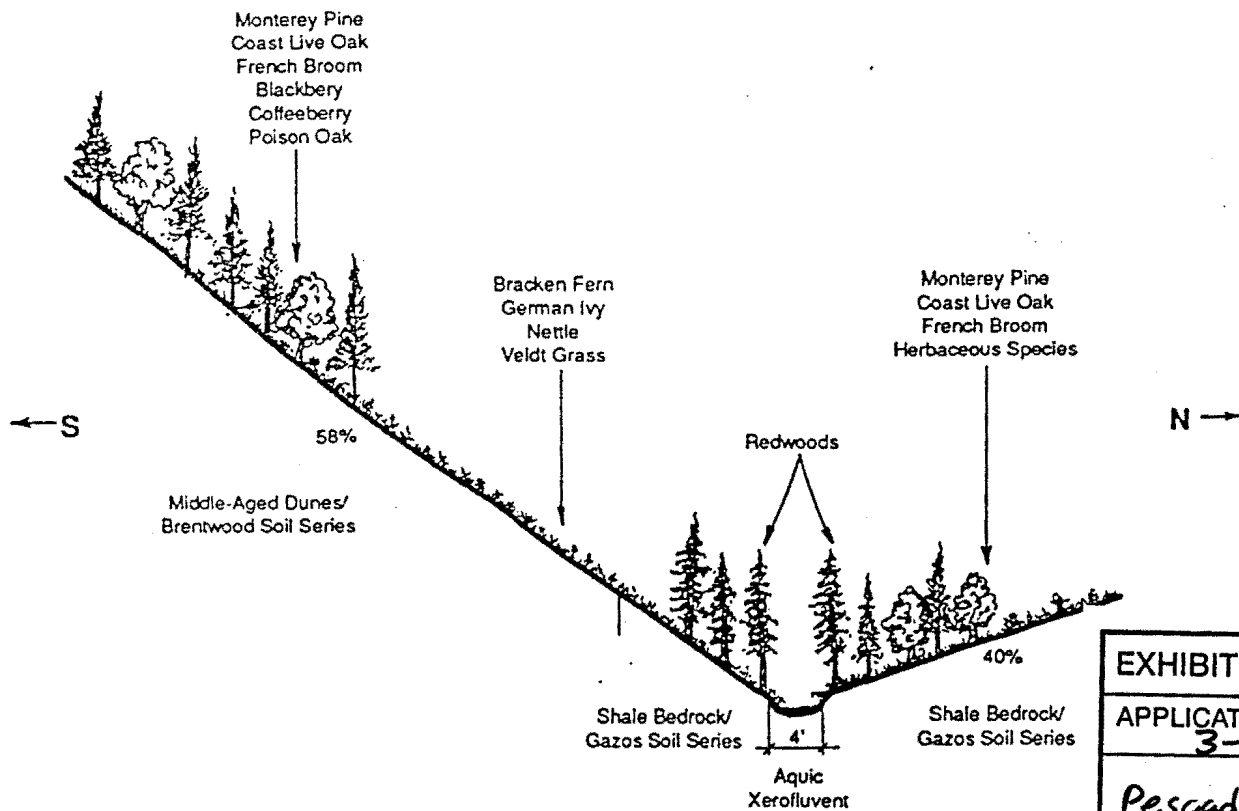


EXHIBIT NO. 6

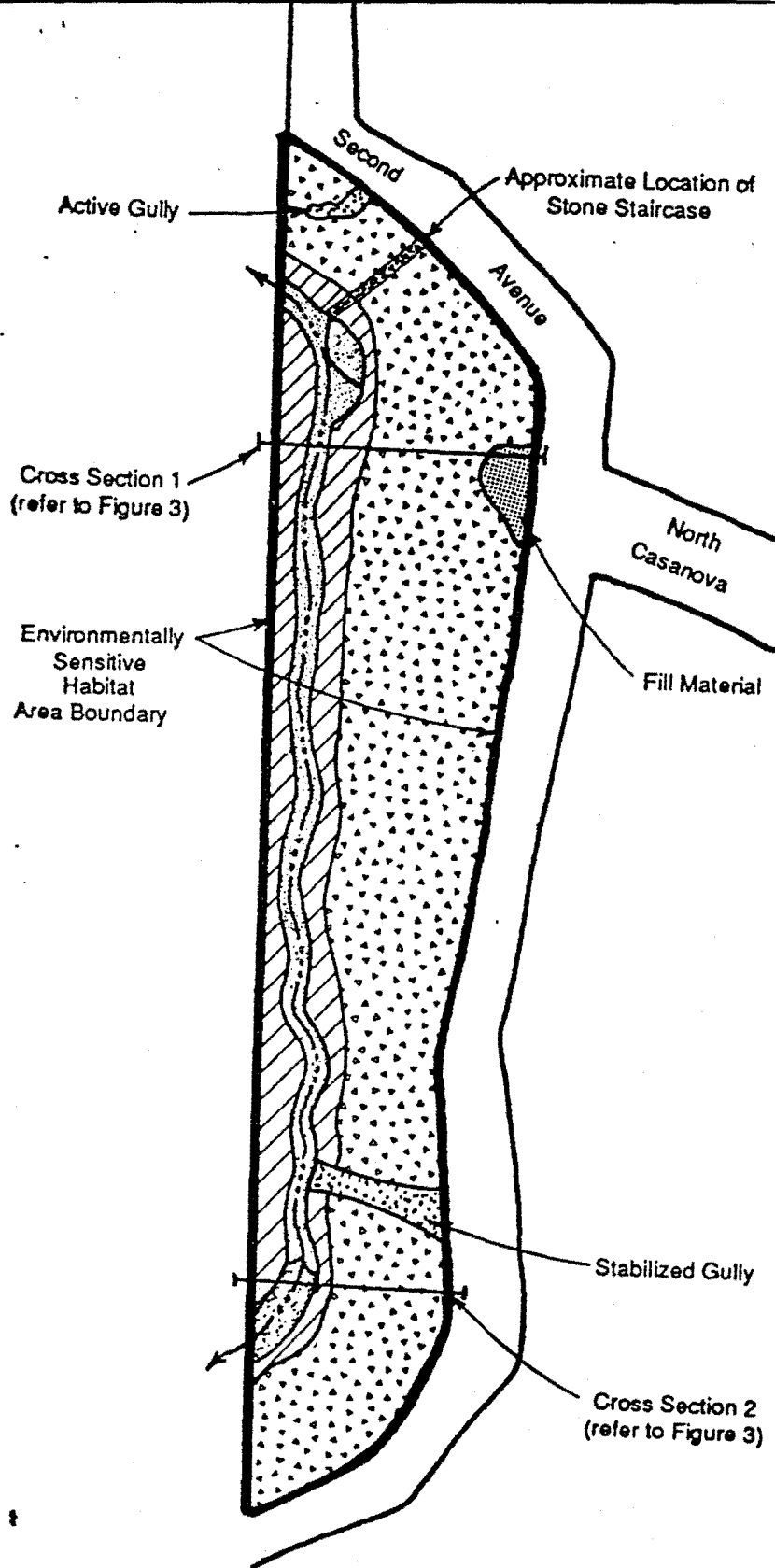
APPLICATION NO.
3-00-082

Pescadero Canyon
Cross-Section
California Coastal Commission








Jones & Stokes Associates, Inc.

Cross Sections 1 and 2 at
Pescadero Canyon East



Legend

-  Monterey Pine Forest on Middle-Aged Dunes (Brentwood Soil Series)
-  Monterey Pine Forest on Shale Bedrock (Gazos Soil Series)
-  Wetland Drainage on Aquic Xerofluvent
-  Redwood Grove on Aquic Xerofluvent
-  Environmentally Sensitive Habitat Area Boundary



Not to Scale

EXHIBIT NO. 7

APPLICATION NO.
3-00-082

Pescadero Canyon
ESHA Boundary
California Coastal Commission



Jones & Stokes Associates, Inc.

**Vegetation, Soil Types, and ESHA
Boundary at Pescadero Canyon East**

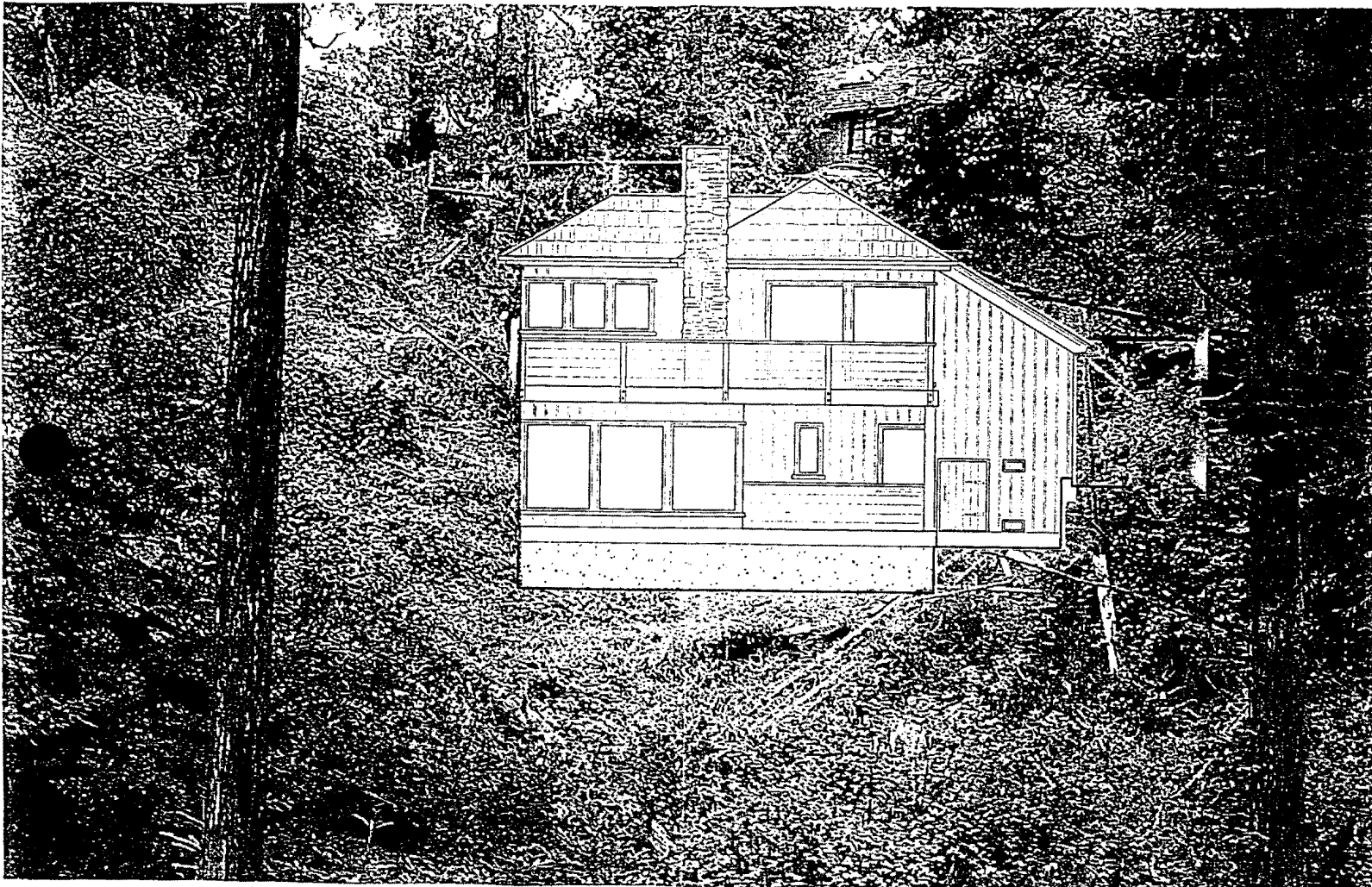


EXHIBIT NO. 8
APPLICATION NO. 3-00-082
Digital Photo Simulation
California Coastal Commission

CALIFORNIA COASTAL COMMISSION

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



20 November 2001

GEOTECHNICAL REVIEW MEMORANDUM

To: Michael Watson, Coastal Program Analyst
From: Mark Johnsson, Senior Geologist
Re: CDP 3-00-082 (Pressley)

EXHIBIT NO. 9
APPLICATION NO. 3-00-082
Geotech Review
p 1 of 4 California Coastal Commission

In reference to the above coastal development permit application, I have reviewed the following materials:

- 1) Grice Engineering and Geology 1995, "Slope stability and foundation soils", 2 p. geotechnical letter dated 18 October 1995 and signed by H. E. Grice (RCE 19424 GE 359).
- 2) Tharp and Associates, Inc. 2000, "Geotechnical Investigation-Design Phase, Proposed single family residence, 2nd Ave., Carmel-By-The-Sea, APN 010-233-006", 31 p. geotechnical report dated November 2000 and signed by D. M. Tharp (RCE C046432).
- 3) Tharp and Associates, Inc. 2001, "Response to geotechnical comments, staff review of Coastal Development Permit Application Number 3-00-082, proposed Pressley single family residence, 2nd Ave., Carmel-By-The-Sea, APN 010-233-006", 8 p. geotechnical response letter dated 7 September 2001 and signed by D. M. Tharp (RCE C046432).

The principal concern regarding development of the site is the stability of the slope, pursuant to section 30253 of the Coastal Act which requires that new development be sited so as to assure stability of the site.

Reference (1) indicates that the materials making up the subject site are "olean" sands overlying subaqueous terrace deposits. Although it indicates that these materials are stable in near vertical slopes, no friction angle or cohesion data to support such a statement are provided. Reference (2) provides a much more comprehensive set of slope stability calculations. I find the manner that these calculations were performed to be appropriate. The results clearly indicate that the slope comprising the site does not meet the generally accepted stability requirements for development. The factor of safety for overall slope stability (static) is 1.4, which is below the generally accepted value of 1.5

generally required. Further, a pseudostatic analysis of the overall slope stability, to assess behavior during earthquake shaking, shows an unstable condition (factor of safety below 1.0). Finally, the factor of safety for surficial sliding, which as assessed using the method of infinite slopes, also is less than 1.0, indicating that the site is surficially unstable.

Reference (2) concludes that the site can be developed if the residence is seated on deep foundation elements (piles or caissons) imbedded in the dense basalt bedrock underlying the sands making up the top 12-14 feet of the soil at the site. This is a standard mitigation measure for slope instability, and may very well assure the safety of the structure. However, no slope stability calculations assessing the stability of the structure with caissons in place were performed.

The surficial instability noted in the report will not be mitigated by founding the structure on deep piles or caissons. I understand that a retaining wall is planned as part of the development, which would likely mitigate upslope instabilities from affecting the site. However, instability—both surficial and deep-seated—below the structure would not be mitigated by either the retaining wall or the proposed caissons.

Reference (3) is a response to a series of questions asked by Coastal Commission staff. I did not prepare these questions, and many of them do not apply to this site. I will address the response to each concern as enumerated in reference (3):

Concern 1: That significant engineering and landform alteration will be required to develop the parcel as planned. The response is that the level of alteration is no greater than is customary for typical hillside development on similar parcels. Although I have not reviewed grading plans, the recommendations contained in reference (2) do not constitute an unusual level of landform alteration. Nevertheless, the grading necessary to provide a level pad on such a steep slope is greater than is customary for many single-family residences.

Concern 2: That the long-term stability of the parcel will be compromised by the proposed development. The response is that the proposed mitigation measures—deep foundation elements consisting of piers or caissons—will actually improve slope stability. To this I concur, although surficial stability could be compromised by the development if runoff is not handled appropriately.

Concern 3: That the site poses geologic hazards including rupture, differential compaction, liquefaction, cracking, ground shaking, and landsliding. I concur with the response that the only significant hazards at this site are ground shaking and landsliding, both of which have been addressed in the slope stability assessment described above.

Concern 4: That the grading and trenching related to the construction of the proposed retaining wall would contribute to site instability and erosion. This is a significant concern, especially

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Geotech Review	

since the site is located in and above environmentally sensitive habitat. As the response indicates, proper implementation of best management practices during construction and grading should minimize the problem, but it will be very difficult to prevent all sediment from entering the environmentally sensitive habitat areas.

Concern 5: That while the smaller house that formerly occupied the site withstood several large earthquakes, it was founded on piers, and a larger house would likely not fare so well under seismic loading. I concur with the response that the proposed foundation system has the capacity to mitigate seismic concerns. It has not, however, been demonstrated quantitatively that it will do so.

Concern 6: Residential runoff could contribute to slope destabilization which might negatively affect ESHA. This is a well-founded concern, and as the response indicates, reference (2) does recommend that all runoff be collected and discharged to approved outlets, and that no runoff be allowed to discharge over the slope face. A drainage plan should be required to ensure that these recommendations are adhered to.

Concern 7: That while the applicant's geology report states the 50% slopes are stable, it does not address the stability of the 63% slope measured from the creek through the centerline of the house. I concur with the response that the slope stability analyses in reference (2) do, in fact, address the stability of the 63% slope.

Concern 8: That the site is prone to geologic instability. I concur with the response that acknowledges this instability, but that the proposed mitigation measures address overall slope instability. They do not, however, ensure that surficial instability will not affect the site.

Concern 9: That construction activities would contribute to site instability through landform alteration and vegetation removal. Like concern (4), this is a valid concern. Proper construction techniques and best management practices will minimize disruption, but some instability might be unavoidable.

Concern 10: That the project poses an undue risk to life and property. I concur with the response that there are risks associated with any such development on steep hillsides in seismically active areas, but that the mitigation measures proposed have the capacity to reduce these risks to the level considered typical of any development.

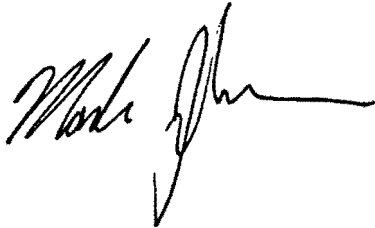
To summarize, the recommendations in reference (2) have the capacity to mitigate overall slope instability at the site. It has not, however, been quantitatively demonstrated that the proposed caissons will ensure a factor of safety of greater than 1.5 (static) and 1.1 (pseudostatic), as typically required. A quantitative slope stability analysis, similar to those undertaken in reference (2), should be undertaken for the post-project configuration of the site.

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APPLICATION NO. 3-00-082
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Surficial failures at the site will likely continue below the residence. The proposed development has the capacity to increase surficial instability if drainage is not handled appropriately. Conversely, if an adequate drainage plan is implemented, the development could actually increase the surficial stability at the site.

I hope that this review is useful. Please do not hesitate to contact me if you have any further questions.

Sincerely,



Mark Johnsson, Ph.D., CEG

EXHIBIT NO. 9
APPLICATION NO. 3-00-082
Geotech Review
P. 4 of 4 California Coastal Commission

PRESSLEY RESIDENCE

REVISED

EXHIBIT NO. 10

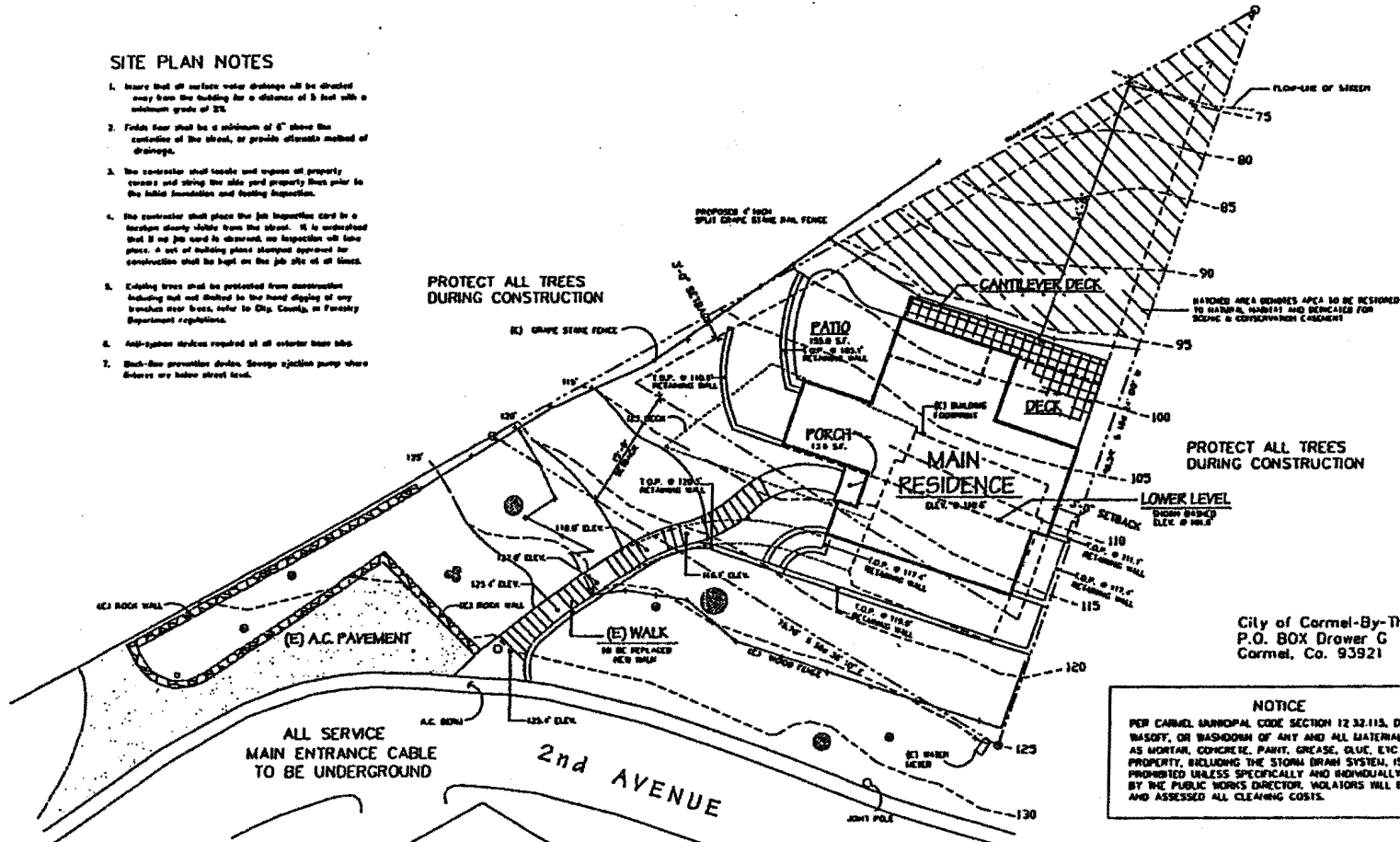
APPLICATION NO.
3-00-082

Revised Plans

pl of 3

SITE PLAN NOTES

1. Ensure that all surface water drainage will be directed away from the building for a distance of 5 feet with a minimum grade of 2%.
2. Folds four shall be a minimum of 6" above the outside of the street, or provide alternate method of drainage.
3. The contractor shall locate and expose all property corners and show the side yard property lines prior to the initial foundation and footing inspection.
4. The contractor shall place the job inspection card in a location clearly visible from the street. It is understood that if no job card is observed, no inspection will take place. A set of building plans stamped approved for construction shall be kept on the job site at all times.
5. Existing trees shall be protected from construction including but not limited to the hand digging of any trenches near trees, refer to City, County, or Forestry Department regulations.
6. Anti-rattle devices required at all exterior door sills.
7. Back-flow prevention device. Sewage ejector pump where enters any below street level.



City of Carmel-By-The-Sea
P.O. BOX Drawer G
Carmel, Co. 93921

NOTICE
PER CARMEL MUNICIPAL CODE SECTION 12.32.113, DISPOSAL, WASTO, OR WASHDOWN OF ANY AND ALL MATERIALS SUCH AS MORTAR, CONCRETE, PAINT, GREASE, GLUE, ETC ON PUBLIC PROPERTY, INCLUDING THE STORM DRAIN SYSTEM, IS STRICTLY PROHIBITED UNLESS SPECIFICALLY AND INDIVIDUALLY APPROVED BY THE PUBLIC WORKS DIRECTOR. VIOLATORS WILL BE CITED AND ASSESSED ALL CLEANING COSTS.

PROJECT INFORMATION

APPL - 010-253-006
SITE AREA - 3,629.27 S.F.
ADDRESS - BLOCK-2ND STREET ACRES
LOT - PARCEL - 5
TRACT CARMEL BY THE SEA
ZONING - R-1

FLOOR AREA RATIO

F.A.R. ALLOWED	45.0%	1,633.2 S.F.
EXISTING F.A.R.	11.0%	392.0 S.F.
PROPOSED F.A.R.		711.0 S.F.
UPPER LEVEL		414.5 S.F.
LOWER LEVEL		296.5 S.F.
TOTAL PROPOSED F.A.R.	33.0%	1,111.0 S.F.

SITE COVERAGE

ALLOWED	45.0%	1,633.2 S.F.
EXISTING FOOTPRINT	22.0%	811.0 S.F.
PROPOSED FOOTPRINT	23.0%	830.9 S.F.

LAND COVERAGE

COVERAGE ALLOWED	10.0%	362.9 S.F.
FRONT PORCH		12.6 S.F.
FRONT WALK		64.4 S.F.
CANTILEVER DECK		79.0 S.F.
PATIO		150.0 S.F.
TOTAL COVERAGE	9.7%	316.0 S.F.

SITE PLAN

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

1-10-01

9836

A1

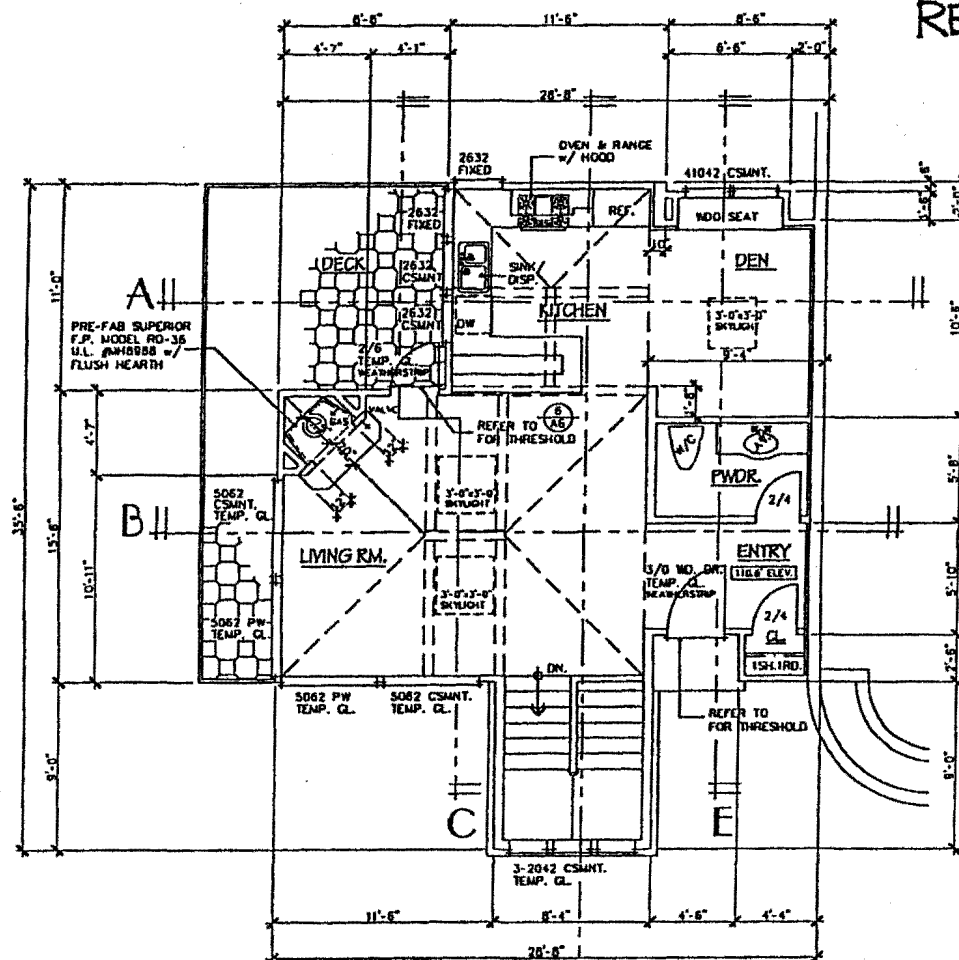
MANDURRAGO
MANDURRAGO &
SULLIVAN

DESIGN STUDIO

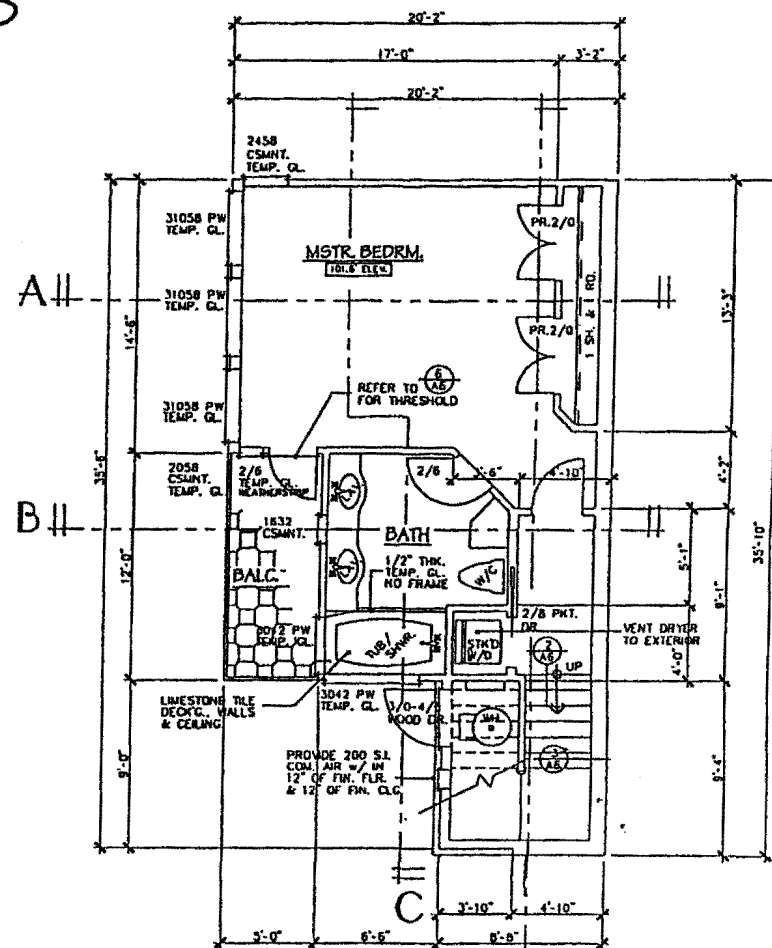
P.O. BOX 1000, CARMEL, CA 93921 TEL: 408-425-1000

PRESSLEY RESIDENCE
SECOND STREET
CARMEL BY THE SEA, CALIF.

REVISED



Main Level
721.0 S.F.



Lower Level
474.5 S.F.

