

Attachment K  
Technical Reports

Signal Hill, LLC  
PLN100418

ATTACHMENT K



**CLEARY CONSULTANTS, INC.**  
Geotechnical Engineers and Geologists

J. Michael Cleary, CEG, GE  
Christophe A. Ciechanowski, GE  
Grant F. Foster, GE

November 23, 2011  
Project No. 1301.1  
Ser. 3456

Ms. Massy Mehdipour  
1425 Dana Avenue  
Palo Alto, CA 94301


**RE: DRILLING OF SOIL BORINGS FOR GEOTECHNICAL INVESTIGATION  
NEW RESIDENCE  
1170 SIGNAL HILL ROAD  
PEBBLE BEACH, MONTEREY COUNTY, CALIFORNIA**

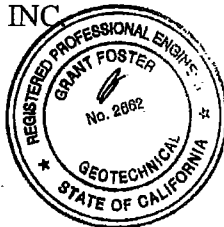
Dear Ms. Mehdipour:

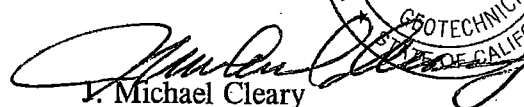
This is to confirm that the soil borings drilled in February, 2010 for your planned new residence did not result in disturbance to the dune. The borings were drilled with a track-mounted auger rig requiring no grading or removal of vegetation; and were backfilled with the native sandy soil.

Please contact our office if you have any further questions regarding this matter.

Yours very truly,  
CLEARY CONSULTANTS, INC

  
Grant Foster  
Geotechnical Engineer 2662



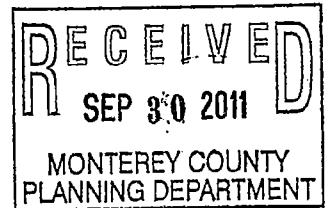
  
J. Michael Cleary  
Geotechnical Engineer 222



GF/JMC:pf

Copies: Addressee (1)

Bill Bernstein AIA (2) Attn: William Bernstein



# ZANDER ASSOCIATES

*Environmental Consultants*

September 28, 2011

Massy Mehdipour  
1425 Dana Ave.  
Palo Alto, CA 94301

**Mehdipour Property**  
**1170 Signal Hill Road**  
**Pebble Beach, California**

Dear Ms. Mehdipour:

As we have discussed, I am writing to address an area of disturbed dune on a slope just below the existing house and building pad on the above-referenced property. Aerial photographs indicate that dune vegetation was removed in the subject area (see Figures 1 & 2 attached). Monterey County has issued a Compliance Order identifying a code violation (sand dune degradation) on the basis of those photographs and a subsequent site inspection conducted on September 1, 2011. The County has recommended that the area of dune disturbance be restored (revegetated) to correct the violation.

The disturbed dune area covers approximately 2500 square feet (0.05-ac), creating a terrace on the dune slope to the southwest of the house (see Figure 2 and attached photographs). The surrounding slope is dominated by the aggressive, non-native European beach grass (*Ammophila arenaria*), which is also rapidly colonizing ( $\pm 20-50\%$  cover) the disturbed terrace area (see attached photographs). Beach grass spreads very quickly through sandy substrates by underground stems (rhizomes) that sprout new shoots and leaves above ground at each node. The species was originally introduced to California in the late 1800s for the purpose of stabilizing dunes, but is now considered one of the most pervasive exotic plants currently threatening dune environments on the west coast, driving out native species, reducing biodiversity and altering native dune morphology.

I suspect that beach grass comprised the dominant vegetation in the subject area prior to disturbance. If the subject area is left alone, beach grass will likely become reestablished, creating 100% cover of vegetation. Any native dune restoration effort in the subject area would first need to eradicate the beach grass, preferably over a period of several years, before introducing native dune species. Even then, the restoration effort would require ongoing vigilance to keep beach grass from recolonizing the relatively small area of disturbed dune.

I do not believe that dune restoration in that limited area of disturbance, especially in the absence of a larger restoration strategy for the entire property, has a high degree of success in the long term. Rather, an effort to initiate an eradication program for beach grass in the

4460 Redwood Hwy, Suite 16-240  
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Telephone: (415) 897-8781  
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Massy Mehdipour  
September 28, 2011  
Page 2

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*Zander Associates*

subject area could be a more appropriate step toward eventual control over the spread of the species on the property.

Please contact me by telephone at (415) 897-8781 or by email ([mzander@zanderassociates.com](mailto:mzander@zanderassociates.com)) if you have any questions regarding this assessment.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Zander", with a large, stylized flourish at the end.

Michael Zander  
Principal

Enclosures.

- Figure 1 Pre-existing Conditions, 2000 Aerial Photograph
- Figure 2 Disturbed Dune Area, 2009 Aerial Photograph
- Site Photographs, September 21, 2011

Copies provided:                      John Bridges





Signal Hill Road

N



1 inch equals 37 feet

Legend

 Property Boundary


Pre-existing Conditions  
2000 Aerial Photograph  
Mehdipour Property  
Pebble Beach, California



Date: 9/11

Figure  
1

Zander Associates  
Environmental Consultants  
4460 Redwood Hwy, Suite 16-240  
San Rafael, CA 94903



  
 Scale: 1" = 35'  
  
 Zander Associates  
 Environmental Consultants  
 4460 Redwood Hwy, Suite 16-240  
 San Rafael, CA 94903

**LEGEND:**  
 Area of Disturbance  
 (2,522 sq. ft.)  
 Property Boundary

Disturbed Area  
 2009 Aerial Photograph  
 Mehdipour Property  
 Pebble Beach, California  
  
 Date: 9/11

Figure  
 2

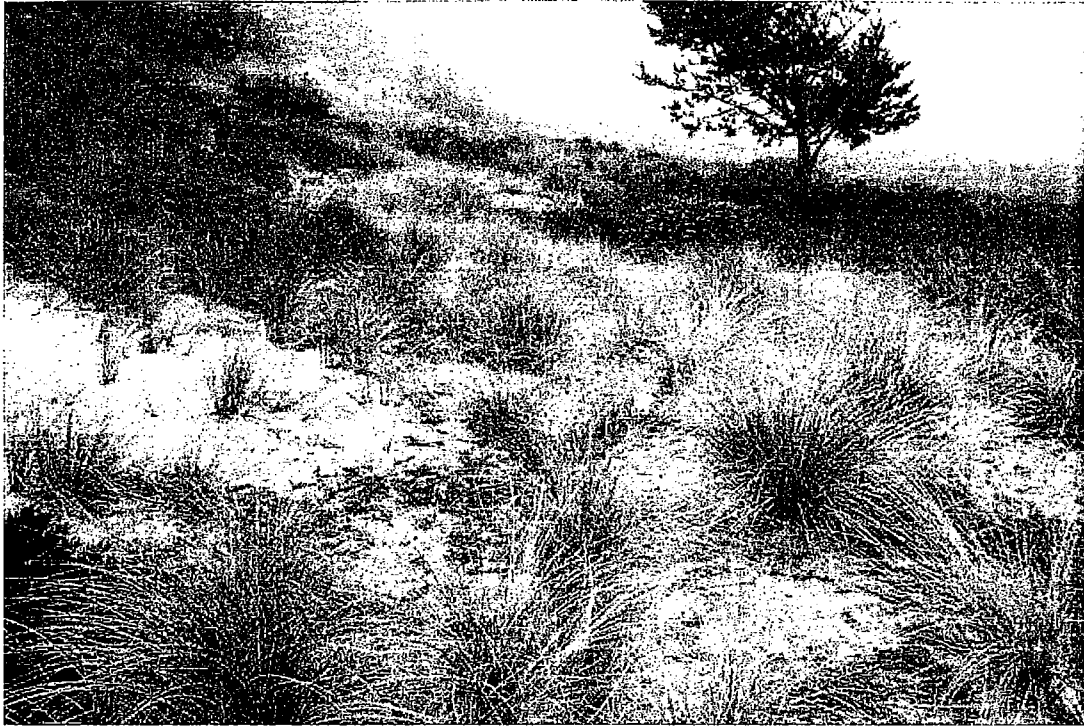
**Site Photographs**  
**September 21, 2011**



Area of disturbed dune looking northwesterly



Close up of beach grass colonizing disturbed slope



Beach grass colonizing disturbed area looking southwesterly



Beach grass shoots and leaves sprouting from underground rhizomes in disturbed sand

*Maureen Hamb-WCISA Certified Arborist #2280  
Professional Consulting Services*



**TREE RESOURCE EVALUATION  
CONSTRUCTION IMPACT ANALYSIS  
1170 SIGNAL HILL ROAD, PEBBLE BEACH**

**Prepared for  
Massy Mehdipour**

**October 30, 2010**

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Santa Cruz, CA 95060  
email: [maureenah@sbcglobal.net](mailto:maureenah@sbcglobal.net)*

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## **ASSIGNMENT/SCOPE OF SERVICES**

Residential development plans are in progress for property located at 1170 Signal Hill Road in Pebble Beach. The project will include the demolition of an existing residence and construction of a new home using a portion of the existing footprint. The property is sparsely forested with both native and planted Monterey cypress that will be impacted by the project. I was retained to evaluate the condition of the existing trees and determine the impacts related to the proposed development. To complete the assessment I have completed the following:

- Locate, number and map trees greater than 6 inches in trunk diameter growing adjacent to the proposed development.
- Identify trees as to species and document trunk diameter at 24" above grade.
- Visually inspect each tree to evaluate health status, structural integrity and suitability for incorporation into the development based on tree condition and species tolerances.
- Review development plans (provided by the project architect) and evaluate potential construction related impacts.
- Review additional documents related to previous tree removal.
- Obtain and plant replacement trees generated from native Monterey cypress stock.
- Create a three year monitoring plan for the replacement trees.

## **SUMMARY**

Residential development is planned for property located at 1170 Signal Hill Road in Pebble Beach. The project includes the demolition of an existing residence and construction of a new home on a portion of the original footprint.

The site is a sloping sand dune area at the edge of a native Monterey cypress habitat. Eight trees on the property were evaluated and inventoried, recommendations have been made for tree retention and tree removal based on the proposed impacts. Three "planted" cypress and one cluster of eucalyptus are growing within the footprint of the new development and will require removal. Two additional cypress were removed previously without proper approvals. Replacement trees have been installed in the same area to represent the removed trees. As the original trees would have been within the footprint of the proposed residence the total tree removal to develop the site as planned is five protected trees.

Prior to the onset of construction the replacement trees will be relocated and installed within the new landscape. During construction the retained trees will be protected by exclusionary fencing and straw bale barricades.



## BACKGROUND

I have inspected eight individual trees growing on property at 1170 Signal Hill Road to evaluate their health status, structural integrity and suitability for incorporation into a development project. For purposes of identification numbered metal tags have been affixed to the tree trunks with corresponding locations documented on the attached site map. Plans prepared by the project architect have been reviewed to analyze the potential impacts to the trees.

The attached inventory includes tree species and trunk diameter at 24 inches above natural grade. Ratings for tree health, structure and suitability along with a summary of the potential impacts and recommendations for reducing impacts are included. Ratings are determined following the completion of a visual tree assessment. This type of evaluation is based on methods developed by Claus Mattheck and documented in The Body Language of Trees. The assessment involves an analysis of the biology and mechanics of each tree, which are then rated as “good”, “fair” or “poor”.

Suitability is determined using overall tree condition and industry data on species characteristics, including tolerances to site changes and specific construction impacts.

## OBSERVATIONS

### Site Description

The development site is located mid slope at the edge of a native Monterey cypress habitat. The vegetation on the property consists of ice plant, dune grasses and both native and “planted” Monterey cypress trees.

### Tree Description

Monterey cypress (*Cupressus macrocarpa*) is the dominant species on the property, one small Monterey pine (*Pinus radiata*) is growing on the slope below the existing home.

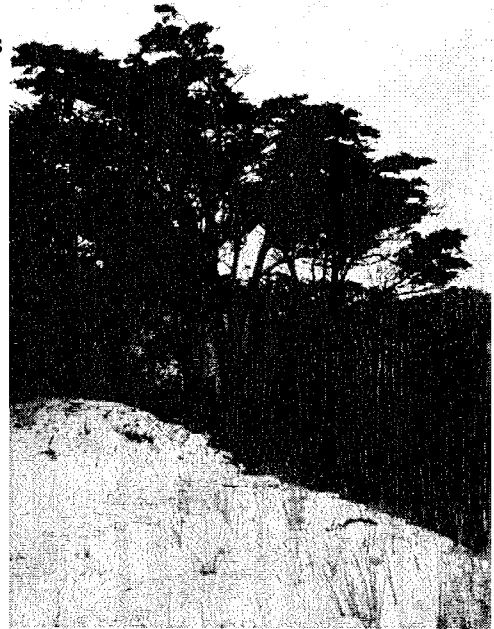
Trees #1, #3 and #4 are remnants of the native cypress forest. Tree #3 is pictured at right. It consists of multiple large diameter stems with a short, broad spreading canopy. This form is typical of the species when it develops in a low nutrient, windy environment.





Trees #5, #6 and #8 are cypress that have been planted in the landscape. Similar trunk diameters and the single trunk form indicate that the plants were likely generated at a nursery and planted during the same time period. Tree #5 is pictured.

These trees are in poor vigor. The canopies are thinning and small to medium size dead branching is visible. This could be caused by exposure to extensive salt spray and wind. The dead and discolored foliage is a symptom of cypress canker (*Seiridium cardinale*) a disease common to the species.



Two cypress trees were removed prior to my initial site visit. They were located below the existing residence. One stump remains visible, no evidence of the second stump remains but the tree is visible on an aerial photo dated 2007.



Six Monterey cypress have been planted in the same areas as replacements. The trees were generated from seed stock that originated at nearby Crocker Grove and provided by the Pebble Beach Company.

The trees are “plugs” and are the only trees available that have been generated from native, local stock.

## **CONSTRUCTION IMPACTS/RECOMMENDATIONS**

Tree removal will be a necessary component of the proposed project. Trees #5-#8 are growing within the proposed driveway area. Trees #9 and #10 are represented by the six replacement trees; they will be relocated to other areas of the property prior to construction.

The replacement trees that represent #9 and #10 will be monitored for a period of three years to ensure acclimation. During this time they will be protected from wind and salt spray by a barricade of burlap supported by posts in the ground. Supplemental irrigation will be provided initially by a "gator bag" system. This system covers the root zone and allows moisture to seep into the planting area slowly and consistently. The bags require filling approximately once every 10-14 days.

Seven Monterey cypress trees are proposed in the new landscape plan. These will replace trees #5, #6 and #8. They will be located between the roadway and the new residence.

Proper root pruning, described below, may be required for tree #3. Once the site staking is in place the need for this procedure and minor canopy alterations will be determined. If root pruning becomes necessary the following recommendations must be followed.

All root pruning should be performed by skilled labor. If roots are encountered by excavation equipment work must stop until the roots are properly pruned. Roots are to be pruned cleanly leaving bark intact. The following tools should be used:

- Hand-pruners
- Loppers
- Handsaw
- Reciprocating saw
- Chainsaw

The tree protection specifications attached within this report include recommendations for exclusionary fencing and straw bale barricades to avoid damage to trees during the construction process. The recommendations made within this report should be included as a condition of approval by Monterey County Planning Department.

Please call my office with any questions regarding the trees on this development site or the content of this report.

Respectfully submitted,

Maureen Hamb-WCISA Certified Arborist #2280

Construction Impact Analysis  
1170 Signal Hill Road

Tree #	Species	Diameter @ 24"	Health	Structure	Suitability	Impacts: High Moderate Low	Comments/Recommendations
1	Monterey cypress	3 stems 21-28"	good	fair	good	low	Growing outside construction area
2	Monterey pine	12.4"	poor	poor	fair	low	Growing below proposed construction area
3	Monterey cypress	group of 3 22, 30 & 24"	good	fair	good	moderate	Grading is proposed adjacent to canopy. Tree must be protected by fencing and barricades, any roots unearthed shall be properly pruned.
4	Monterey cypress	11.2"	fair	fair	good	moderate	Young tree with short stature and compact canopy. Must be protected with barricades and fencing.
5	Monterey cypress	22.4"	poor	fair	poor	high	Considerable dieback in foliar canopy caused by excessive wind, salt and cypress canker. Within footprint of proposed driveway/Remove and replant same species

Construction Impact Analysis  
1170 Signal Hill Road

Tree #	Species	Diameter @ 24"	Health	Structure	Suitability	Impacts: High Moderate Low	Comments/Recommendations
6	Monterey cypress	16.5"	poor	fair	poor	high	Considerable dieback in foliar canopy caused by excessive wind, salt and cypress canker. Within footprint of proposed driveway/Remove and replant same species
7	Eucalyptus	cluster	poor	poor	poor	high	Weakly structured cluster of stems, a portion has failed in the past. Within proposed driveway/Remove
8	Monterey cypress	22.5"	poor	fair	poor	high	As with trees 5 & 6, dieback from wind, salt and cypress canker has reduced tree vigor. Within driveway footprint/Remove and replace with same species.
9	Monterey cypress	41" @ grade	unknown	unknown	unknown	high	Tree removed prior to my initial site visit. Tree would have been within the building footprint. Three replacement trees have been planted to represent the removed tree/Replacement trees will be relocated to another area on the property prior to the onset of construction.
10	Monterey cypress	unknown	unknown	unknown	unknown	high	As with tree #9, this tree was removed prior to my initial site visit. No stump remains. The tree is documented on an aerial photo dated 2007. The tree would have been located within the footprint of the proposed residence. /Replacement trees will be relocated to another area on the property prior to construction.

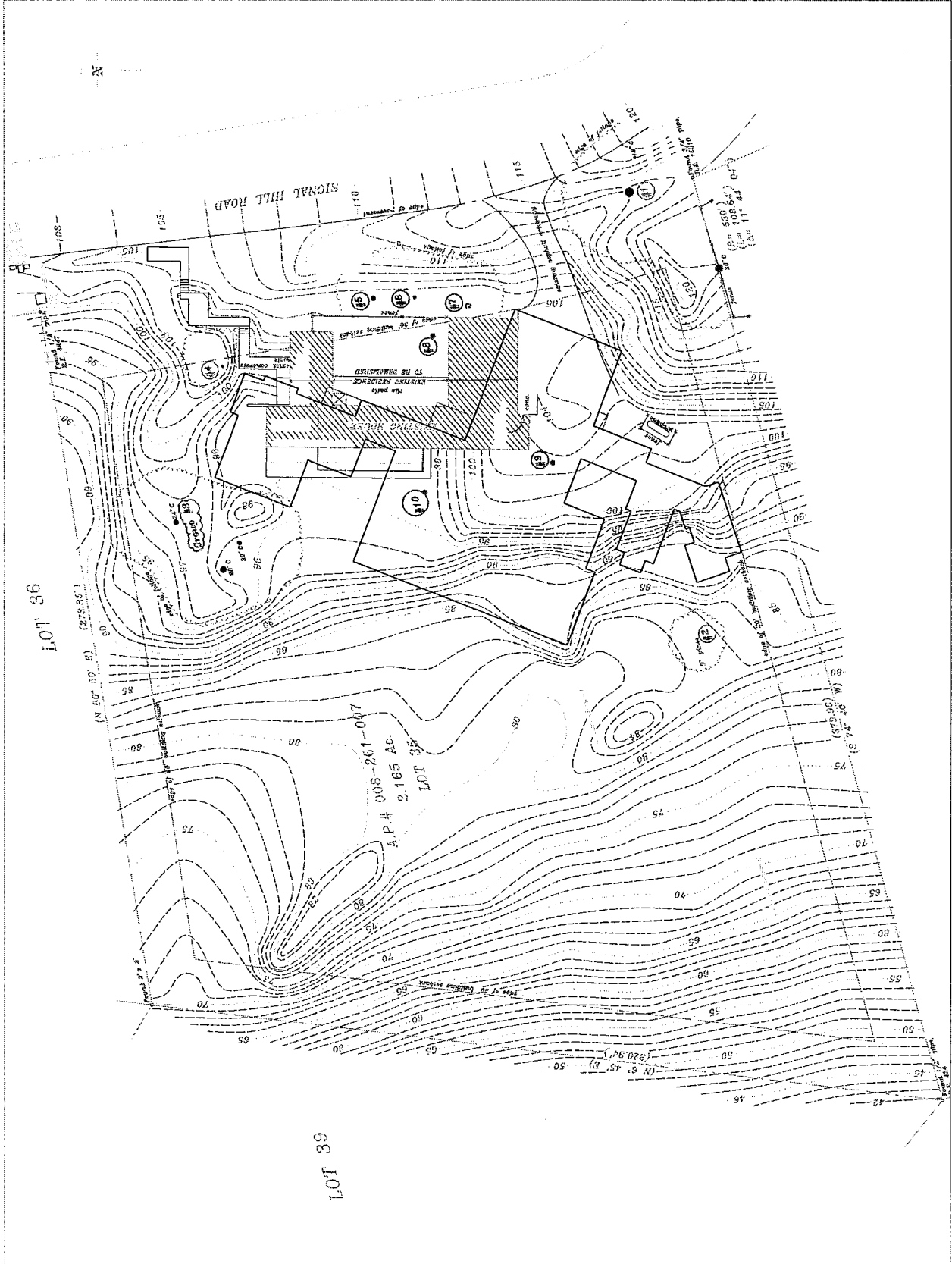
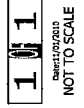
Map Key / Legend

- RETAIN AND PROTECT
- REMOVE DUE TO IMPACTS

1170 Signal Hill Road

Tree Location & Removal Plan

Maureen Hanib Consulting, Arborist  
 849 Almar Ave, Suite C #319  
 Santa Cruz, CA 95060  
 831-426-1287 office  
 831-234-7735 mobile  
 email: maureen@shcglobal.net



# ZANDER ASSOCIATES

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*Environmental Consultants*

June 8, 2010

Massy Mehdipour  
1425 Dana Ave.  
Palo Alto, CA 94301

**Biological Resource Assessment  
1170 Signal Hill Road  
Pebble Beach, Monterey County, California**

Dear Ms. Mehdipour:

Zander Associates has completed a baseline biological resource assessment of your property located at 1170 Signal Hill Road at Pebble Beach. We reviewed background documents, including current records of special status species in the California Natural Diversity Data Base (CNDDDB, 2010), and visited the property on two separate occasions during the spring blooming season to characterize vegetation/habitat types and conduct focused plant surveys. Our findings are presented below.

**Property Overview**

The property is an approximately 2.13-acre residential lot with an existing house overlooking 17-Mile Drive and the Pebble Beach shoreline on the Monterey Peninsula (Figure 1). The property is situated in an older (ca 1950's) residential subdivision on sandy dune substrates between two existing golf courses: Spyglass Hill & Cypress Point. The property also sits near the base of Signal Hill Dune, a protected remnant of a once more extensive dune system that historically occurred along the Monterey Peninsula shoreline. The historic dune system has been fragmented by sand mining, the construction of roads, golf courses, houses and other development over the years.

The existing house, driveway, landscaping and other residential amenities occupy approximately 0.40-acre of the site on a graded pad adjacent to Signal Hill Road. Several mature trees and shrubs, including Monterey cypress (*Cupressus macrocarpa*), eucalyptus (*Eucalyptus* sp.) and tea tree (*Leptospermum* sp.) are growing as landscape elements along Signal Hill Road and at the edge of the pad near the house.<sup>1</sup> West of the pad, the site slopes down (southwesterly) toward 17-Mile Drive through sandy dune terraces. Most of the undeveloped areas on the property are heavily colonized by non-native European beach grass

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<sup>1</sup>Native habitat for Monterey cypress occurs at Cypress Point, just south of the property; however, the trees on the site appear to have been planted as landscape elements.

(*Ammophila arenaria*) and iceplant (*Carpobrotus* spp.) but there are also limited areas of more native dune habitat.

## Methods

Zander Associates queried current (2010) CNDDDB online records for listings of special status plant and animal species for the Monterey 7.5' USGS quadrangle. We also consulted the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants and reviewed our own extensive files on the Pebble Beach area to compile a list of special status species known or suspected to occur in the vicinity of the site (Table 1).

Zander Associates biologists visited the site on two separate occasions during 2010 to survey the site and verify existing habitat conditions. On April 8, 2010 and again on May 5, 2010, we systematically traversed the entire site to search for target special status plants. We also visited known ("reference") locations for special status plant species in the Signal Hill area (primarily annual sand dune species with a limited blooming season) to confirm the appropriate timing of our surveys. We paid particular attention to potential habitat for special status wildlife species but did not conduct any focused surveys for animals. Following are descriptions of the general vegetation and wildlife habitat characteristics of the site and the results of our special status species assessment.

## Vegetation Types

Four general but overlapping and intergraded vegetation types occur on the property: European beach grass dominant, iceplant dominant, sparsely vegetated open sand, and mixed coastal dune scrub. Figure 2 indicates the general distribution and extent of these vegetation communities and a description of each is provided below.

European beach grass covers large areas of the lot and is especially dominant on the slopes west of the existing house (Photo 1). It often occurs in pure stands at the exclusion of other vegetation, but is also mixed with non-native iceplant and native coastal scrub elements such as mock heather (*Ericameria ericoides*) and coyote brush (*Baccharis pilularis*).<sup>2</sup> European beach grass was originally introduced to California in the late 1800s for the purpose of stabilizing dunes but is now considered one of the most pervasive exotic plants currently threatening dune environments on the west coast, driving out native species, reducing biodiversity and altering native dune morphology. The species spreads almost exclusively by rhizomes which form extensive underground systems and can rapidly colonize large areas, especially in sandy substrates.

Iceplant-dominated areas also occur on parts of the property, mostly well downslope of the existing house and pad toward the westerly borders of the lot (Photo 2). Dense iceplant mats largely preclude the establishment of other vegetation, but do allow occasional scattered

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<sup>2</sup> A solitary Monterey pine (*Pinus radiata*) sapling is also growing in a matrix of beachgrass and iceplant below the house and pad.

patches of aggressive colonizers like poison oak (*Toxicodendron diversilobum*) and a few isolated individuals of plants such as seacliff buckwheat (*Eriogonum parvifolium*) and mock heather. Iceplant is also interspersed with other vegetation types throughout the property. The species was brought to California in the early 1900s to stabilize soil along railroad tracks and roadways with thousands of acres planted until the 1970s. It has also been promoted as an ornamental plant because of its succulent foliage, bright magenta or yellow flowers and adaptability to harsh (e.g. dry, salty, windy) conditions. Ice plant grows very quickly, producing large, spreading mats. It flowers prolifically and the seeds disburse easily. The plant also reproduces vegetatively; even small pieces of the plant can root and grow easily. Consequently it has invaded foredune, dune scrub, coastal bluff scrub, coastal prairie, and maritime chaparral communities throughout coastal California. It is considered among the most invasive wildland pest plants by the California Exotic Pest Plant Council (CalEPPC), documented as aggressive invaders that displace natives and disrupt natural habitats.

Sparsely vegetated open sand occurs patchily on the property and is comprised of mostly bare white sands that support only scattered dune species, such as beach sagewort (*Artemisia pycnocephala*), mock heather, woolly lotus (*Lotus heermannii* var. *orbicularis*), sand verbena (*Abronia* sp.) and beach evening primrose (*Camissonia cheiranthifolia*). The open sandy areas with sparse native shrubs provide the best potential habitat on the property for plant species, most of which are annual and cannot tolerate much, if any, competition from other plants. The mapped open sand habitat just downslope and westerly of the existing house occurs as a small terrace on deep, loose sands that appears to have been created through sand excavation or movement relatively recently (Photos 3 & 4). Rhizomes of European beach grass are already colonizing the area and other invasives including iceplant and French broom (*Genista monspessulana*) are growing nearby. The open sandy areas to the west are more compacted but are also vulnerable to colonization by non-natives.

Coastal dune scrub vegetation, characterized by native shrubby species such as coyote brush, silver lupine (*Lupinus chamissonis*), coffee berry (*Rhamnus californica*), Pacific blackberry (*Rubus ursinus*), and mock heather, occurs in some areas as the dominant cover in a matrix of iceplant, beach grass and dune sedge (*Carex pansa*). Other prevalent species include seacliff buckwheat, poison oak, Pacific reed grass (*Calamagrostis nutkatensis*) and Mexican rush (*Juncus mexicanus*). Dune sedge is the significant ground cover in large areas dominated by this vegetation type, giving way to iceplant toward the southwesterly parts of the site and beach grass to the south and east (Photo 5). Prominent granitic outcrops, colonized by a mix of non-native and native scrub species and open sand, are found toward the westerly property boundary (Photo 6).

### **Wildlife Habitat**

Animals likely to use the project site include species adapted to sand dune and ruderal plant communities. Burrowing rodents such as the California ground squirrel (*Spermophilus beecheyi*), pocket gopher (*Thomomys umbrinus*), Norway rat (*Rattus norvegicus*) and the house mouse (*Mus musculus*) can live in dense beach grass and ice plant patches. In more



open areas, reptiles such as the coast horned lizard (*Phrynosoma coronatum frontale*), western fence lizard (*Sceloporus occidentalis*) and northern alligator lizard (*Gerrhonotus coeruleus*) may be found. The fossorial (sand burrowing) California legless lizard (*Anniella pulchra*) has been observed in the vicinity. Common mammals in the Del Monte Forest area such as raccoons (*Procyon lotor*), skunks (*Mephitis mephitis*), opossums (*Didelphis virginiana*) and black-tailed deer (*Odocoileus hemionus*) and birds such as Brewer's blackbird (*Euphagus cyanocephalus*), scrub-jay (*Aphelocoma californica*) and white crowned sparrow (*Zonotrichia leucophrys*) would also be expected.

### Special Status Species

For this assessment, special status species are defined as: those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS); those listed or proposed for listing as rare, threatened or endangered by the California Department of Fish and Game (CDFG); plants occurring on list 1A, 1B or 2 of the CNPS Inventory of Rare and Endangered Vascular Plants of California (2001); and animals designated as "Species of Special Concern" by CDFG. Nesting migratory birds and raptors, protected by the Migratory Bird Treaty Act (16 USC 703) and the California Fish and Game Code (Section 3503.5), are also afforded special status.

We searched the current CNDDDB listings of special status plant and animal species for the Monterey 7.5' USGS quadrangle and checked other sources to develop a list of potential species for our 2010 surveys (see Table 1). During our field surveys, we were particularly focused on plant species (primarily annual or ephemeral plants) known to occur in dune environments in the area. We also paid attention to potential habitat for special status wildlife associated with dunes, although we did not conduct focused surveys for any animal species. A discussion of the primary plant and animal species we targeted and evaluated is presented below. Notes on a more comprehensive list of potential species are provided in Table 1.

#### Dune plants

Monterey spineflower (*Chorizanthe pungens* var. *pungens*), Menzies' wallflower (*Erysimum menziesii*), sand gilia (*Gilia tenuiflora* var. *arenaria*), beach layia (*Layia carnosa*) and Tidestrom's lupine (*Lupinus tidestromii*) have all been observed in the dune habitats associated with Signal Hill. Each is listed at either the state or federal level (or both) as rare, threatened or endangered (see Table 1 for regulatory standing of each). These endemic dune species have a limited season of blooming and mostly depend on seed for their reproduction and continued survival. We visited known locations for each of these species and found them in bloom at Signal Hill and at sites along the 17-Mile Drive shoreline during both of our 2010 site visits. We did not find these or any other special status plants, except for Monterey pine and Monterey cypress (see below) on the property at 1170 Signal Hill Road.

### Monterey pine and Monterey cypress

Both Monterey pine and Monterey cypress are native to the Del Monte Forest and are included on the CNPS List 1B, species considered rare, threatened or endangered in California and elsewhere. Several mature specimens of Monterey cypress are growing adjacent to (northwesterly of) the pad for the house and one relatively young (just beyond sapling stage) individual Monterey pine is growing downslope and southerly of the house. The cypress appear to have been planted as ornamental landscape elements and the pine is likely a seedling of trees in the landscape of adjacent houses. Nonetheless, because these trees are in their native range, they are afforded special consideration; their removal would be subject to review by the Pebble Beach Company Forester and/or Monterey County.

### California black legless lizard (*Anniella pulchra nigra*)

The black legless lizard is a CDFG Species of Special Concern.<sup>3</sup> This species lives in a number of habitats in dunes and sandy areas, from immediately above high tide, the crest of sand dunes, and the edge of the hind dunes to inland sandy areas associated with oak woodlands, grasslands, maritime chaparral and other habitats. They are fossorial animals that burrow in sand and leaf litter beneath plants growing in these habitats and feed on insects and other invertebrates. Some plant cover is required to support insects that, in turn, serve as food for the lizards.

Legless lizards are most abundant in dune habitats where native vegetation is present. While they have also been found along the edges of ice plant mats within dune ecosystems, ice plant mats are not considered suitable habitat for the species. The dense root structure of ice plant and lack of leaf litter and duff produced by the plant appear to provide poor burrowing conditions. The species was found as a result of directed surveys on a nearby lot along Signal Hill Road in 2006 and anecdotal sightings have been reported from the area. The sandy substrates on the property provide potential habitat for this species.

### Coast horned lizard (*Phrynosoma coronatum frontale*)

This lizard is also a CDFG Species of Special Concern. Coast horned lizards inhabit open country, especially sandy areas, washes, flood plains, and wind-blown deposits in a wide variety of habitats, including coastal dunes, shrublands, woodlands, riparian habitats and annual grassland. Warm, sunny, open areas are a main habitat requirement, along with patches of loose soil where the lizard can bury itself. The California horned lizard is known to occur in many habitat types, and it could possibly occur in the sandy soils of the site, especially where there are open sandy areas with sparse native vegetation.

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<sup>3</sup> Some herpetologists and authorities consider the black legless lizard a melanistic (darker colored) adult form of the California legless lizard (*A. pulchra*) that occurs in the Monterey area; both are CSC species.

### Smith's Blue Butterfly (*Euphilotes enoptes smithi*)

Smith's blue butterfly is a federally endangered species that occurs within sand dune habitats. It is completely dependent upon coast and/or seacliff buckwheat during all life stages. During its one-year lifespan, mate location, copulation, oviposition and pupae emergence all occur on the flowerheads of the buckwheat species during peak flowering season, June through September. The dormant pupal form takes place during non-flowering periods. During our floristic surveys we found seacliff buckwheat (*Eriogonum parvifolium*) plants, primarily within dune scrub habitat.

Smith's blue butterfly has not been recorded in the Pebble Beach area and there are historic gaps in its distribution between the City of Monterey shoreline and the Carmel Valley area. Although apparently suitable habitat and host plants for this species occur along the 17-Mile Drive shoreline and in the vicinity of Signal Hill Dune, no butterflies have ever been recorded and none were observed in these areas or anywhere along the entire 17-Mile Drive during several regular, seasonally-timed summer surveys of the area conducted between 2000 and 2008 by Dr. Richard Arnold, a noted expert on Smith's blue butterfly. It is reasonable to assume that, given the species' history of absence from the area, Smith's blue butterfly is unlikely to occur on the property at 1170 Signal Hill Road.

### Migratory birds

The Migratory Bird Treaty Act (16 USC 703) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, and their eggs and nests. As used in the act, the term "take" is defined as meaning, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." Section 3503.5 of the California Fish and Game Code also protects the nests and eggs of birds-of-prey and essentially overlaps with the Migratory Bird Treaty Act. No bird nests were observed on the project site during our surveys but the few trees, shrubs and open sandy areas could provide marginally suitable nesting habitat for some species.

### **Conclusion**


We did not find any of the dune plant species on the target list or any other special status plants during our spring 2010 focused site surveys.<sup>4</sup> We assume the potential presence of black legless lizards and coast horned lizards based on habitat characteristics on the site. Although coast buckwheat, the host plant for the federally-listed Smith's blue butterfly (*smithi*) occurs on the site, we do not expect the butterfly to occur in the vicinity based on previous years of surveys and assessment in the area.

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<sup>4</sup> Not including Monterey pine and Monterey cypress as discussed above

We trust that this assessment will assist you in your application process with Monterey County. Please call or email ([mzander@zanderassociates.com](mailto:mzander@zanderassociates.com)) me if you have any questions.

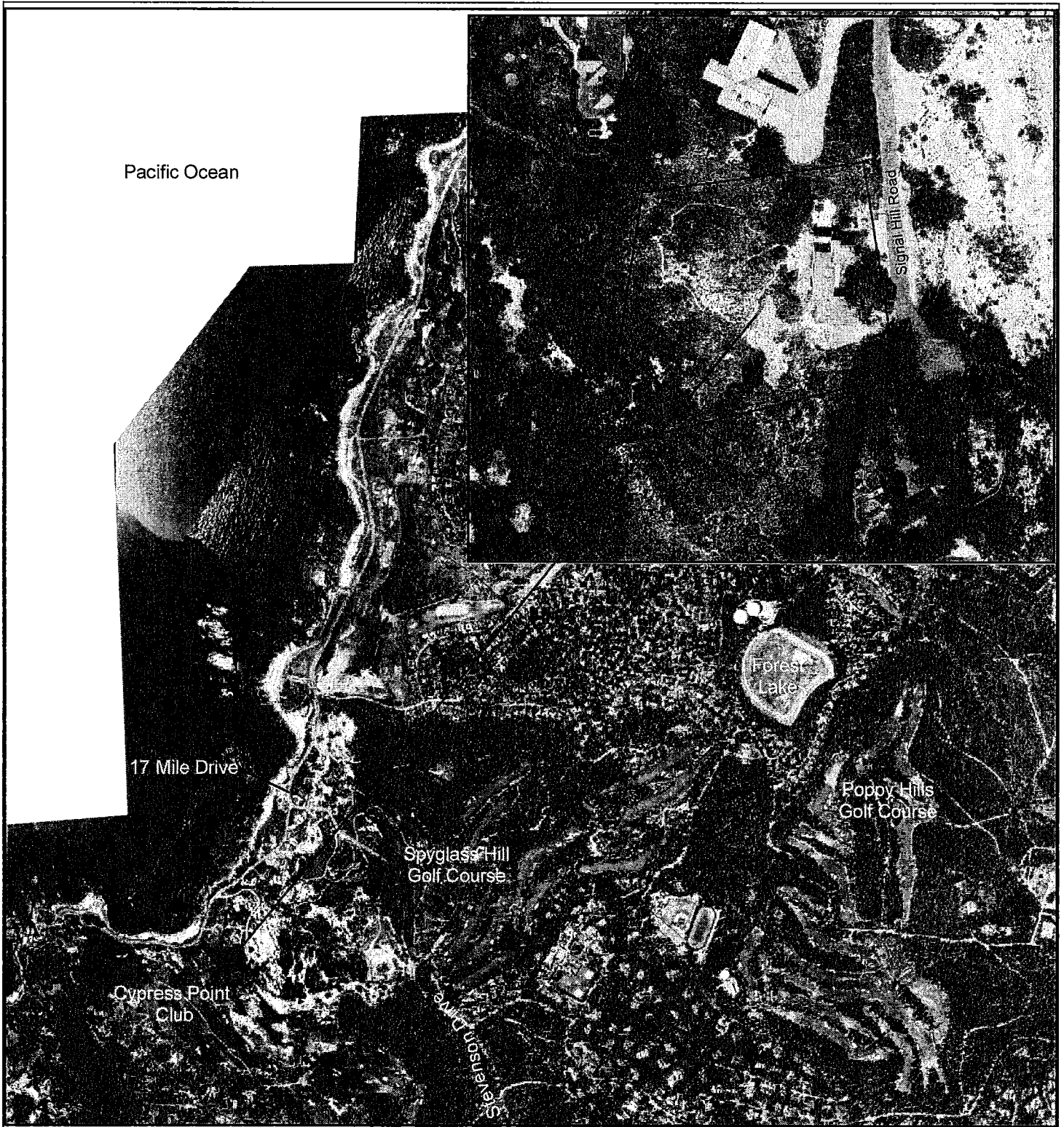
Sincerely,

A handwritten signature in black ink, appearing to read "M. Zander", with a long horizontal flourish extending to the right.

Michael Zander  
Principal

Attachments:      Figure 1, Site Location  
                          Figure 2, Vegetation Types  
                          Table 1, Special Status Species  
                          Table 2, Plants Observed on the Site  
                          Site Photographs

Copies (via email)      Bill Bernstein,  
                                  Maureen Wruck



**Legend**

 Property Boundary

1 inch equals 1,667 feet



Zander Associates  
 Environmental Consultants  
 4460 Redwood Hwy, Suite 16-240  
 San Rafael, CA 94903

Site Location  
 Mehdi pour Property  
 Pebble Beach, California

Figure  
 1







Date: 6/10



Scale: 1" = 50'

Zander Associates  
 Environmental Consultants  
 4460 Redwood Hwy, Suite 16-240  
 San Rafael, CA 94903

**LEGEND:**

-  Open Sand
-  Beach Grass Dominant
-  Iceplant Dominant
-  Coastal Scrub
-  Existing Residence and Landscaping
-  Property Boundary

Vegetation Types  
 Mehdi-pour Property  
 Pebble Beach, California

Date: 6/10

Figure  
 2

Table 1: Special Status Species Evaluated for Potential to Occur on the Mehdi pour Property\*

PLANTS	Status Fed/CA/CNPS	Habitat and Blooming Period	Findings <sup>2</sup>
<i>Allium hickmanii</i> (Hickman's onion)	--/--/1B.2	Sandy loam soils and vernal swales in a variety of habitats including, closed-cone coniferous forest, chaparral, coastal scrub, valley and foothill grassland, and coastal prairies; blooming period April through May	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i> (Hooker's manzanita)	--/--/1B.2	Sandy soils, sandstone outcrops in coastal scrub, chaparral, cismontane woodland, and closed-cone coniferous forest habitats in Monterey and Santa Cruz counties; blooms February through May (evergreen)	Marginal habitat present for species on site. Not observed and not expected to occur.
<i>Arctostaphylos pumila</i> (Sandmat manzanita)	--/--/1B.2	Closed-cone coniferous forest, chaparral, coastal dunes, and cismontane woodland habitats; sandy soil with other chaparral associates; blooms February through May (evergreen)	Potential to occur on sandy substrates, usually more inland/less exposed than those on site. Species not present during directed surveys.
<i>Astragalus tener</i> var. <i>titi</i> (coastal dunes milk-vetch)	E/E/1B.1	Low ground, alkali flats, and flooded lands in coastal bluff scrub or coastal dunes along the coast; blooms March through June	Marginal habitat present for species on site. Not observed and not expected to occur.
<i>Callitropsis goveniana</i> (Gowan cypress)	T/--/1B.2	Closed-cone coniferous forest on coastal terraces, usually on sandy soils at 30-300 meters.	Not within local native range of species. Not observed and not expected to occur on site.
<i>Callitropsis macrocarpa</i> (Monterey cypress)	--/--1B.2	Closed-cone coniferous forest usually on granitic soils at 10-30 meters.	Present on site. Several mature Monterey cypress trees that appear to have been planted as landscape elements on site.
<i>Chorizanthe pungens</i> var. <i>pungens</i> (Monterey spineflower)	T/--/1B.2	Coastal dunes, chaparral, cismontane woodland, and coastal scrub habitats in Monterey and Santa Cruz counties; blooming period April through June	Not present. Species not present during directed surveys.
<i>Chorizanthe robusta</i> var. <i>robusta</i> (Robust spineflower)	E/--/1B.1	Sandy soils in cismontane woodland openings and coastal dune and scrub habitats; blooms May through September	Not present. Species not present during directed surveys.
<i>Clarkia jolonensis</i> (Jolon clarkia)	--/--1B.2	Chaparral, cismontane woodland, and coastal scrub habitats; blooms April through June (evergreen)	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Collinsia multicolor</i> (San Francisco collinsia)	--/--1B.2	Closed-cone coniferous forest and coastal scrub, usually on decomposed shale (mudstone) mixed with humous; blooms March through May	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> (Seaside bird's-beak)	--/E/1B.1	Often found on disturbed closed-cone coniferous, chaparral, cismontane woodland, coastal scrub or dune sites; blooming period May through September	Marginal habitat present for species on site. Not observed and not expected to occur.
<i>Delphinium hutchinsoniae</i> (Hutchinson's larkspur)	--/--/1B.2	Semi-shaded, slightly moist slopes in broad leaf upland forest, chaparral, coastal prairie or coastal scrub habitats in Monterey County; blooms March through June	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Ericameria fasciculatum</i> (Eastwood's goldenbush)	--/--/1B	Sandy openings of closed-cone coniferous forest, maritime chaparral, coastal scrub or coastal dune habitats in Monterey County; blooming period July through October	Not present. Species not present during directed surveys.



Table 1: Special Status Species Evaluated for Potential to Occur on the Mehdiপুর Property\*

PLANTS	Status <sup>1</sup> Fed/CA/CNPS	Habitat and Blooming Period	Findings <sup>2</sup>
<i>Eriogonum nortonii</i> (Pinnacles buckwheat)	--/--/1B.3	Sandy soils, often on recent burns in chaparral, and valley and foothill grassland; blooms May through August	Only marginal habitat present for species on site and outside of species range. Not observed and not expected to occur.
<i>Erysimum ammophilum</i> (Coast wallflower)	--/--/1B.2	Sandy openings in maritime chaparral, coastal dunes and coastal scrub; blooms February through June	Not present. Species not present during directed surveys.
<i>Erysimum menziesii</i> ssp. <i>menziesii</i> (Menzies's wallflower)	E/E/1B.1	Localized on coastal dunes; blooms March through June	Not present. Species not present during directed surveys.
<i>Fritillaria liliacea</i> (Fragrant fritillary)	--/--/1B.2	Coastal scrub, coastal prairie, valley and foothill grasslands, often on serpentine soils; generally blooms from February-April	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> (Sand gilia)	E/T/1B.2	Cismontane woodland, maritime chaparral, coastal scrub and dune habitats in Monterey County, in particular bare, wind-sheltered areas near dune summits or in hind dunes; blooming period April through May	Not present. Species not present during directed surveys.
<i>Grindelia hirsutula</i> var. <i>maritima</i> (San Francisco gumplant)	--/--/1B.2	Sandy or serpentine soils on sea bluffs in coastal bluff scrub, coastal scrub, valley and foothill grassland; blooms June through September	Only marginal habitat present for species on site and outside of species range. Not observed and not expected to occur.
<i>Horkelia cuneata</i> ssp. <i>sericea</i> (Kellogg's horkelia)	--/--/1B.1	Closed-cone coniferous forest, chaparral, and coastal scrub habitats, old dunes and coastal sand hills; blooms April through September	Only marginal habitat present for species on site and outside of species range. Not observed and not expected to occur.
<i>Layia carnosa</i> (Beach layia)	E/E/1B.1	On sparsely vegetated semi-stabilized dunes; blooms March through July	Not present. Species not present during directed surveys.
<i>Lupinus tidestromii</i> (Tidestrom's lupine)	E/E/1B.1	Adjacent to ocean on partially stabilized dunes; blooms April through June	Not present. Species not present during directed surveys.
<i>Malacothamnus palmeri</i> var. <i>palmeri</i> <i>involutus</i> (Carmel Valley bush mallow)	--/--/1B.2	Burn follower on tallus hilltops and slopes in chaparral, cismontane woodland and coastal scrub; blooms May through August	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Malacothamnus palmeri</i> var. <i>palmeri</i> (Santa lucia bush mallow)	--/--/1B.2	Dry rocky slopes within chaparral at 60 to 360 meters, blooms May through July	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> (Carmel Valley malacothrix)	--/--/1B.2	Rock outcrops within chaparral; blooms June through December	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Microseris paludosa</i> (Marsh malacothrix)	--/--/1B.2	Moist habitat within closed-cone coniferous forest, cismontane woodland, coastal scrub and valley and foothill grassland; blooms April through June	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Pinus radiata</i> (Monterey pine)	--/--/1B.1	Closed-cone coniferous forest and cismontane woodland.	Present. Single individual of this species occurs on slope below existing house.



Table 1: Special Status Species Evaluated for Potential to Occur on the Mehdi pour Property\*

PLANTS	Status <sup>1</sup> Fed/CA/CNPS	Habitat and Blooming Period	Findings <sup>2</sup>
<i>Piperia yadonii</i> (Yadon's rein orchid)	E/--/1B.1	Poorly drained sandy soils of closed-cone coniferous forest, chaparral and coastal scrub habitats; blooms May through August	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Plagiobothrys uncinatus</i> (Hooked popcorn-flower)	--/--/1B.2	Sandstone outcrops and canyon sides often in burned or disturbed areas at 300 to 820 meters, within chaparral, cismontane woodland, valley and foothill grassland and coastal bluff scrub; blooms April through May	Habitat conditions not appropriate and outside of species range. Not observed and not expected to occur.
<i>Potentilla hickmanii</i> (Hickman's cinquefoil)	E/E/1B.1	Freshwater marshes, seeps and small streams in open or forested areas along the coast; blooms April through August	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Rosa pinetorum</i> (Pine rose)	--/--/1B.2	Perennial shrub found in closed-cone coniferous forest; blooms May through July	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Trifolium polyodon</i> (Pacific Grove clover)	--/R/1B.1	Along small springs and seeps in grassy openings in closed-cone coniferous forest, meadows and coastal prairie; blooms April through June	No suitable habitat for species on site. Not observed and not expected to occur.
<i>Trifolium trichocalyx</i> (Monterey clover)	E/E/1B.1	Poorly drained low nutrient soil underlain with hardpan or burn areas within closed-cone coniferous forest; blooms April through June	No suitable habitat for species on site. Not observed and not expected to occur.
ANIMALS	Status <sup>1</sup> Fed/CA	Habitat	Findings <sup>2</sup>
INVERTEBRATES			
<i>Euphilotes enoptes smithi</i> (Smith's blue butterfly)	E/--	Most commonly found in coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz counties. Found in association with host plant, <i>Eriogonum latifolium</i> and <i>Eriogonum parvifolium</i> , which are utilized as both larval and adult foodplants.	Very limited potential to occur. Host plants occur on site, but species has not been found along the 17-Mile Drive shoreline during directed surveys over the last ten years.
AMPHIBIANS / REPTILES			
<i>Ambystoma californiense</i> (California tiger salamander)	T/CE	Grasslands and open oak woodlands with ground squirrel or gopher burrows for underground retreats, and breeding ponds such as seasonal wetlands, vernal pools or slow-moving streams that do not support predatory fish or frog populations	No suitable habitat. No suitable breeding or aestivation habitat available on site. Nearest recorded location is approximately 6.4 miles south of site at Palo Corona Ranch.
<i>Rana draytonii</i> (California red-legged frog)	T/CSC	Lowlands and foothills in or near permanent sources of deep water within streams, marshes, and occasionally ponds with dense, shrubby, or emergent riparian vegetation.	No suitable habitat. Ponds, streams and moist forest understory not present. Nearest recorded location is approximately 0.49 mile north of site at Seal Rock Creek.
<i>Actinemys marmorata pallida</i> (Southwestern pond turtle)	--/CSC	Requires aquatic habitats with permanent or persistent water and protected areas for basking such as partially submerged rocks or logs, floating vegetation mats or open mud banks	No suitable habitat. Deep waters, ponds and streams not present.
<i>Phrynosoma coronatum</i> (Coast horned lizard)	--/CSC	Occurs in areas with loose sandy soils and moderate cover of chaparral, scrub and/or grasslands.	Potential to occur on site. Species could occur in open sands associated with mixed coastal scrub vegetation.

Table 1: Special Status Species Evaluated for Potential to Occur on the Mehdipour Property\*

ANIMALS	Status Fed/CA	Habitat	Findings <sup>2</sup>
<i>Anniella pulchra nigra</i> (Black legless lizard)	--/CSC	Monterey and Morro Bay areas in moist dunes or sandy soils with mock heather & bush lupine	Potential to occur on site. Species could occur in open sands associated with mixed coastal scrub vegetation.
<b>BIRDS</b>			
<i>Pelicanus occidentalis californicus</i> (California brown pelican)	D/E	Is a colonial nester on coastal islands just outside the surf line. Islands are of small to moderate size and afford immunity from attack by ground-dwelling predators.	No suitable nesting habitat on site.
<i>Charadrius alexandrinus nivosus</i> (Western snowy plover)	T/CSC	Federal listing applies to nesting sites of pacific coastal populations only. For nesting, require sandy, gravelly or friable soils that are found on sandy beaches, salt pond levees and shores of large alkali lakes.	No suitable nesting habitat. Property too far removed from coastline to provide suitable nesting habitat.
<i>Athene cucularia</i> (Burrowing owl)	--/CSC	Ground nester in open dry annual or perennial grasslands, deserts and scrublands with low-growing vegetation, dependent upon burrowing mammals (i.e. California ground squirrel)	Only marginal habitat present for species on site and no evidence of ground squirrel or other burrows. Species (or sign) not observed and not expected to occur on site.
<i>Cypseloides niger</i> (Black swift)	--/CSC	Breed in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above surf. Forage widely.	No suitable nesting habitat on site
<b>MAMMALS</b>			
<i>Antrozous pallidus</i> (Pallid bat)	--/CSC	Variety of habitats, most common in open, dry communities with rocky and/or forested areas for roosting.	No suitable roosting habitat on site. The cypress trees that occur on site are not of adequate density to provide suitable roosting habitat.

## 1. Status Explanations

**Federal (Fed)**

E = listed as endangered under the federal Endangered Species Act

T = listed as threatened under the federal Endangered Species Act

D = delisted

-- = no designation

**California State (CA)**

R = listed as rare under the California Endangered Species Act

E = listed as endangered under the California Endangered Species Act

T = listed as threatened under the California Endangered Species Act

CE = candidate for endangered under the California Endangered Species Act

CSC = California Department of Fish and Game Species of Special Concern

-- = no designation

**California Native Plant Society (CNPS)**

IB = plants considered rare, threatened or endangered in California and elsewhere.

IB.1 = seriously endangered in CA

IB.2 = fairly endangered in CA

IB.3 = not very endangered in CA

## 2. Findings based on literature review, field surveys and assessment of habitat types present, and knowledge of species habitat requirements.

\*Source: Search of the California Department of Fish and Game's Natural Diversity Database (CDFG 2010) occurrences and the California Native Plant Society's On-line Inventory (CNPS 2010) for the Monterey 7.5-minute USGS quadrangle.

Table 2  
Plants Observed on the Site

SCIENTIFIC NAME	COMMON NAME
<i>Abronia latifolia</i>	yellow sand verbena
<i>Abronia umbellata</i>	pink sand verbena
<i>Aira caryophyllea</i>	*hair grass
<i>Ammophila arenaria</i>	*European beachgrass
<i>Artemisia pycnocephala</i>	beach sagewort
<i>Baccharis pilularis</i>	coyote brush
<i>Briza maxima</i>	*rattlesnake grass
<i>Bromus diandrus</i>	*rippgut grass
<i>Bromus madritensis</i> ssp. <i>madritensis</i>	*Spanish brome
<i>Calamagrostis nutkaensis</i>	Pacific reed-grass
<i>Calystegia soldanella</i>	beach morning-glory
<i>Camissonia cheiranthifolia</i>	beach evening primrose
<i>Cardionema ramosissimum</i>	sand mat
<i>Carex pansa</i>	sand dune sedge
<i>Carpobrotus chilense</i>	*sea fig
<i>Carpobrotus edulis</i>	*Hottentot fig
<i>Cryptantha leiocarpa</i>	coast popcorn flower
<i>Cupressus macrocarpa</i>	Monterey cypress
<i>Dudleya caespitosa</i>	sea lettuce
<i>Ericameria ericoides</i>	mock-heather
<i>Erigeron glaucus</i>	seaside daisy
<i>Eriogonum parvifolium</i>	seacliff buckwheat
<i>Eschscholzia californica</i> var. <i>maritima</i>	California poppy
<i>Euphorbia peplus</i>	*petty spurge
<i>Eucalyptus</i> sp.	*eucalyptus
<i>Filago gallica</i>	*narrow-leaved filago
<i>Galium aparine</i>	*goose-grass
<i>Genista monspessulana</i>	*French broom
<i>Juncus mexicanus</i>	Mexican rush
<i>Leptospermum</i> sp.	*tea tree
<i>Lessingia californica</i> var. <i>californica</i>	California beach-aster
<i>Lotus heermannii</i> var. <i>orbicularis</i>	woolly lotus
<i>Lotus scoparius</i> var. <i>perplexans</i>	Hoover's lotus
<i>Lupinus chamissonis</i>	silver bush lupine
<i>Madia sativa</i>	coast tarweed
<i>Marah fabaceus</i>	man-root
<i>Medicago polymorpha</i>	*bur-clover
<i>Oxalis pes-caprae</i>	*Bermuda buttercup
<i>Phalaris californica</i>	California canary-grass
<i>Pinus radiata</i>	Monterey pine
<i>Plantago coronopus</i>	*cut-leaf plantain
<i>Poa unilateralis</i>	San Francisco blue grass
<i>Rhamnus californica</i> ssp. <i>californica</i>	California coffee-berry
<i>Rubus ursinus</i>	Pacific blackberry
<i>Senecio vulgaris</i>	*common groundsel
<i>Sonchus asper</i>	*prickly sow-thistle
<i>Sonchus oleraceus</i>	*common sow thistle
<i>Toxicodendron diversilobum</i>	poison-oak
<i>Vulpia octoflora</i> var. <i>octoflora</i>	slender fescue

Site Photographs  
1170 Signal Hill Road

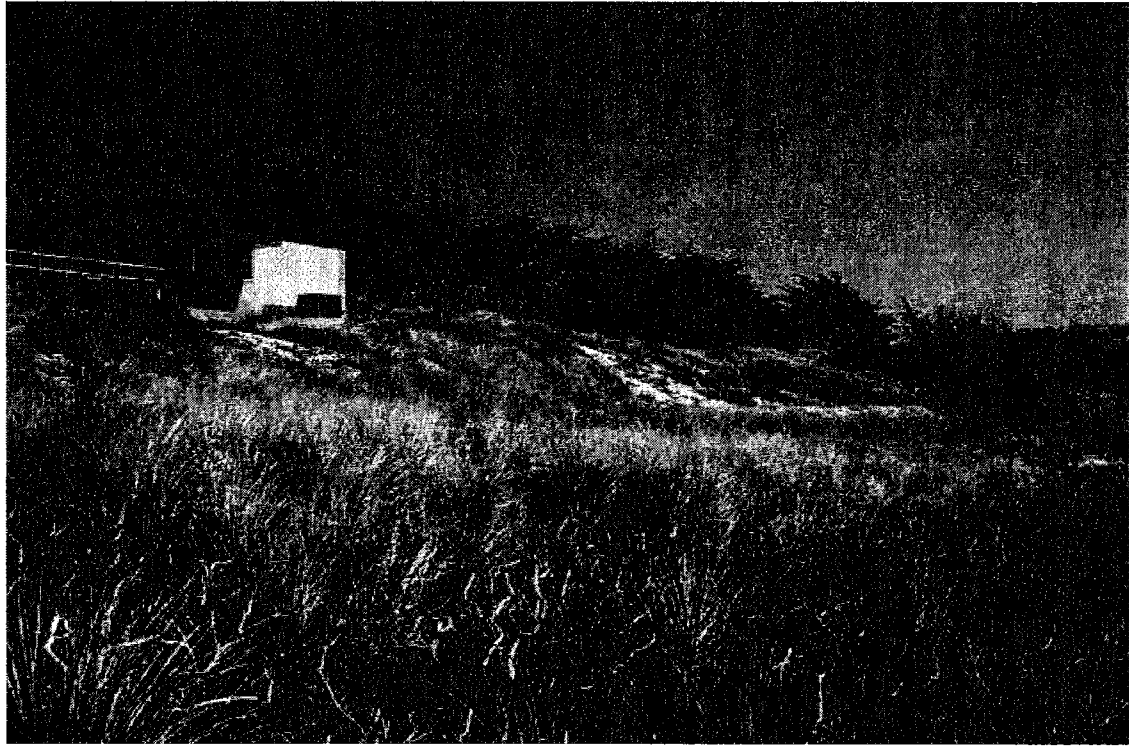


Photo 1: European beachgrass on slopes below existing house

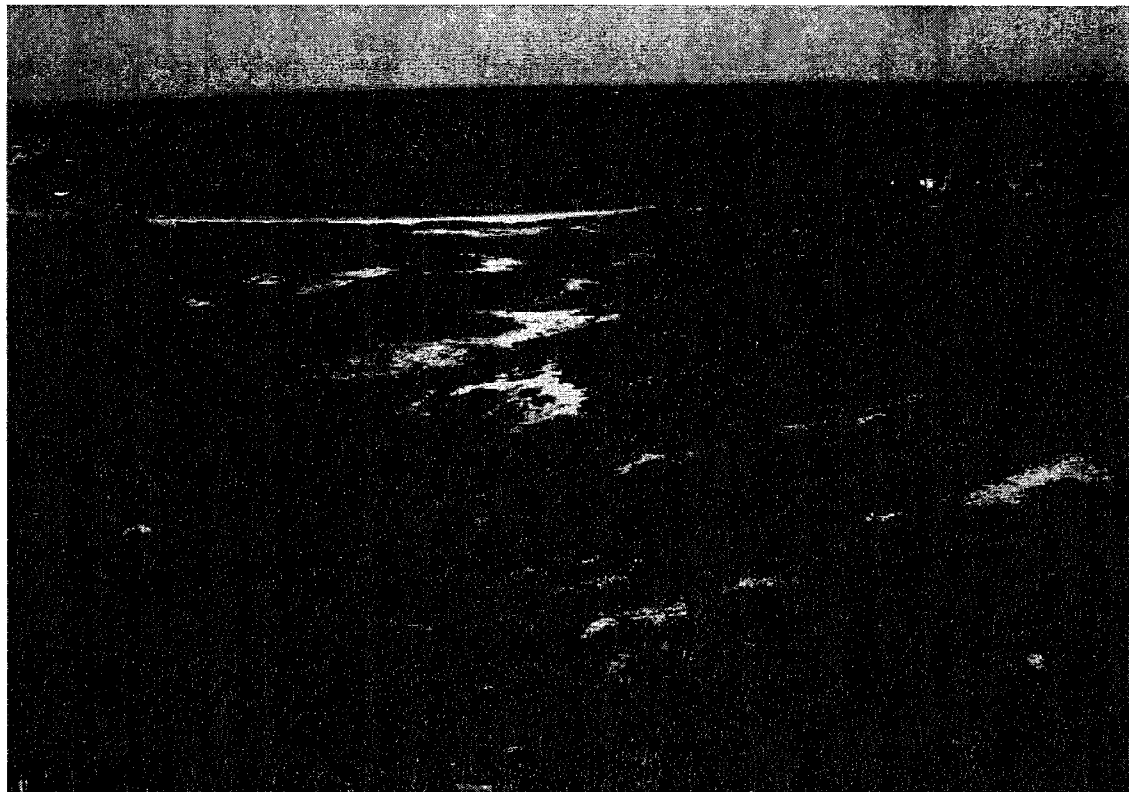


Photo 2: Iceplant dominated slopes along westerly site border

Site Photographs  
1170 Signal Hill Road

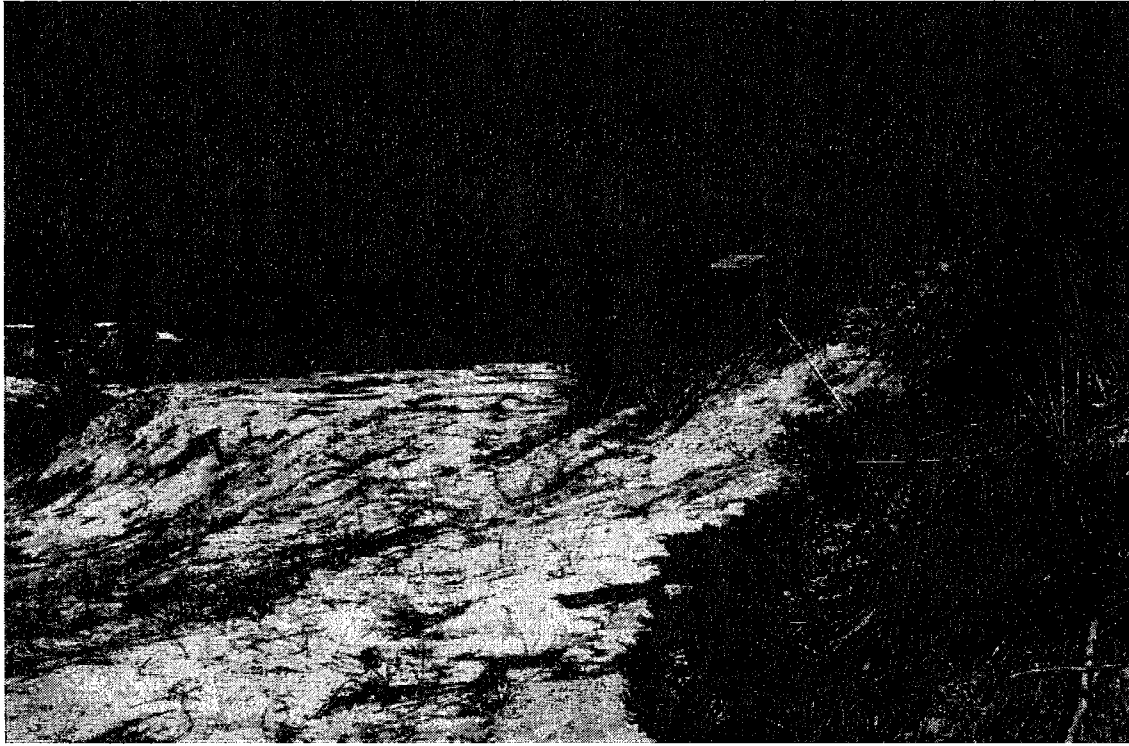


Photo 3: Looking northerly toward recent open sandy terrace below residence

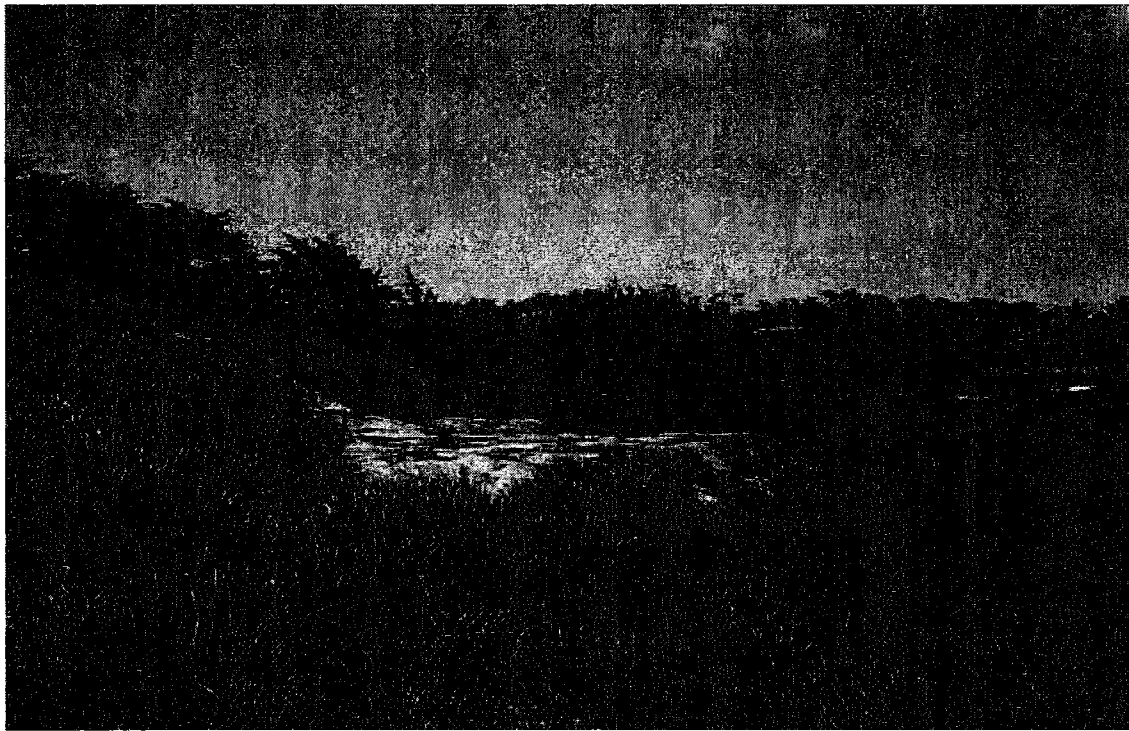


Photo 4: Looking southerly toward recent open sandy terrace surrounded by beachgrass below residence

Site Photographs  
1170 Signal Hill Road



Photo 5: Coastal scrub with dune sedge understory merging to beachgrass



Photo 6: Coastal scrub with granitic outcrop in middle distance

*Maureen Hamb-WCISA Certified Arborist #2280  
Professional Consulting Services*



**TREE RESOURCE EVALUATION  
CONSTRUCTION IMPACT ANALYSIS  
1170 SIGNAL HILL ROAD, PEBBLE BEACH**

**Prepared for  
Massy Mehdipour**

**June 27, 2011**

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## **ASSIGNMENT/SCOPE OF SERVICES**

Residential development plans have been updated for property located at 1170 Signal Hill Road in Pebble Beach (APN 008-261-007). The project includes the demolition of an existing residence and construction of a new home using a portion of the original footprint. The property is sparsely forested with both native and planted Monterey cypress that will be impacted by the project. I was retained to evaluate the condition of the existing trees and determine the impacts related to the proposed development. I submitted the analysis in October of 2010. Since that time the plans have been modified and updated and the following evaluation is based on the most recent plans. To revise my initial findings I have performed the following:

- Visually inspect each tree to update the health status, structural integrity and suitability for incorporation into the development based on tree condition and species tolerances.
- Review most recent development plans (grading plans prepared by Whitson Engineering) and evaluate potential construction related impacts.
- Provide recommendations for tree removal/tree retention based on construction related impacts.
- Provide recommendations for reducing impacts to retained trees.
- Create a tree protection plan.

## **SUMMARY**

Residential development is plans have been recently modified for property located at 1170 Signal Hill Road in Pebble Beach. The project includes the demolition of an existing residence and construction of a new home on a portion of the original footprint.

The site is a sloping sand dune area at the edge of a native Monterey cypress habitat. Eight trees on the property were evaluated and inventoried, recommendations have been made for tree retention and tree removal based on the proposed impacts. Three "planted" cypress and one cluster of eucalyptus are growing within the footprint of the new development and will require removal.

Two additional cypress were removed previously without proper approvals. Replacement Monterey cypress seedlings acquired from Pebble Beach Company and generated from Crocker Grove seed stock have been installed in the same area to represent the removed trees as required by Monterey County Planning staff. As the original trees would have been within the footprint of the proposed residence the total tree removal to develop the site as planned is five trees.



Grade changes are proposed adjacent to two retained trees. Any site disturbance within the defined Critical Root Zone (CRZ) will require monitoring and proper root pruning. During construction the retained trees will be protected by exclusionary fencing and straw bale barricades.

## **BACKGROUND**

In October of 2010 I inspected eight individual trees growing on property at 1170 Signal Hill Road to evaluate their health status, structural integrity and suitability for incorporation into a development project. For purposes of identification numbered metal tags were affixed to the tree trunks with corresponding locations documented on the attached site map. The most recent grading plans prepared by Whitson Engineering have been reviewed to analyze the potential impacts to the trees.

The attached inventory includes tree species and trunk diameter at 24 inches above natural grade. Ratings for tree health, structure and suitability along with a summary of the potential impacts and recommendations for reducing impacts are included. Ratings are determined following the completion of a visual tree assessment. This type of evaluation is based on methods developed by Claus Mattheck and documented in The Body Language of Trees. The assessment involves an analysis of the biology and mechanics of each tree, which are then rated as “good”, “fair” or “poor”.

Suitability is determined using overall tree condition and industry data on species characteristics, including tolerances to site changes and specific construction impacts.

Monterey cypress (*Cupressus macrocarpa*) as a species has a low tolerance to construction related impacts (Matheny & Clark 1998). Monterey pine (*Pinus radiata*) as a species have a moderate tolerance to construction related impacts.

Along with ratings for tree condition the attached inventory includes the size of the **Critical Root Zone**; this area is determined following the evaluation of tree condition and tolerances. This exclusionary zone is an area of root development that, if possible, is left undisturbed. This exclusion zone is not related to the extents of the foliar canopy (sometimes referred to as the “dripline”). The size of the canopy does not provide an indication of root development and cannot be perceived as a boundary when evaluating construction related impacts.

The **Critical Root Zone** method has been successfully utilized to define the “optimum” protection area for tree roots. It is based on the British Standards Institute (BSI) method developed in 1991. It uses ranges in trunk diameter, tree age and vigor to calculate the exclusionary zone. This method can be modified to include species tolerances and tree architecture.

In addition to the Critical Root Zone the attached inventory defines the level of cumulative impacts related to the proposed construction as **Low, Moderate or High.**

**Low** impacts are minimal, the optimum protection zone has been allowed.

**Moderate** impacts may impact the absorbing or structural root systems. Canopy modifications of more than 20% could be required. Special construction methods or pre-construction treatments will be recommended to reduce impacts to an acceptable level and eliminate the potential decline of the tree.

**High** impacts may require tree removal. If retained, special construction methods must be implemented, supplemental irrigation may be recommended and tree condition monitored.

## OBSERVATIONS

### Site Description

The development site is located mid slope at the edge of a native Monterey cypress habitat. The vegetation on the property consists of ice plant, dune grasses and both native and "planted" Monterey cypress trees.

### Tree Description

Monterey cypress (*Cupressus macrocarpa*) is the dominant species on the property, one small Monterey pine (*Pinus radiata*) is growing on the slope below the existing home.

Trees #1, #3 and #4 are remnants of the native cypress forest. Tree #3 is pictured at right. It consists of multiple large diameter stems with a short, broad spreading canopy. This form is typical of the species when it develops in a low nutrient, windy environment.



Trees #5, #6 and #8 are cypress that have been planted in the landscape. Although a native species, they are not native to the site or a member of the protected cypress forest habitat.

Similar trunk diameters and the single trunk form indicate that the plants were generated at a nursery and planted during the same time period. Tree #5 is pictured below at right.

These trees are in poor vigor. The canopies are thinning and small to medium size dead branching is visible. This could be caused by exposure to extensive salt spray and wind. The dead and discolored foliage is a symptom of cypress canker (*Seiridium cardinale*) a disease common to the species.

Two cypress trees were removed prior to my initial site visit. They were located below the existing residence. One stump remains, there is no evidence of the second stump but the tree is visible on an aerial photo dated 2007.



Six Monterey cypress have been planted in the general area as replacements. The trees were generated from seed stock that originated at nearby Crocker Grove and provided by the Pebble Beach Company.

The trees are “plugs” and are the only trees available that have been generated from native, local stock.

## **CONSTRUCTION IMPACTS/RECOMMENDATIONS**

Monterey County Code Section 20.147.050 and the Del Monte Forest Land Use Plan restrict and discourage the removal of native trees.

“Monterey cypress: within its indigenous range, removal of any size tree will be allowed only in cases where life, property, or existing access is immediately threatened or where a diseased tree is determined by a qualified professional forester to represent a severe and serious infection hazard to the rest of the forest.”

The tree removal that has occurred previously included two trees of native origin growing at the edge of the Monterey cypress habitat. The mitigation for this removal has been completed.

The tree removal that is proposed for the new development includes three planted Monterey cypress (trees #5, #6 and #8) trees that are not components of the native habitat. Replanting three cypress trees from 36 inch box nursery stock as replacements is recommended. The trees shall be planted between the public road and the new residence.

Proper root pruning, described below, may be required for tree #3 and #4. Once the site staking is in place the need for this procedure and minor canopy alterations will be determined. If root pruning becomes necessary the following recommendations must be followed.

All root pruning should be performed by skilled labor. If roots are encountered by excavation equipment work must stop until the roots are properly pruned. Roots are to be pruned cleanly leaving bark intact. The following tools should be used:

- Hand-pruners
- Loppers
- Handsaw
- Reciprocating saw
- Chainsaw

The impacts as evaluated are not excessive and the loss of major supporting or absorbing roots is not anticipated. No detrimental long term effects are expected for the retained trees.

Tree Resource Evaluation/Construction Impact Analysis  
1170 Signal Hill Road/APN 008-261-007  
June 27, 2011  
Page 6

The tree protection specifications attached within this report include recommendations for exclusionary fencing and straw bale barricades to avoid damage to trees during the construction process. The recommendations made within this report should be included as a condition of approval by Monterey County Planning Department.

Please call my office with any questions regarding the trees on this development site or the content of this report.

Respectfully submitted,

Maureen Hamb-WCISA Certified Arborist #2280

Construction Impact Analysis  
1170 Signal Hill Road

Tree #	Species	Diameter	Health	Structure	Suitability	Impacts: High Moderate Low	Comments/Recommendations	CRZ
1	Monterey cypress	3 stems 21-28"	good	fair	good	low	Growing outside construction area/Protect with fencing and barricades	20
2	Monterey pine	12.4"	poor	poor	fair	low	Growing below proposed construction area/ Grading, excavation or other site disturbance must be located outside CRZ. Protect with fencing and barricades.	8
3	Monterey cypress	group of 3 22, 30 & 24"	good	fair	good	moderate	Grading is proposed adjacent to canopy/ Excavation must be monitored by project arborist. Any roots unearthed must be properly pruned as described within report. Protect with fencing and barricades.	15
4	Monterey cypress	11.2"	fair	fair	good	moderate	Young tree with short stature and compact canopy/ Grading or excavation must be eliminated within CRZ. Protect with fencing and barricades.	6
5	Monterey cypress	22.4"	poor	fair	poor	high	Planted tree with considerable dieback in foliar canopy caused by excessive wind, salt and cypress canker. Within footprint of proposed driveway/Remove and replant same species	15

Construction Impact Analysis  
1170 Signal Hill Road

Tree #	Species	Diameter	Health	Structure	Suitability	Impacts: High Moderate Low	Comments/Recommendations	CRZ
6	Monterey cypress	16.5"	poor	fair	poor	high	Planted tree with considerable dieback in foliar canopy caused by excessive wind, salt and cypress canker. Within footprint of development/Remove and replant same species	12
7	Eucalyptus	cluster	poor	poor	poor	high	Weakly structured cluster of stems, a portion has failed in the past. Within footprint of development/Remove	
8	Monterey cypress	22.5"	poor	fair	poor	high	As with trees 5 & 6, planted tree with dieback from wind, salt and cypress canker has reduced tree vigor. Within development footprint/Remove and replace with same species.	15
9	Monterey cypress	41" @ grade	unknown	unknown	unknown	high	Tree removed prior to my initial site visit. Tree would have been within the building footprint. Three replacement trees have been planted to represent the removed tree/Replacement trees will be relocated to another area on the property prior to the onset of construction.	
10	Monterey cypress	unknown	unknown	unknown	unknown	high	As with tree #9, this tree was removed prior to my initial site visit. No stump remains. The tree is documented on an aerial photo dated 2007. The tree would have been located within the footprint of the proposed residence. /Replacement trees will be relocated to another area on the property prior to construction.	

# ZANDER ASSOCIATES

*Environmental Consultants*

December 21, 2011

Massy Mehdipour  
1425 Dana Ave.  
Palo Alto, CA 94301

**Mehdipour Property**  
**1170 Signal Hill Road**  
**Pebble Beach, California**

Dear Ms. Mehdipour:

I am writing to address an area of disturbed dune on a slope just below the existing house and building pad on the above-referenced property. Aerial photographs indicate that dune vegetation was removed in the subject area (see Figures 1 & 2 attached). Monterey County has issued a Compliance Order identifying a code violation (sand dune degradation) on the basis of those photographs and a subsequent site inspection conducted on September 1, 2011. The County has recommended that the area of dune disturbance be restored (revegetated) to correct the violation.

The disturbed dune area covers approximately 2500 square feet (0.05-ac), creating a terrace on the dune slope to the southwest of the house (see Figure 2 and attached photographs). The surrounding slope is dominated by the aggressive, non-native European beach grass (*Ammophila arenaria*), which was also rapidly colonizing (+20-50% cover) the disturbed terrace area during my site reconnaissance on September 21, 2011 (see attached photographs). Beach grass spreads very quickly through sandy substrates by underground stems (rhizomes) that sprout new shoots and leaves above ground at each node. The species was originally introduced to California in the late 1800s for the purpose of stabilizing dunes, but is now considered one of the most pervasive exotic plants currently threatening dune environments on the west coast, driving out native species, reducing biodiversity and altering native dune morphology.

I suspect that beach grass comprised the dominant vegetation in the subject area prior to disturbance. If the subject area is left alone, beach grass will likely become reestablished, creating 100% cover of vegetation. Indeed, you noted during our conversation yesterday that beach grass has already increased its spread through the area in the three months since my September visit. Without any further intervention, the disturbed area will probably be stabilized by beach grass within a year and "restored" (i.e. revegetated with beach grass) to its pre-disturbance condition.

4460 Redwood Hwy, Suite 16-240  
San Rafael, CA 94903

Telephone: (415) 897-8781  
Fax: (415) 814-4125

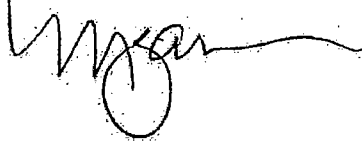


Massy Mehdipour  
December 21, 2011  
Page 2

*Zander Associates*

Please contact me by email ([mzander@zanderassociates.com](mailto:mzander@zanderassociates.com)) or by telephone at (415) 897-8781 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Zander", with a large circular flourish at the end.

Michael Zander  
Principal

---

Enclosures.

- Figure 1 Pre-existing Conditions, 2004 Aerial Photograph
- Figure 2 Disturbed Dune Area, 2009 Aerial Photograph
- Site Photographs, September 21, 2011

Copy provided:

John Bridges



Zander Associates  
Environmental Consultants  
4460 Redwood Hwy, Suite 16-240  
San Rafael, CA 94903

**LEGEND:**

--- Property Boundary

Pre-existing Conditions  
2004 Aerial Photograph  
Mehdipour Property  
Pebble Beach, California



Date: 9/11

Figure  
1



Scale: 1" = 35'

**LEGEND:**

-  Area of Disturbance (2,522 sq. ft.)
-  Property Boundary

Disturbed Area  
2009 Aerial Photograph  
Mehdipour Property  
Pebble Beach, California

Date: 9/11

Figure  
2

Zander Associates  
Environmental Consultants  
4460 Redwood Hwy, Suite 16-240  
San Rafael, CA 94903

Site Photographs  
September 21, 2011

---



Area of disturbed dune looking northwesterly



Close up of beach grass colonizing disturbed slope





Beach grass colonizing disturbed area looking southwesterly



Beach grass shoots and leaves sprouting from underground rhizomes in disturbed sand

*Staub Forestry &  
Environmental Consulting*



May 17, 2012

Mr. John S. Bridges, Esq.  
FENTON AND KELLER  
PO Box 791  
Monterey, CA 93942-0791

**Peer Review of Arborist Reports and Tree Replacement Plan  
for 1170 Signal Hill Road, Pebble Beach, APN 008-261-007**

Dear Mr. Bridges:

At your request, we have examined the following documents related to unauthorized removal of two Monterey cypresses (approximately 30" and 41" in trunk diameter) and tree replacement plans required by the County of Monterey:

1. Maureen Hamb Arborist Report dated 12/22/11 for Monterey Cypress Removal and Restoration (Restoration Plan PLN100418/Code Enforcement Case No. CE090288)
2. Maureen Hamb Proposal to Provide Maintenance and Monitoring Services dated 12/22/11
3. Maureen Hamb supplemental Arborist Report dated 3/13/12.
4. Tree Replacement Plan site plan date May 4, 2012

With these documents in hand, we made a field inspection of the site and the proposed cypress planting areas on May 8, 2012 and offer the following observations, findings and recommendations.

1. It should be noted that the subject property and the existing residence are located with native dunes habitat and not within the native habitat range of Monterey cypress, which begins across the swale to the south and west and only on the seaward edge of the granitic headlands that extend from Cypress Point to Pescadero Point and at Point Lobos. All cypress trees growing on the property are planted specimens that were planted associated with initial residential construction around 1960 or shortly thereafter.
2. While not native to dunes habitat, planted Monterey cypresses have been used in such habitats to minimize blowing sand and screen structures in residential settings.
3. We concur with the general descriptions, findings and recommendations in the Arborist Reports and Proposal subject to minor comments as noted below. We agree that a major soil reclamation project of the primary rooting around the stumps of the removed trees C1 and C2 is not warranted.
4. The six small Monterey cypress seedlings noted in the reports as being in decline and having

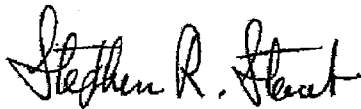
been relocated to more protected areas have either died or are in such decline that they will not recover so new seedling will need to be planted with simultaneous installation of barrier and wind protection and irrigation measures as described in the Hamb Proposal dated 12/22/11. It would be desirable to plant seedlings somewhat larger than supercell size if possible. We recommend working with the Pebble Beach Company to obtain the largest possible available planting stock (it appears that at least a few in the one gallon to five gallon size might be able to be selected if arranged in advance) so that it will be better able to deal with the exposed conditions on the site.

5. Proposed planting locations for 10 Monterey cypress seedlings as shown on the May 4, 2012 Tree Replacement Plan are reasonable, but I recommend that the project arborist select the exact planting locations to account for minor site variations and best prospects for success and to submit an "As Planted Site Plan" if there are any changes from the proposed planting plan. For instance, moving S10 further away from the crown influence of the 24" cypress to its WNW and moving S5 eastward toward Signal Hill Road to the topographically gentle indent south of the asphalt driveway might be worth considering.

6. The recommendation for a 5:1 replanting ratio for the two removed trees is appropriate given the difficulty of establishing cypresses on this exposed dune site, but it would be desirable to provide flexibility to remove one or more of these planted trees once they have been firmly established for a period of at least 10 years. Any such removal should only be permitted if an arborist report makes a credible finding that tree replacement mitigation, tree health and landscape objectives can be adequately met by such a selective thinning of the 10 planted trees...

7. Maintenance and monitoring reporting for the seedlings and mature cypresses as described in the 12/22/11 Proposal is appropriate.

Submitted by:



Stephen R. Staub  
Certified Arborist WE-6739A  
Registered Professional Forester, License Number 1911



*Maureen Hamb-WCISA Certified Arborist WE2280  
Professional Consulting Services*



March 13, 2012

**Massy Mehdipour**  
1425 Dana Avenue  
Palo Alto, CA 93953

Project: 1170 Signal Hill Road, Pebble Beach  
APN 008-261-007

As you requested I have inspected and evaluated the suitability for Monterey cypress seedling installation on areas of your property on Signal Hill Road. My findings are summarized below.

**Background**

In October of 2010, I evaluated the condition and potential impacts to trees growing on property located at 1170 Signal Hill Road in Pebble Beach. This evaluation was in response to a proposed residential development project on the site. Two mature Monterey cypress trees had been previously removed from the property without obtaining the required permits. The trees were included in my initial inventory and identified on the site plan as trees C1 and C2.

Monterey County Planning Department required the planting of replacement trees in areas adjacent to the original trees. Three seedlings were planted in areas three to five feet from the original stump of tree C1 and five feet from the estimated location of C2. I provided irrigation and monitoring for a period of months.

In September of 2011, I found the seedlings adjacent to both trees in a declining condition. The lower stems and branching of the C1 seedlings were discolored (black) and moisture was oozing from the stem. I unearthed the small root structures from the growing site to complete an examination. The small fibrous roots had blackened and appeared saturated. Excavation deeper into the planting site (approximately two feet) revealed several woody roots one to two inches in diameter that originated from the stump of the removed tree. As with the seedlings the roots appeared saturated and were discolored and soft, the surrounding soil was slightly discolored.

The seedlings adjacent to C2 were discolored as well. The affects of salt spray and strong winds and caused the foliage to burn and dieback.

To prevent further decline of the seedlings they were relocated to areas beyond the estimated size of the affected woody roots and into areas that provided protection and buffering from exposure to the elements.

849 Almar Ave. Suite C #319  
Santa Cruz, CA 95060  
email: maureenah@sbcglobal.net

Telephone: 831-763-6919  
Fax: 831-763-7724  
Mobile: 831-234-7735

Young trees cannot tolerate environmental forces with the same ability as a mature tree. The wind inhibits rooting and salt spray burns the foliage limiting the trees ability to uptake moisture and nutrients. My findings were documented on both September 19 and December 22 of 2011.

### **Current Status**

The Monterey County Planning Department has requested that I evaluate the feasibility of a soil reclamation project surrounding the stump of tree C1 in an effort to create an area where seedlings could be viable.

As I described in a memo dated December 22, 2011 the root systems of both the removed tree and the seedlings were infected by a decay causing fungus that originated from the original tree. This may be been a result of previous chemical treatment to prevent the regeneration of the removed tree or as a natural occurrence related to the presence of dead woody material that is available for colonization by the pathogen.

The most common soil born fungus responsible for root decay in cypress are *Phytophthora* and *Pythium*. Both pathogens are invisible to the eye and can spread both within woody material and through the soil.

The extent of the fungal development within the area cannot be determined. The sandy soil of the growing site allows for unrestricted root development into the deeper soil levels and beyond the trunk. A tree of this size (41 inches in trunk diameter) could have a root structure that extends as much as 40 feet from the base. Root depth is based on oxygen availability and cannot be determined unless the site is excavated.

Removal and replacement of the soil in this area cannot be considered as a solution to the presence of soil borne fungus. There are no assurances that the pathogen can be removed as they are invisible structures that have the ability to spread. In addition, soil born fungus can remain in a dormant state in the soil until circumstances are appropriate for germination.

### **Conclusion**

The current location of the seedlings is appropriate for the long-term success of the trees. The planting area is within the boundaries of the existing cypress trees on both this site and the surrounding properties. Extending trees beyond the natural forest edge and into the dune habitat is not recommended.

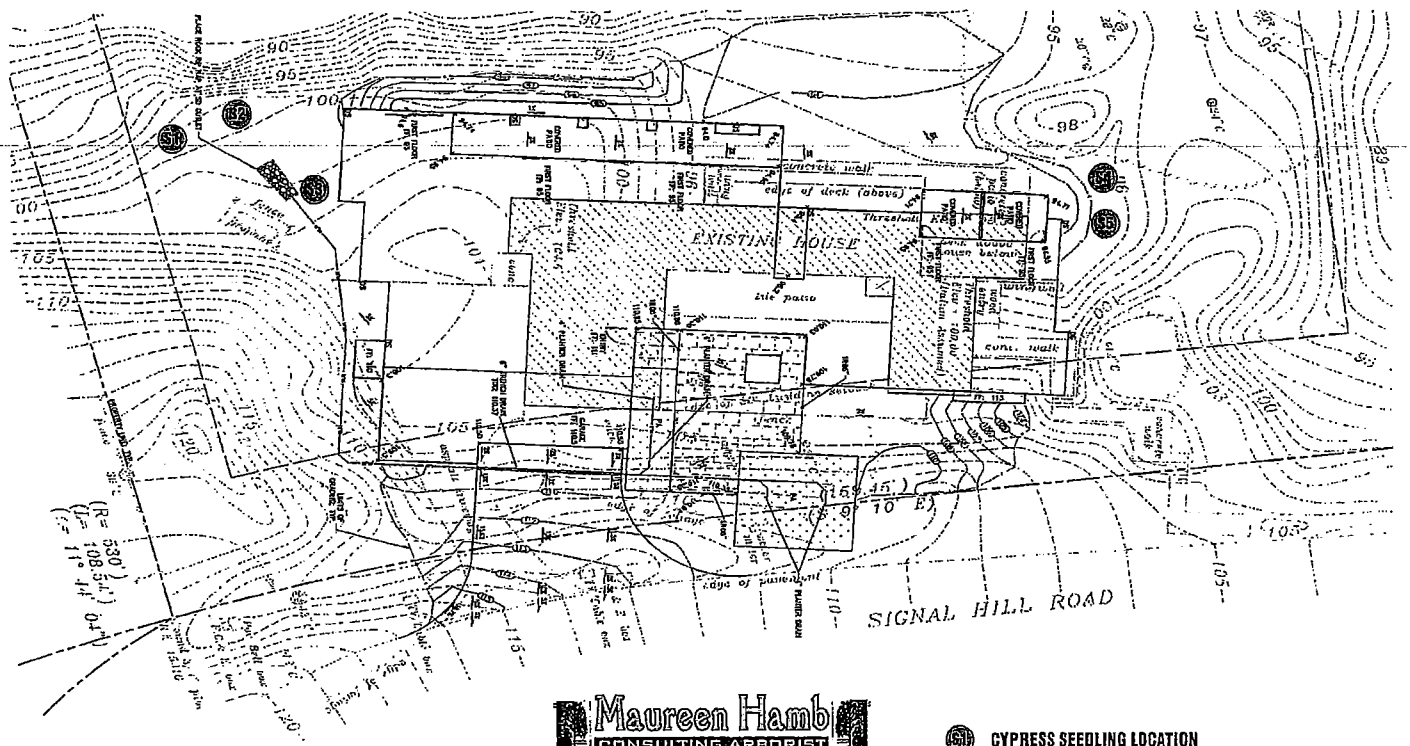
Excavation and soil remediation cannot provide a guarantee that the trees will not be affected by soil borne fungus or the remains of the original root system. Soil within an extensive area (at least 40 feet from the stump to a depth of at least five feet) would have to be removed and replaced, with no assurances to the success of the planting.

Due to the limitations of this property, including exposure to severe winds and salt spray along with the soil problems I have planted the replacement seedlings to the south and north of the C1 and C2 stump locations. For purposes of restoration these areas are proximate to the locations of the original trees.

Please call my office with any questions regarding the trees on this project site.

Respectfully.

Maureen Hamb-Certified Arborist WE2280



**Maureen Hamb**  
CONSULTING ARBORIST

 CYPRESS SEEDLING LOCATION

849 ALMAR AVENUE SUITE D #319  
SANTA CRUZ, CA 95060

831 763-6919 OFFICE  
831 763-7724 FAX  
831 234-7735 MOBILE  
MAURENAH@BBCGLOBAL.NET

*Maureen Hamb-WCISA Certified Arborist WE2280  
Professional Consulting Services*



December 22, 2011

**Massy Mehdipour**  
1425 Dana Avenue  
Palo Alto, CA 94301

Project: 1170 Signal Hill Road  
Pebble Beach, CA 93953  
APN 008-261-007

Phase: Restoration Plan PLN100418/Code Enforcement Case No. CE090288

### **Monterey Cypress Removal and Restoration**

In October 2010, I installed five Monterey cypress seedlings on the above named property. These trees are intended as restoration for two mature Monterey cypress that were removed previously without the required authorization from Monterey County Planning. The removed trees were approximately 41 and 30 inches in trunk diameter. Seedlings were installed in locations adjacent to the removed trees.

Initially attempts were made to locate larger replacement trees of local genetic origin. Large replacement trees (36 inch nursery box) were located in a nursery in the Santa Barbara area. The origin of the plants could not be verified. Pebble Beach Company was found to be the only source of local stock, generated from seeds gathered from Crocker Grove. The only size available was seedlings.

In September of this year the seedlings were found in a severe state of decline. The root systems were examined and found to be infected by a decay causing fungus that was present in the soil. The decay appeared to originate from the degrading root system of the original trees. This may have been a result of previous chemical treatment to prevent the regeneration of the removed tree, or a soil borne fungus initiated naturally by decaying woody materials.

Due to the soil conditions adjacent to the original planting areas the trees were replaced and planted in areas where they are sheltered from severe winds and native trees exist nearby.

The seedlings will be protected from severe winds and possible browsing by deer with exclusionary fencing and burlap barricades. Irrigation will be provided during dry periods at a rate of two gallons per week. Monitoring will be performed as outlined in the attached proposal.

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email: [maureenah@sbeglobal.net](mailto:maureenah@sbeglobal.net)

Telephone: 831-763-6919  
Fax: 831-763-7724  
Mobile: 831-234-7735

## Monterey Cypress Pruning

In October of this year I inspected a cluster of three Monterey cypress (*Cupressus macrocarpa*) trees growing on property located at 1170 Signal Hill Road. The trees were recently pruned and concerns were raised regarding the long-term affects to tree health that may be a result.

I have inspected the trees on a number of occasions during the previous 18 months Documenting the health and structural condition in several reports. In those documents I described the trees and healthy, well-structured examples of the species.

The recent pruning included the removal of large diameter lower branching. The upper canopies remain intact. The face of the pruning cuts are rough and uneven, paint has been applied to the open wounds.

Although the amount of branch/foilage removal and quality of the pruning cuts (placement at the branch/stem attachment point) are not within standard arboricultural industry standards there is no evidence of decline in the tree canopy at this time.

Trees that have been excessively pruned may not express decline for a number of years. Tree structure, although modified has not be destabilized. The poorly placed pruning cuts could decay in the distant future, but this is yet to be determined.

A monitoring program that runs in conjunction with the five-year monitoring program that is in place for the Monterey cypress seedlings on this property is recommended. The health of the foliar canopy will be inspected for coloration, annual growth rates and signs of dieback or discoloration. Pruning wounds will be inspected to note any indications of decay or bark beetle infestations.

If decline of the canopy occurs and affects more than 50% of the live foliage tree replacement will be required. If pruning wounds decay and invade the main stems to a point of 50% of the stem diameter tree replacement will be required.

Tree replacement will be in the form of native Monterey cypress from Pebble Beach Company stock. Replacement ratios will be three trees planted for every tree in decline.

Please contact me with any questions or further clarification of the cypress restoration and monitoring recommendations.

Respectfully submitted,

Maureen Hamb Certified Arborist WE2280

**Maureen Hamb-WCISA Certified Arborist WE2280  
Professional Consulting Services**



October 19, 2011

Massy Mehdipour  
1425 Dana Avenue  
Palo Alto, CA 94301

Project: 1170 Signal Hill Road  
Phase: Cypress pruning evaluation

As you requested I have inspected a cluster of three Monterey cypress (*Cupressus macrocarpa*) trees growing on your property on Signal Hill Road. The trees were recently pruned and concerns were raised regarding the long-term affects to tree health that may be a result.

I have inspected the trees on a number of occasions during the previous 18 months and documented the health and structural condition in several reports. In those documents I described the trees and healthy, well-structured examples of the species.

The recent pruning included the removal of large diameter lower branching. The upper canopies remain intact. The face of the pruning cuts are rough and uneven, paint has been applied to the open wounds.

Although the amount of branch/foilage removal and quality of the pruning cuts (placement at the branch/stem attachment point) are not within standard arboricultural industry standards there is no evidence of decline in the tree canopy at this time.

Trees that have been excessively pruned may not express decline for a number of years. Tree structure, although modified has not be destabilized. The poorly placed pruning cuts could decay in the distant future, but this is yet to be determined.

A monitoring program that runs in conjunction with the five-year monitoring program that is in place for the Monterey cypress seedlings on this property is recommended. The health of the foliar canopy will be inspected for coloration, annual growth rates and signs of dieback or discoloration. Pruning wounds will be inspected to note any indications of decay or bark beetle infestations.

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Fax: 831-763-7724  
Mobile: 831-234-7735

If decline of the canopy occurs and affects more than 50% of the live foliage tree replacement will be required. If pruning wounds decay and invade the main stems to a point of 50% of the stem diameter tree replacement will be required.

Tree replacement will be in the form of native Monterey cypress from Pebble Beach Company stock. Replacement ratios will be three trees planted for every tree in decline.

Please call my office with any questions regarding the trees on this property.

Respectfully submitted,

Maureen Hamb-Certified Arborist WE2280



**Maureen Hamb-WCISA Certified Arborist #2280  
Professional Consulting Services**



September 19, 2011

**Fenton & Keller**  
Attention: John Bridges  
P.O. Box 791  
Monterey, CA 93942

Project: 1170 Signal Hill Road/Massy Mehdipour

In October of 2010 I planted Monterey cypress seedlings on property located at 1170 Signal Hill Road, Pebble Beach. The tree planting was a requirement established by the Monterey County Planting Department in response to tree removal that had occurred without the required permits.

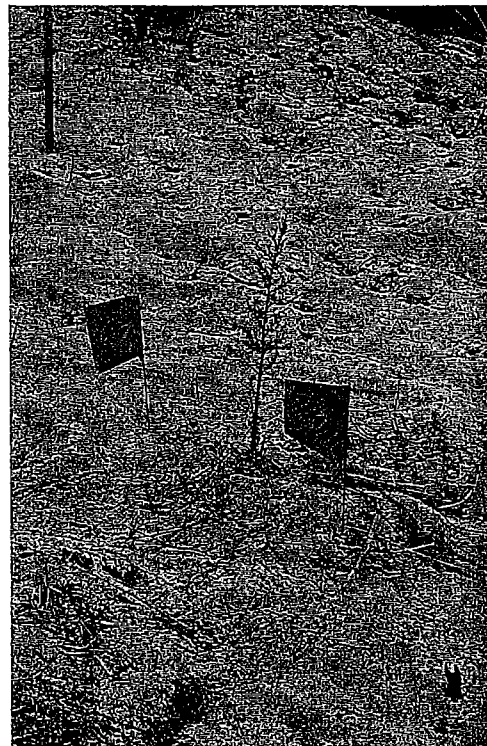
The project planner, Delinda Robinson requested that the seedlings be installed in areas adjacent to the original trees, to act as "placeholders". I have monitored the condition of the trees and provided irrigation on a weekly basis since planting.

Recently, the condition of the trees appeared to be declining and I became concerned about the quality of the growing site.

I excavated the planting areas and found a number of decayed woody and fibrous roots. These were likely the remains of the original trees. The roots of the seedlings were discolored and dieback was visible at the root ends.

In an effort to keep the seedlings healthy for the long term, I relocated them in areas where the fungus related to root decay could not affect tree establishment.

The locations of the seedlings are documented on the attached site map. The areas were excavated to determine the quality of the growing site and appropriateness for future development.



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The new planting areas are adjacent to mature existing trees and will be provided the shelter from wind and salt spray that can inhibit foliar development.

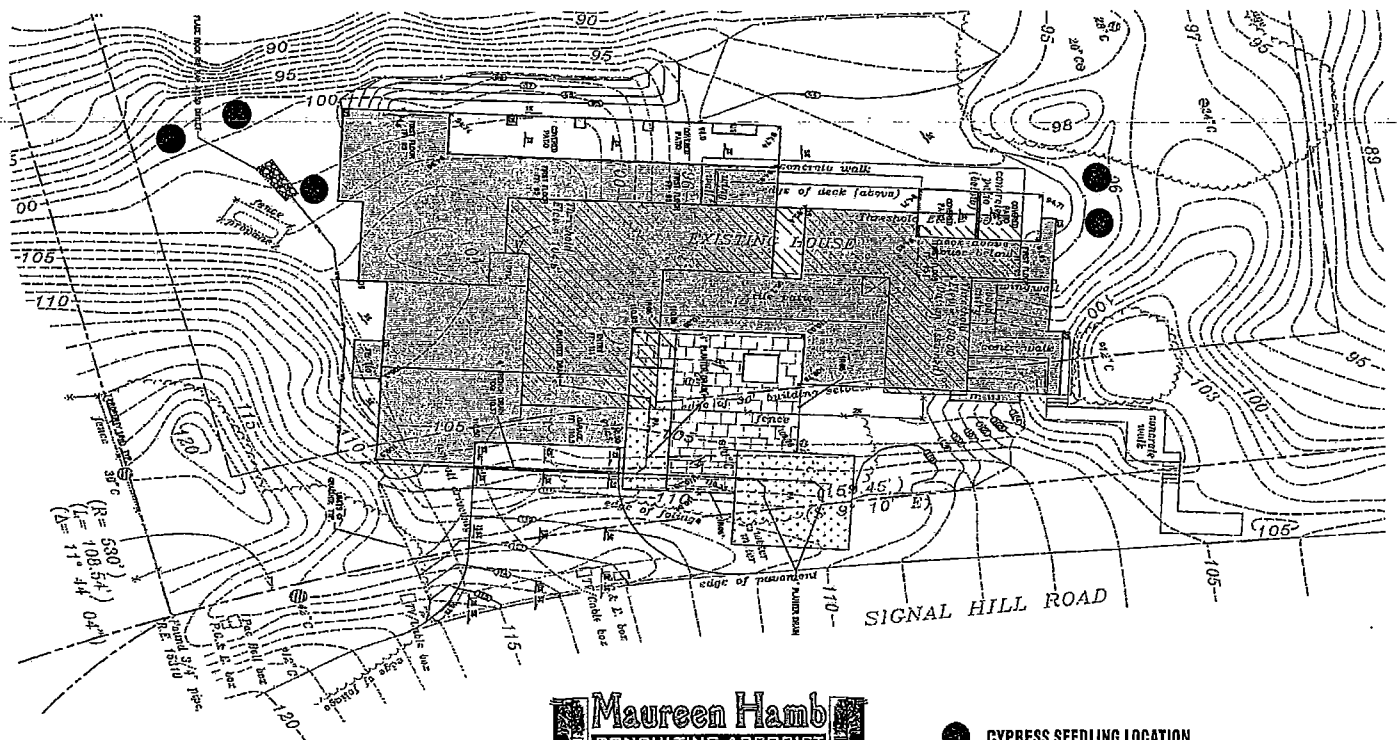
The trees are in the most appropriate area. I will continue to monitor and irrigate the trees on a weekly basis.

Please call my office with any questions regarding the trees on this property.

Respectfully,

Maureen Hamb-WCISA Certified Arborist WE2280

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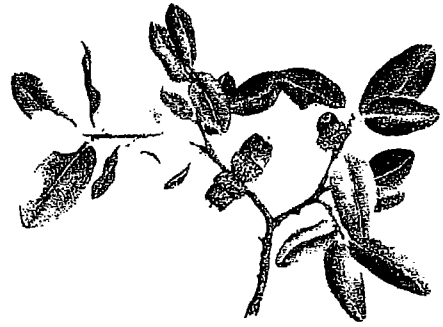


● CYPRESS SEEDLING LOCATION

849 ALMAR AVENUE SUITE C #319  
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831 234-7735 MOBILE  
HAUREENAH@SBCGLOBAL.NET

*Maureen Hamb-WCISA Certified Arborist #2280  
Professional Consulting Services*



March 25, 2011

Delinda Robinson Senior Planner  
Monterey County Planning Department  
168 W. Alisal Street, 2<sup>nd</sup> Floor  
Salinas, CA 93901

Project: 1170 Signal Hill Road

Delinda,

On September 14, 2010 we exchanged emails regarding the removal of two Monterey cypress trees at 1170 Signal Hill Road. At that time you stated that the owner would be required to plant replacement trees in the same location that they were removed from and that the trees must be generated from native, local seed sources.

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I attempted to locate larger container grown Monterey cypress from a local seed stock but they are not available. Pebble Beach Company has provided six replacement saplings that were grown from seeds obtained from nearby Crocker Grove.

As stated in my October arborist report the six small trees have been planted in the areas where the original trees were removed. I am monitoring the condition of the replacement trees and have been contracted by the property owner to continue the monitoring program for a period of three years. The owner understands your instruction that in the future a Coastal Development Permit would be required for the removal of the replacement trees regardless of their size and even though the property is outside the indigenous range of the Monterey Cypress. Relocation may be done as part of the new project.

Can you please update me on the status of the "red tag" that was associated with the unapproved tree removal and advise if further action needs to be taken to resolve this issue.

Respectfully,

Maureen Hamb-WCISA Certified Arborist #2280

849 Almar Ave. Suite C #319  
Santa Cruz, CA 95060  
email: maureenah@sbcglobal.net

Telephone: 831-420-1287  
Fax: 831-420-1251  
Mobile: 831-234-7735

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Maureen Hamb-WCISA Certified Arborist #2280  
Professional Consulting Services



**Proposal to Provide Monitoring Services**

Prepared for: Massy Mehdipour  
1425 Dana Avenue  
Palo Alto, CA 94301

Project: 1170 Signal Hill Road

Date: October 30, 2010

**SCOPE OF SERVICES**  
Six Monterey cypress trees

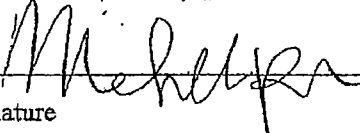
- Provide irrigation via a temporary "Gator" system that supplies the trees 2 gallons of water per week (during dry periods only) for a period of 12 months.
- Monitoring monthly to evaluate the condition of the mitigation trees for a period of six months.
- Following the six month acclimation period inspections should be performed at quarterly intervals for a period of one year, then twice yearly for an overall monitoring period not to exceed three years.
- Monitoring forms describing the condition of the trees and recommendations for changes in irrigation protocol will be provided to the County of Monterey and the property owner.

**FEES**

All monitoring visits will be billed hourly at \$ 175.00

**ACCEPTANCE**

I understand and accept the scope of services and associated fees described in this proposal. I agree to pay all invoices in full upon presentation.

  
\_\_\_\_\_  
Signature

NOV. 10, 2010  
\_\_\_\_\_  
Date

849 Atmar Ave. Suite C #319  
Santa Cruz, CA 95060  
email: maureenah@sbcglobal.net

Telephone: 831-420-1287  
Fax: 831-420-1251  
Mobile: 831-234-7735

# ZANDER ASSOCIATES

*Environmental Consultants*

May 7, 2012

Massy Mehdipour  
1425 Dana Ave.  
Palo Alto, CA 94301

**Tree Replacement  
1170 Signal Hill Road  
Pebble Beach, California**

Dear Massy:

At your request, I reviewed a letter report regarding tree replacement on your property at 1170 Signal Hill Road at Pebble Beach prepared by Maureen Hamb on March 13, 2012. The report evaluates the lack of success of replanted Monterey cypress seedlings on the property and recommends new planting locations based on distance from the (presumably infected) underground root systems of dead (previously removed) cypress trees. I also reviewed a map entitled Tree Replacement Plan, dated May 4, 2012, illustrating the locations of ten replacement plantings and estimated locations of two removed cypress trees.

All ten seedling replacement plantings appear to be within the previous grading limits on the site as identified in our Supplemental Biological Resource Assessment dated June 23, 2011. We believe that the previous grading limits, combined with our site-specific assessment, established a reasonable basis for determining dune ESHA on the Mehdipour property. The previous grading limits also established the boundary for two separate dune restoration/planting areas identified in our June 2011 Dune Restoration Plan for the property.

The primary restoration goal outside of the previously graded area (identified as the Natural Habitat Area or NHA in our Dune Restoration Plan) is to eliminate all exotic species and restore native dune scrub habitat. While Monterey cypress occurs in its native habitat at Cypress Point just south of the property, we do not consider it an appropriate component of dune scrub habitat on the subject site. Consequently, we did not include it on the recommended plant species list for the NHA. However, we did include Monterey cypress in the recommended plant palette for the Landscape Area (LA) within the previous grading limits around the proposed new residence.

The May 4<sup>th</sup> Tree Replacement Plan substantially conforms to the recommendations in our June 2011 Dune Restoration Plan for the property. We do not believe that planting seedling cypress trees in the locations indicated on the tree Replacement Plan will compromise dune ESHA or limit the ability to restore native dune habitat on your property.

4460 Redwood Hwy, Suite 16-240  
San Rafael, CA 94903

Telephone: (415) 897-8781  
Fax: (415) 814-4125

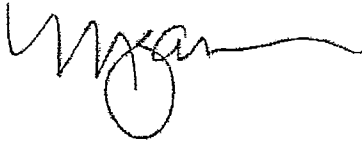
Massy Mehdipour  
May 7, 2012  
Page 2

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*Zander Associates*

Please contact me by email ([mzander@zanderassociates.com](mailto:mzander@zanderassociates.com)) or by telephone at (415) 897-8781 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Zander". The signature is fluid and cursive, with a large, stylized "M" and "Z".

Michael Zander  
Principal

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