

Exhibit F

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WALKER FAMILY SINGLE
FAMILY DWELLING.
1634 SONADO ROAD
PEBBLE BEACH CA

Biological assessment

An assessment of the biological resources and potential impacts to those resources from the construction of a single-family residence.

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Mr. and Mrs. Robert Walker propose to build a new 4704 square foot two-story single-family residence with a 106 square foot covered entry and a 988 square foot detached garage with a 356 square foot guest house above, on their property at 1634 Sonado road, Pebble Beach CA. The House will include an 1142 square foot main floor terrace on the south side and 105 square foot second floor balcony. The property will be fully fenced with 173 linear feet of 6' tall stucco fence and 241 linear feet of 6' tall wooden fence. The lot is 68,636 square feet and the total coverage of the development will be 8,649 square feet. Approximately 4000 feet of disturbed native plant communities will be impacted by the project

Applications for development of any type, including subdivision of land for development purposes, shall include field surveys and impact analysis, by qualified individuals, to precisely determine habitat area, including ESHA, and to recommend siting, design, and related mitigating measures to ensure protection of any sensitive species or habitat areas present. All required setbacks, development footprint, fuel management, and landscape areas shall be illustrated on a map that depicts habitat areas

a. Identify the property surveyed, with accompanying location map and site plan showing topography and all existing and proposed structures and roads, and the proposed project site.

The Walker property at 1634 Sonado road is within the Del Monte Forest of Pebble Beach in the center of the Monterey peninsula within the Monterey Quadrangle of the USGS. The property slopes to the south from an elevation of approximately 400 feet at Sonado Road to a low end closer to 350 feet at the southern end and is .6-mile NE of Stillwater cove on the Pacific Ocean and 1-mile West of Highway 1. The property is within the jurisdiction of the Del Monte Forest Area Land Use Plan, a local Coastal Plan of the California Coastal Act administered by the County of Monterey. The lot is bounded on the north by Sonado Road, and on the East, South and West by large homes with patches of open disturbed bushland and Pine woodland between the developed and landscaped properties.

b. Describe the method of survey.

On October 26, 2021, I visited the Walker property and walked the entire site with Mr. and Mrs. Walker discussing the extent of the proposed project, then walked the entire impact area independently, taking photos and notes on the flora and fauna and conditions on site. Late October is a poor time to do a botanical survey and is limits the potential for achieving valid assessments of presence or absence for many annual and perennial species. However, given my experience with the habitat types in the Del Monte Forest and the specific conditions of the property I believe that the few species with potential to occur on site that would not be clearly identifiable, or observable now may be confirmed with a short follow up survey in March or April of 2022.

c. Identify the environmentally sensitive habitat found on the site and within 100 feet of the site with an accompanying map delineating the habitat location or locations.

Environmentally Sensitive Habitat Area (ESHA) Determination.

The presence/absence of ESHA shall be determined prior to initiating the application review process with the intent to design sites in a manner avoiding ESHA to the greatest extent feasible. ESHAs are those habitat areas in which plant or animal life, or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human

activities and developments. Historically, the following types of habitats have generally been found to meet the definition of ESHA:

- ☒ *Habitat areas that are rare or especially valuable from a local, regional, or statewide basis.*
- ☒ *Habitat areas that support plant or animal species designated or candidates for listing as rare, threatened, or endangered under State or Federal law.*
- ☒ *Habitat areas that support species designated as Fully Protected or Species of Special Concern under State law or regulations.*
- ☒ *Habitat areas that support plant species for which there is compelling evidence of rarity (e.g., those designated 1b (rare or endangered in California and elsewhere) or 2 (rare, threatened, or endangered in California but more common elsewhere) by the California Native Plant Society).*
- ☒ *Areas of particular biological, scientific, or educational interest, including large continuous expanses of native trees and vegetation.*

Determinations of whether ESHA is actually present in the Del Monte Forest in any particular situation must be based on an evaluation of both the resources on the ground and knowledge about the sensitivity of the habitat at the time of development consideration. In the Del Monte Forest, examples of habitat areas that have historically been determined to meet the definition of ESHA include: the rare Monterey cypress and Gowen cypress forest communities, portions of the native Monterey pine forest, the endemic Monterey pine/Bishop pine association, central maritime chaparral, coastal sand dunes, streams and riparian corridors, wetlands, rocky intertidal areas, near-shore reefs, offshore rocks and inlets, the Carmel Bay ASBS, kelp beds, rookeries and haul-out sites, important roosting sites, and sites in which sensitive plants and animals associated with these and other habitats are located.

In terms of native Monterey pine forest and ESHA determinations, unless there is compelling site-specific evidence to the contrary, significant stands (i.e., 20 acres in size or larger) of native Monterey pine forest that are relatively undisturbed are considered ESHA. Stands of native Monterey pine forest less than 20 acres that provide specific documented ecosystem functions, such as the provision of habitat for rare species (e.g., Yadon's piperia or Hooker's Manzanita) or rare communities (e.g., central maritime chaparral), or that are very close to or connected to large areas of forest may also be considered ESHA because of their especially valuable ecosystem functions. Other factors that might be considered in native Monterey pine forest ESHA determinations include the relative degradation or health of the understory, association with wetland or riparian resources, or the relative uniqueness of the stand itself.

The Walker property is comprised of two primary plant communities grading indefinitely into one another depending on slope and aspect: Central maritime chaparral, and Monterey Pine woodland. On the Monterey peninsula the typical plant community succession¹ moves from grassland to chaparral to pine woodland and finally to Oak woodland as the climax forest. The dominant plants of each of these plant communities are not shade tolerant and each successional stage eventually shades those previously dominant plants to the point of decline and death. Because of the slope and rocky substrate, (bedrock evident at the surface in several locations) the maritime chaparral remains the dominant plant community. Based on the Del Monte Forest Area plan, both plant communities on the Walker property

¹ Plant succession is described as the change in composition of vegetation in one place over time. Succession is viewed as one of two related processes: primary succession or secondary succession. Primary succession is the development of vegetation on substrate previously lacking plants. Examples include the development of vegetation on sand dunes. Secondary succession is the development of vegetation following a disturbance to the original plant community. Disturbances leading to secondary succession include fire, windstorms, and anthropogenic disturbances such as logging and farming (old field succession). The process described for the Monterey peninsula would be considered Secondary succession.

could be considered Environmentally Sensitive Habitat; either for the rarity of the specific grouping of dominant and companion plants (community) as a whole or for the individual species occasionally found within them. Rare and listed species that are potentially present on the Walker property are found in both plant communities in the Pebble Beach company lands and in the case of small fragments of Monterey Pine Forest, it is only the presence of an individually rare, threatened, or endangered species that would classify it as ESHA. A discussion of each plant community: its basic components and characteristics as well as where it is found on the property follows.

Central Maritime Chaparral

Central Maritime Chaparral: A brushland association whose characteristic features are well-drained, nutrient poor (oligotrophic); somewhat to highly acidic soils within the coastal fog zone; a suite of evergreen sclerophyllous shrubs in mature stands (including *Arctostaphylos* and *Ceanothus* species); and the presence of one or more “indicator” species, which are indicative of central maritime chaparral habitats because their distribution is restricted to only those regions with the requisite climate and soil., It is a plant community indicated primarily by one of a number of manzanita (*Arctostaphylos*) species in combination with other evergreen shrubs like *Ceanothus*, Toyon, Coast silk tassel as well as smaller sub-shrubs and perennials. Central maritime chaparral occupies ridge tops, coastal bluffs and ancient sand dunes in coastal Monterey County. Typical site conditions include well-drained, sandy substrates within the zone of summer coastal fog incursion. Fire appears necessary for continued reproduction. Maritime chaparral intergrades on more mesic, less sandy sites with Monterey Pine Forest, Bishop Pine Forest, and Monterey Pygmy Cypress Forest; with Chamise chaparral on stonier sites out of the foggy area and with Lucian Coastal Scrub closer to the coast or on shaley substrates. Central maritime chaparral on the Monterey peninsula is often host to several rare, threatened, or endangered plant species including Hooker’s manzanita (*Arctostaphylos hookeri ssp hookeri*), Sandmat manzanita (*Arctostaphylos pumila*), Monterey ceanothus (*Ceanothus rigidus*), Monterey spineflower (*Chorizanthe pungens var. pungens*), Eastwoods golden fleece (*Ericameria fasciculata*), and Yadon’s rein orchid (*Piperia yadonii*).

On the Walker property disturbed Central maritime chaparral occupies the generally flat northeastern portion and the upper east facing slope and the lower south facing slope above neighboring homes. At no place is it particularly dense, but in several places the vegetation is contiguous as a mosaic of species, particularly on the eastern half of the construction zone and south of the main floor of the house. The general construction zone was managed for fire safety approximately two years ago, so the full range of the maritime chaparral plant species coverage on the site is not immediately clear. A masticator was used to cut plant material to nearly ground level, to remove old decadent growth and encourage vigorous resprouting of new growth that will be much less fire prone for several years into the future. This is an ideal method for creating a more fire safe zone among the large Pebble Beach houses without removing the root systems of the fire adapted, unique and sensitive native vegetation. In lieu of actual fire, this is the safest and closest thing to healthy management of the maritime chaparral that can be applied in these conditions in Pebble Beach communities. Given the dueling policies of fire clearance for structural safety, and habitat preservation for sensitive species, I strongly recommend prescribing this method for future management of the native habitat on site.

Approximately 5000 square feet of the coverage of the development on site would be in area currently occupied by sparse to moderately dense maritime chaparral. This includes the driveway, the motor court and the eastern portion of the house and all of the terrace on the South side of the house. Primary components of the Central maritime chaparral community on the property include Explorer's manzanita (*Arctostaphylos tomentosa ssp hebeclada*), glandular wooly leaf manzanita (*Arctostaphylos tomentosa ssp bracteosa*), Hooker's manzanita (*Arctostaphylos hookeri ssp hookeri*), Chamise (*Adenostema fasciculata*), Sticky monkeyflower (*Diplacus aurantiacus*), Toyon (*Heteromeles arbutifolia*) and evergreen huckleberry (*Vaccinium ovatum*), and a single individual of Sandmat manzanita (*Arctostaphylos pumila*). The four species of Manzanita are local endemic species. The Hooker's manzanita is found only from Point Lobos to southern Santa Cruz County and is on the California Rare Plant rank list 1B.1 (seriously endangered in California). The sandmat manzanita (rare plant rank 1B.2 Fairly endangered in California) is found sporadically in openings on the peninsula and more densely in the maritime chaparral plant communities from near the Monterey airport north through the former Fort Ord into Marina. Impacts to these species or their habitat must be analyzed during preparation of environmental documents relating to the California Environmental quality Act (CEQA), or those considered to be functionally equivalent to CEQA, as they meet the definition of Rare or Endangered under CEQA Guidelines §15125; (c) and/or §15380. The Explorers and glandular wooly leaf manzanita are restricted to an even narrower distribution, primarily on the Monterey peninsula but neither of these have any special status designation at this time.

Monterey pine forest

Not all Monterey Pine Forest is the same, even in the same general location. Native Monterey pine forests occupy a small portion of their historical range and are currently restricted to five coastal locations: Año Nuevo in the north, the Monterey Peninsula, Cambria, and on Guadalupe and Cedros islands off the coast of Baja, California in the south. Monterey pine occurs as a dominant member of several associations of plants and animals within its native range collectively referred to as Monterey pine forest. Co-dominant canopy species found in California populations of Monterey pine range from redwoods (*Sequoia sempervirens*), Douglas fir (*Pseudotsuga menziesii*) and knobcone pine (*Pinus attenuata*) near Año Nuevo at the northernmost extent of its current native range to coast live oaks (*Quercus agrifolia*), Bishop pine, Monterey cypress (*Hesperocyparis macrocarpa*) and Gowen cypress (*Hesperocyparis goveniana ssp. goveniana*) on the Monterey Peninsula. In Cambria, the Monterey pine is found largely in pure stands, but occasionally occurs with coast live oak (Hillyard 1997). Monterey pine (*Pinus radiata*) is an endemic, closed-cone pine of California and Baja California. Today the species occurs naturally in five disjunct native populations in California and Baja California: near Año Nuevo on the Santa Cruz/San Mateo County coastline, on the Monterey Peninsula, near Cambria just south of the Big Sur Coast, and on the two Mexican islands of Guadalupe and Cedros (Figure 5). The contemporary limited range of Monterey pine has been attributed to several factors including the inland reach of summer fog, soil type, annual rainfall, availability of soil nutrients, root diseases and other factors (Vogl et al 1988). However, over the past two million years the natural distribution of Monterey pine has fluctuated regularly, primarily in response to large-scale climate change. The species is considered an aggressive colonizer that has always expanded and contracted from fragmented populations during

favorable climatic conditions and is thus adapted to small population sizes, fluctuations in size, colonization's of new locations and even local extirpations (Millar 1998).

The Monterey peninsula has 6 recognized Marine terraces or stairs extending from sea level to approximately 800-foot elevation. Each stair or terrace has unique variations of Monterey Pine Forest. Monterey pine forest on Terrace 5 supports an open canopy of Monterey pine with some coast Jive oak. The pines are stunted, becoming flat topped at about 50-60 feet tall. Stands are multistoried and pine regeneration is good. The understory is a mix of open grass and duff with patches of dense shrubs. Shrub cover is an even mix of shaggy-barked manzanita (*Arctostaphylos tomentosa*), Hooker's manzanita (*Arctostaphylos hookeri* var. *hookeri*), sandmat manzanita (*Arctostaphylos pumila*), California coffeeberry, bush monkeyflower, poison-oak, and coyote brush. The soils supporting Monterey pine forest on Terrace 5 are deeper (about 24 inches to the top of claypan versus 4-20 inches for pygmy forest) than in the Monterey Pine-Bishop pine and pygmy forests on Terrace 5.

Like the central maritime chaparral, the local Monterey Pine Forest supports several rare, threatened and endangered plant species including all those mentioned for the Maritime chaparral as well as the Pine Rose (*Rosa pinetorum*) a species almost entirely limited to co-occurrence within Monterey Pine forests in Monterey and San Luis Obispo Counties. The Monterey Pine itself is a rare plant rank list 1B.2 species

The Monterey Pine woodland on the Walker property is broken canopy, sparse and spread out mostly on the lower East portion of the property. There are 11 individual pines (* for the house construction, 3 that are dead or nearly so) ranging from 10" dbh to 24" dbh (A Heritage sized tree) slated for removal for the development. The property supports a fair population of Monterey Pine trees outside of the Development envelope. Monterey Cypress, a species native on the western edge of the Monterey peninsula also occurs on the Walker property, but it is not a native occurrence. These trees are obviously from landscaping on the property of the westerly neighbor.

Database research

Prior to my visit to the Walker Property, I compiled a list of potential occurring plant and animal species by querying the California Natural Diversity Database and The California Native Plant Society Rare Plant Inventory for the Monterey Quadrangle of the USGS. The Database outputs are attached as appendices to this report. There is only one plant from this list that has a high likelihood of occurring on the site that would not have been observable during my October 28 survey; *Piperia yadonii* a federally listed Endangered species occurs in the Monterey Pine Forest and Maritime chaparral throughout the Del Monte Forest and will be addressed in the recommended mitigation measures in this report.

Impacts - Describe and assess potential impacts of the development on the environmentally sensitive habitat

The development of a 4104 Square-foot single family residence, garage with guest house and appurtenant hardscape (totaling over 8600 square feet) on the Walker property will permanently impact approximately 4000 square feet of non-contiguous Central maritime chaparral and Monterey

Pine woodland, containing several individual CNPS Rare plant rank list 1B plants (*Arctostaphylos hookeri* ssp *hookeri* and *Arctostaphylos pumila*), 11 individual Monterey Pine (*Pinus radiata*) Trees, many plants of *Lomatium parvifolium* (Rare plant rank 4.2²) and potentially, individuals of *Piperia yadonii* a federally endangered species of orchid endemic to the Monterey peninsula and a short distance to the north and south . This is considered a significant impact to environmentally sensitive habitat. However, it is in a narrow swath between three neighboring developed properties and Sonado road and does not appreciably decrease the quality of habitat in the local area.

The removal of Monterey Pine trees and associated understory has the potential to impact nesting birds. Nesting birds are protected by State, Federal and international laws. If grubbing, grading or tree removal occurs during the typical bird nesting season between Feb 15 and September 1, there is a potential to negatively impact bird species that may be utilizing the trees and shrubs for nesting.

Recommend mitigation measures which will reduce impacts.

To avoid the potential “take” of the federally endangered *Piperia yadonii*, a survey conducted by a biologist or botanist familiar with the appearance, life history and morphology of *Piperia yadonii* will be conducted during the appropriate time to determine the presence or absence of the species, within the impact zone (permanently removed and temporarily impacted habitat) on the Walker property. Reference sites of known populations of *Piperia yadonii* in the Del Monte Forest will be utilized to determine whether the timing is appropriate to conduct the vegetative survey on the Walker property. If multiple new vegetative (leaf) shoots are present above ground in the reference site(s), this will be taken as an indicator that conditions are suitable to expect that, if present on the Walker property, new vegetative shoots would be seen there on the same date. When the reference sites are found to have new *Piperia* foliage sprouting, the project impact area at the Walker property will be surveyed on the same day. If no *Piperia* foliage is found on the Walker property, the plant will be considered absent from the site. If new *Piperia* foliage is found on the Walker property, it will be assumed to be *Piperia yadonii* based on the habitat conditions and similar nearby occurrences. This would be cause for discussion with USFWS to determine the best plan of action to avoid or adequately mitigate the impact.(Another species of rein orchid occasionally co-occurs with *Piperia yadonii* in Coastal Monterey County. *Piperia michaelii* {California Rare Plant rank 4.2} is very similar in many respects and the only way to confidently differentiate the two is to see the plants in flower which occurs in May through June typically)

On December 14, 2021, I visited two reference populations of *Piperia yadonii* in the Del Monte Forest. Both are along Spruance Road, one 7/10ths of a mile NW and one about 6/10ths of a mile north. Both sites had multiple new sprouts of new *piperia yadonii* leaves sprouting. Some were just breaking the surface and others with multiple leaves completely grown. On the same day I thoroughly searched the Walker property through the development impact area and found no evidence of any *Piperia* foliage at

² The California Rare Plant Ranks are a ranking system originally developed by the California Native Plant Society (CNPS) to better define and categorize rarity in California's flora. Few of the List 4.2 plants would meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and few, if any, are eligible for state listing. They are not automatically required to be evaluated for impacts under CEQA but recommended.

all. Based on the reference site comparisons it is my conclusion that no *Piperia* species occur in the development impact area of the Walker property.

Since there does not appear to be any way to avoid the impacts to the Maritime chaparral /Monterey Pine woodland, the replacement of removed *Arctostaphylos* species can be treated the same way as the removal of the *Pinus radiata*, by planting new plants (grown from seed or cutting taken from the removed plants or from collection in the Del Monte Forest) on a 2 for 1 basis, in an area downslope to the east of the proposed house. An approved Biologist will do a targeted survey to flag and count the total number of Hooker's and Sandmat manzanita Plants that will be removed for the proposed project. On December 14 I visited the Walker property and flagged and counted 63 total *Arctostaphylos hookeri* plants that were in the development impact area of the project. Thus 126 plants of *Arctostaphylos hookeri* will be propagated from living plant material on the property and planted out as replacement plants on the East and southern portions of the property outside of the development area. Roughly 60,00 square feet of the lot will remain undeveloped in natural condition. There is sufficient area for replanting both the Monterey Pines specified in the Frank Ono Tree Assessment/Forest Management Plan, and the manzanita plants identified in this biological assessment.

Future management of the replacement plants and the remainder of undisturbed maritime chaparral on-site would-be best be done in planned 5–10-year intervals utilizing mastication to remove older more fire prone vegetation by cutting the plants to the ground and leaving all root systems intact. This should be done in the late summer (August 15) to mid fall (November 15) to avoid potentially occurring nesting birds and small mammals.

Avoidance of bird nesting impacts can be achieved by conducting all grubbing, grading and tree removal between September 1 and February 15. For any tree removal activity or ground disturbing activity that occurs during the typical bird nesting season (February 15-September 1), the project applicant shall retain a qualified biologist to perform a nesting survey to determine if any *active* raptor or migratory bird nests occur within the project site or within 100 feet of proposed tree removal activity. During the typical nesting season, the survey shall be conducted no more than 7 days prior to ground disturbance or tree removal. If nesting birds are found on the project site, an appropriate buffer plan shall be established by the project biologist.

No more than 7 days prior to ground disturbance or Tree removal the Applicant shall submit to the planning director a nesting survey report prepared by a qualified biologist describing whether any active raptor or migratory bird nests occur within the project site or immediate vicinity.

Adherence to these recommended measures can reduce the impacts of the Walker property development to a less than significant level.

Patrick Regan – consulting Biologist



Appendix 1 Plant List

Observed on Walker property October 28, 2021, and/or December 14, 2021

Acacia sp.*

Acmispon glaber var. glaber - deerweed

Adenostoma fasciculatum - chamise

Agrostis hallii – Hall’s bent grass

Anagallis arvensis - scarlet pimpernel*

Anaphalis margaritacea – pearly everlasting

Arctostaphylos hookeri ssp hookeri – Hooker’s manzanita

Arctostaphylos pumila – sandmat manzanita

Arctostaphylos tomentosa ssp bracteosa – glandular wooly leaf manzanita

Arctostaphylos tomentosa ssp hebeclada - Explorer’s manzanita

Artemisia californica – Cal sagebrush

Baccharis pilularis - coyote brush

Carex tumulicola – foothill sedge

Carpobrotus edulis – Ice plant*

Deinandra corymbosa subsp. corymbosa – coast tarweed

Diplacus aurantiacus var. aurantiacus - sticky monkey flower

Elymus glaucus - western ryegrass

Eriophyllum confertiflorum – Golden yarrow

Genista monspessulana – French broom*

Hesperocyparis macrocarpa – Monterey Cypress+

Heteromeles arbutifolia - Toyon

Lomatium parvifolium - Small-leaved Lomatium

Pedicularis densiflora – warriors Plume

Pinus radiata - Monterey Pine

Quercus agrifolia var. agrifolia - coast live oak

Solidago spathulata – Dune goldenrod

Vaccinium ovatum – Evergreen huckleberry

* Not native to Walker property or California

+ Native to Monterey County but not to the site

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Figure 1: View looking SE through lot where driveway will approach house. Maritime chaparral in foreground, Monterey Pine woodland in background.

Figure 2: Hooker's manzanita in proposed driveway area. (Invasive Acacia above)





Figure 3: View looking west through proposed building area. Invasive Acacia in foreground.

Figure 4: view looking Southwest through development area.





Figure 5: View looking east from driveway development area.

Figure 6: View looking west from below development area. Several species of manzanita in foreground.





Figure 7: View looking west through proposed building area. Manzanita crown sprouting in foreground.

Figure 8: View looking NE from SW corner of proposed development area. Minimal impacts in this area.





Figure 9: Closeup of *Arctostaphylos hookeri* ssp. *hookeri* on project site.

Figure 10: Close up of *Lomatium parvifolium* (Rare Plant Rank 4.2) on site



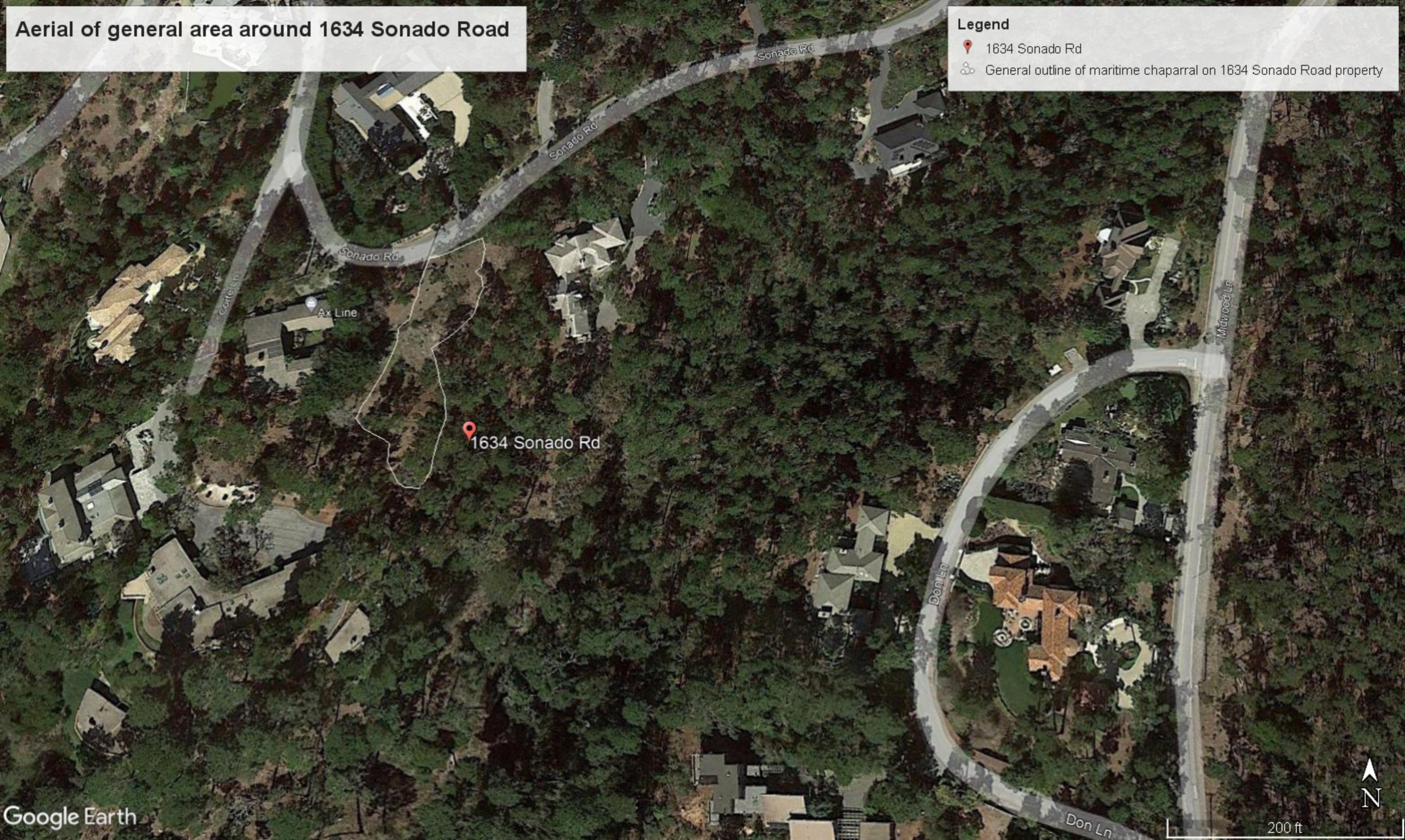


Figure 11: *Piperia yadonii* foliage in Spruance Road reference site 12/14/21

Aerial of general area around 1634 Sonado Road

Legend

-  1634 Sonado Rd
-  General outline of maritime chaparral on 1634 Sonado Road property



SPECIAL-STATUS PLANT SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT VICINITY						
SPECIES LISTED AS BEING UNLIKELY TO OCCUR WITHIN THE PROJECT AREA ARE CONSIDERED TO BE BEYOND THEIR KNOWN RANGE OR TO HAVE LOW HABITAT SUITABILITY FOR REPRODUCTION, COVER, AND/OR FORAGING. SPECIES LISTED AS HAVING NO CHANCE TO OCCUR ARE ENTIRELY DEPENDENT ON HABITAT CONDITIONS SIMPLY NOT FOUND ON SITE						
Scientific and Common name	Legal status Federal /State/ CNPS	Life form	Plant community/Habitat Requirements	Flowering period	Likelihood to naturally Occur within the Project Site	Observed on project site?
<i>Agrostis lacunavernalis</i> Vernal pool bent grass	-/-/1B.1	Annual herb	Vernal pools (mima mounds)	Apr-May	None	No
<i>Allium hickmanii</i> Hickman's Onion	-/-/1B.2	Perennial herb	Coastal prairie, Chaparral, Northern Coastal Scrub, Coastal Sage Scrub, Closed-cone Pine Forest, Valley Grassland	March - May	Unlikely Only marginal habitat occurs on site.	No
<i>Arctostaphylos hookeri ssp. hookeri</i> Hooker's manzanita	-/-/1B.2	Evergreen Shrub	Maritime chaparral, Foothill Woodland, Northern Coastal Scrub, Closed-cone Pine Forest	January - June	High	Yes
<i>Arctostaphylos montereyensis</i> Toro manzanita	-/-/1B.2	Evergreen Shrub	Maritime chaparral, Foothill Woodland, Northern Coastal Scrub	February - March	Unlikely	No
<i>Arctostaphylos pajaroensis</i> Pajaro manzanita	-/-/1B.1	Evergreen Shrub	Maritime chaparral	December - March	Unlikely.	No
<i>Arctostaphylos pumila</i> Sandmat manzanita	-/-/1B.2	Evergreen Shrub	Old Dunes, Maritime chaparral Coastal Strand, Northern Coastal Scrub, Closed-cone Pine Forest	February-March	High	Yes
<i>Astragalus nuttallii var. nuttallii.</i>	-/-/4.2	Perennial herb	Rock, sandy areas, bluffs, below 70 meters	January to	None. No suitable habitat occurs on	No

ocean bluff milk-vetch				October	site.	
<i>Astragalus tener</i> <i>var. titi</i> coastal dunes milk-vetch	E/E/1B.1	Annual herb	Moist sandy depressions near coast, coastal bluffs, dunes. Below 20 meters	March to June	None. No suitable habitat occurs on site.	No
<i>Castilleja ambigua</i> <i>var. insalutata</i> pink johnny-nip	-/-/4.2	Annual herb	Annual plant found in Coastal Prairie and Coastal Scrub habitats	Mar-May	None. No suitable habitat occurs on site.	No
<i>Castilleja latifolia</i> Monterey Coast paintbrush	-/-/4.3	Annual herb	Sandy soils. Closed-cone coniferous forest, Cismontane woodland (openings), Coastal dunes, Coastal scrub	Feb-Sept.	None. No suitable habitat occurs on site.	No
<i>Ceanothus rigidus</i> Monterey ceanothus	-/-/4.2	Evergreen shrub	Maritime chaparral, Foothill Woodland, Northern Coastal Scrub	March-April	High. Suitable habitat on site	No
<i>Chorizanthe douglasii</i> Douglas's spine flower	-/-/4.3	Annual herb	Chaparral, Foothill Woodland, Yellow Pine Forest	April - July	Unlikely. No suitable habitat occurs on site	No
<i>Chorizanthe pungens</i> <i>var. pungens</i> Monterey spine flower	T/-/1B.2	Annual herb	Coastal Dunes, maritime chaparral, closed-cone Pine Forest Foothill Woodland, Northern Coastal Scrub, Coastal Sage Scrub	April - June	Unlikely. No suitable habitat occurs on site	No
<i>Clarkia jolonensis</i> Jolon clarkia	-/-/1B.2	Annual herb	Interior foothill woodland	April - June	Unlikely. No suitable habitat occurs on site	No
<i>Clarkia lewisii</i> Lewis's clarkia	-/-/4.3	Annual herb	Chaparral, Foothill Woodland, Northern Coastal Scrub	April-July	Unlikely. No habitat occurs on site	No
<i>Collinsia multicolor</i> San Francisco	/-/-/1B.2	Annual herb	Northern Coastal Scrub, Closed-cone Pine Forest	March-May	Unlikely.	No

collinsia						
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> Seaside bird's beak	-/T/1B.1	Annual herb	Maritime chaparral, closed-cone Pine forest, Coastal Strand, Northern Coastal Scrub, Coastal Sage Scrub, Southern Oak Woodland, Foothill Woodland	April - October	Unlikely. No suitable habitat occurs on site	No
<i>Cryptantha rattanii</i> Rattan's cryptantha	-/-/1B.2	Annual herb	Valley Grassland, Foothill Woodland	April - July	Unlikely. No suitable habitat occurs on site	No
<i>Delphinium hutchinsoniae</i> Hutchinson's larkspur	-/-/1B.2	Perennial herb	Coastal Prairie, Chaparral, Mixed Evergreen Forest, Northern Coastal Scrub	March - June	Unlikely. No suitable habitat occurs on site.	No
<i>Eriastrum virgatum</i>	-/-/1B.2	Perennial herb	Coastal Prairie, Chaparral, Mixed Evergreen Forest, Northern Coastal Scrub	March - June	Unlikely. No suitable habitat occurs on site	No
<i>Ericameria fasciculata</i> Eastwood's golden bush	-/-/1B.1	Evergreen shrub	Dunes, Maritime Chaparral, Closed-cone Pine Forest, Northern Coastal Scrub	July - October	Unlikely. No suitable habitat occurs on site	No
<i>Erysimum menziesii</i> ssp. <i>menziesii</i> Menzies' wallflower.	E/E/1B.	Perennial herb	Dunes along coast, coastal strand	March - May	None. No suitable habitat occurs on site	No
<i>Fritillaria agrestis</i> stinkbells	-/-/4.2	Perennial bulb	Found in Chaparral, Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland in Clay soils; sometimes serpentinite		Unlikely. No suitable habitat occurs on site	No
<i>Fritillaria liliacea</i> Fragrant fritillary	-/-/1B.2	Perennial herb	Coastal Prairie, Valley Grassland, Northern Coastal Scrub, wetland-riparian	February - April	Unlikely. No suitable habitat occurs on site	No
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> Sand Gilia	E/T/1B.2	Annual herb	Dunes along coast, openings in Maritime chaparral and Closed-cone pine forest, Coastal Strand, Northern Coastal Scrub	April - June	None. No suitable habitat occurs on site	No
<i>Gilia tenuiflora</i> ssp. <i>amplifaucalis</i> trumpet-throated	-/-/4.3	Annual herb	Annual herb found in sandy soils of dry creeks, flood plains and slopes	March-April	None. No suitable habitat occurs on site	No

gilia						
<i>Hesperocyparis goveniana</i> - Gowen cypress	T/-/1B.2	Tree	Closed-cone-pine/cypress forests, coastal terraces.	NA	Low. No suitable habitat on site.	No
<i>Hesperocyparis macrocarpa</i> - Monterey cypress	-/-/1B.2	Tree	Closed-cone-pine/cypress forests	NA	No natural habitat on site	Yes - introduced
<i>Horkelia cuneata</i> var. <i>sericea</i> Kellogg's horkelia	-/-/1B.1	Annual herb	Northern Coastal Scrub, Coastal Sage Scrub, Closed-cone Pine Forest	February - July	Low. No suitable habitat occurs on site	No
<i>Hosackia gracilis</i> harlequin lotus	-/-/4.2	Perennial herb	Perennial herb found in water, springy areas, shores, meadows, roadside ditches. Mixed Evergreen Forest, Northern Coastal Scrub, Closed-cone Pine Forest, wetland-riparian	March - July	None. No suitable habitat on site	No
<i>Iris longipetala</i> coast iris	-/-/4.2	Perennial tuber	Perennial rhizomatous plant found in wet meadows, Coastal prairie, and seeps and moist areas in coniferous forests	March-April	None. No suitable habitat on site	No
<i>Layia carnosa</i> - beach layia	FE/SE/1 B.1	Annual herb	Coastal dunes below 60 meters	March - July	None. No suitable habitat on site	No
<i>Leptosiphon grandiflorus</i> large-flowered leptosiphon	-/-/4.2	Annual herb	dunes, coastal Coastal Strand, Foothill Woodland, Northern Coastal Scrub, Coastal Sage Scrub, Closed-cone Pine Forest, Valley Grassland, Coastal Prairie	April - August	Unlikely. No suitable habitat occurs on site	No
<i>Lessingia tenuis</i> Spring lessingia	-/-/4.3	Annual herb	Openings in Chaparral, Cismontane woodland, Lower montane coniferous forest	May - June	Unlikely. Marginal habitat on site	No
<i>Lomatium parvifolium</i> Small leaved lomatium	-/-/4.2	Perennial herb	Chaparral, Closed-cone Pine Forest Serpentine soils	January - June	High. Suitable habitat occurs on site.	Yes. (found during 12/14/2021 follow up survey)
<i>Lupinus tidestromii</i>	E/E/1B.	Perennial	Dunes, beaches below 100 meters	April -	None	No

<i>Tidestrom's</i> lupine	1	herb		June		
<i>Malacothamnus palmeri</i> var. <i>involucratus</i> Carmel Valley bush-mallow	-/-/1B.2	Shrub	Coastal scrub, Chaparral, Foothill Woodland	May - August	None. No suitable habitat on site	No
<i>Microseris paludosa</i> Marsh microseris	-/-/1B.2	Perennial herb	Northern Coastal Scrub, Closed-cone Pine Forest	April - June	None. No suitable habitat on site	No
<i>Monardella sinuata</i> ssp. <i>nigrescens</i> Northern curly-leaf monardella	-/-/1B.2	Annual herb	Old dunes, maritime chaparral, openings in coastal scrub,	May - July	Low. Marginal habitat occurs on site	No
<i>Monolopia gracilens</i> woodland woollythreads	-/-/1B.2	Annual herb	Annual herb found in sunny openings of Broad-leaved upland forest, Chaparral, Cismontane woodland, North coast coniferous forest and Valley and Foothill grassland	March - July	Unlikely. Marginal habitat occurs on site	No
<i>Pinus radiata</i> Monterey Pine	-/-/1B.1	Evergreen tree	Closed-cone Pine Forest	January - February	Present on site	yes
<i>Piperia michaelii</i> Michael's rein orchid	-/-/4.2	Perennial herb	Coastal Foothill Woodland, Yellow Pine Forest, Northern Coastal Scrub, Coastal Sage Scrub, Closed-cone Pine Forest	April - August	Possible. Suitable habitat	No
<i>Piperia yadonii</i> Yadon's rein orchid	E/-/1B.1	Perennial herb	Coastal scrub, Maritime chaparral, Closed-cone pine forest	May - August	Possible. Suitable habitat	No
<i>Potentilla hickmanii</i> - Hickman's cinquefoil	E/E/1B.1	Perennial herb	Vernally wet meadows, open pine forests. Elevation: below 100 m.	April - August	Unlikely. Marginal habitat occurs on site	No
<i>Rosa pinetorum</i> Pine rose	-/-/1B.2	Shrub	Yellow Pine Forest, Red Fir Forest	May - July	Possible. Conditions appropriate	No
<i>Sidalcea malachroides</i>	-/-/4.2	Perennial herb	Disturbed areas in Coastal Prairie, Mixed Evergreen Forest, Redwood Forest	April - August	Unlikely. No suitable habitat occurs on site	No

Maple leaved checkerbloom						
<i>Trifolium hydrophilum</i> saline clover	-/-/1B.2	Annual herb	Annual herb found in Marshes and swamps, wet, alkaline soils in Valley and foothill grassland and Vernal pools	April - October	Unlikely. No suitable habitat occurs on site	No
<i>Trifolium polyodon</i> Pacific Grove clover	-/R/1B.1	Annual herb	Meadows, Coastal Prairie, Closed-cone Pine Forest, wetland-riparian	April - June	Unlikely. No suitable habitat occurs on site	No
<i>Trifolium trichocalyx</i> - Monterey clover	E/E/1B.1	Annual herb	Open closed-cone pine woodlands, roadsides Elevation: < 100 m.	April - June	Unlikely. Marginal suitable habitat occurs on site	No

Status explanations

California Rare Plant Rank 1B.1: Plants Rare, Threatened, or Endangered in California and Elsewhere-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

California Rare Plant Rank 1B.2: Plants Rare, Threatened, or Endangered in California and Elsewhere- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

California Rare Plant Rank 1B.3: Plants Rare, Threatened, or Endangered in California and Elsewhere- Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

California Rare Plant Rank 4.2: Plants of Limited Distribution - A Watch List-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

California Rare Plant Rank 4.3: Plants of Limited Distribution - A Watch List - Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

All of the plants constituting California Rare Plant Rank 1B meet the definitions of the California Endangered Species Act of the California Fish and Game Code and are eligible for state listing. Impacts to these species or their habitat must be analyzed during preparation of environmental documents relating to CEQA, or those considered to be functionally equivalent to CEQA, as they meet the definition of Rare or Endangered under CEQA Guidelines §15125; (c) and/or §15380.

Some of the plants constituting California Rare Plant Rank 4 meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and few, if any, are eligible for state listing. The California Native Plant Society strongly recommends that California Rare Plant Rank 4 plants be evaluated for impact significance during preparation of environmental documents relating to CEQA, or those considered to be functionally equivalent to CEQA, based on CEQA Guidelines §15125 (c) and/or §15380.

Federal status **E:** Endangered

T: Threatened

RBHC

California Status - **E**: Endangered
T: Threatened

SPECIAL-STATUS WILDLIFE SPECIES KNOWN OR WITH THE POTENTIAL TO OCCUR IN THE PROJECT VICINITY				
Scientific and Common name	Legal status Federal/State	Habitat Requirements	Likelihood to naturally Occur within the Project Site	Observed on project site?
Invertebrates				
<i>Bombus caliginosus</i> - obscure bumble bee	none	Inhabits open grassy coastal prairies and Coast Range meadows. Nesting occurs underground as well as above ground in abandoned bird nests	Low	No
<i>Coelus globosus</i> globose dune beetle	none	Inhabits foredunes and sand hummocks immediately bordering the coast from Bodega Bay Head to Ensenada, Baja California, and all of the Channel Islands except San Clemente Island	None. No suitable habitat occurs on site	No
<i>Danaus plexippus</i> Monarch butterfly	None - Candidate	Overwintering habitat specific to woodland areas immediately bordering the coast composed of Monterey Pine, Eucalyptus, Cypress and Redwood.	Possible, known overwintering sites documented nearby. Wind protection and open light conditions need to be ideal for utilization.	Several adults in flight
<i>Euphilotes enoptes smithi</i> Smith's blue butterfly	E/-/-	Coastal scrub with dominance of one or two specific buckwheat species: <i>Eriogonum latifolium</i> or <i>Eriogonum parvifolium</i> .	Unlikely. No suitable habitat (No <i>Eriogonum</i> plants of any species) occurs on site	No
Vertebrates				
Mammals				
<i>Enhydra lutris-nereis</i> Southern Sea otter	T/-/FP	Entirely aquatic	None	No
<i>Eumetopias jubatus</i> Steller (=northern) sea-lion	DL/-/-	Entirely aquatic	None	No
<i>Lasionycteris noctivagans</i>	-/-/-	Silver-haired bats are most commonly found in boreal or coniferous and deciduous forest near	Unlikely	No

Silver-haired bat		bodies of water, such as rivers, lakes, streams, estuaries or ponds. Summer day roosts are typically under loose bark in trees, willows (<i>Salix</i>), maple (<i>Acer</i>), and ash (<i>Fraxinus</i>) trees.		
<i>Lasiurus cinereus</i> Hoary bat	-/-/-	Winter dweller in Coastal forests. The hoary bat is one of the few tree-dwelling bats of North America, preferring the cover provided by the peeling bark, foliage, or hollow cavities of large trees located in dense forests to that of caves (Brigham 1998).	Low	No
<i>Myotis yumanensis</i> Yuma myotis	-/-/-	The Yuma myotis is found in a variety of habitats – from low desert habitats to cool, moist redwood canyons and coniferous forests – but perhaps more importantly. this species has an intimate association with open water. Within its range, the highest probability of its detection is in the vicinity of open water including rivers, streams, ponds, lakes, and even stock tanks. The Yuma myotis may be the most water-associated bat in North America.	Unlikely	No
<i>Neotoma macrotis luciana</i> Monterey dusky-footed woodrat	-/-/SSC	Grasslands, Oak woodlands	likely	No
<i>Sorex ornatus salaries</i> Monterey shrew	-/-/SSC	Marshes, salt and fresh; low, dense vegetation adjacent to rivers, lakes, and streams; grassy hillsides and chaparral slopes; occasionally into adjacent woodlands (Hoffman, in Wilson and Ruff 1999). May use burrows of other animals.	None	No
<i>Sorex vagrans paludivagus</i> Monterey vagrant shrew	-/-/-	The Monterey vagrant shrew inhabits riparian and tidal and freshwater wetlands of the San Francisco Peninsula, Salinas River Delta, and lowlands adjacent to Monterey Bay (Findley 1955,	None	No

		Hennings and Hoffmann 1977).		
Fish				
Oncorhynchus mykiss irideus steelhead - south/central California	T/-/SSC	Rivers and perennial streams along Central coast	None. No suitable habitat occurs on site	No
Amphibians				
<i>Ambystoma californiense</i> California tiger salamander	T/T/SSC	Adult tiger salamander is a semi-permanent resident of annual grasslands and valley and foothill woodlands and is occasionally found along streams. Adults spend most of the year underground in mammal burrows, logs or rocks. The first heavy rains of winter initiate the migration of adults to permanent and temporary ponds (Stebbins 1985). Larvae require fishless ponds, lakes or vernal pools usually in grasslands.	Unlikely. No suitable breeding habitat occurs on site or nearby	No
<i>Batrachoseps luciae</i> Santa Lucia slender salamander	-/-/-	Inhabits moist locations in redwood and mixed evergreen forests. Mostly found on north-facing slopes. Found along the western slope of the northern Santa Lucia Mountains in Monterey county from the Monterey Peninsula south to near the San Luis Obispo county line, and on the eastern slopes from Arroyo Seco south to at least the 36th parallel.	Likely in Monterey Pine woodland in East and South portions of site	No
<i>Rana boylei</i> Foothill yellow legged frog	-/Candidate/SSC	Frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools.	None. No suitable habitat	No
<i>Rana draytonii</i> California red-legged	T/-/SSC	In the coast range, requires ephemeral or permanent water, ponds, reservoirs, or creeks	Unlikely. No breeding habitat on site or nearby. No suitable	No

frog		(with slow moving pools during the winter/spring) with water that lasts at minimum until the end of June for reproduction (Reis 1999a). During the late summer or fall, adult frogs are known to utilize a variety of upland habitat types near water bodies with either leaf litter or mammal burrows.	upland habitat occurs on site.	
<i>Taricha torosa</i> Coast range newt	-/ SSC	Perennial Streams, seasonal ponds and pools. Optimum habitats are in or near streams in valley-foothill hardwood and hardwood-conifer habitats. Adults use mammal burrows, rocks and logs in woodland or forest habitats during the non-breeding season	Unlikely. No suitable breeding habitat occurs on site.	No
Reptiles				
<i>Anniella pulchra</i> Northern legless lizard	-/SSC	This legless lizard burrows in loose soil, especially in semi-stabilized sand dunes and in other areas with sandy soil, including habitats vegetated with oak or pine-oak woodland, or chaparral; it also occurs along wooded stream edges, and occasionally in desert-scrub (Hunt 1983, Grismer 2002, Stebbins 2003). Bush lupine and mock heather often are present in suitable dune habitats (Stebbins 2003). The species is often found in leaf litter or under rocks, logs, or driftwood. Abundance increases in optimal habitat with higher moisture levels.	Unlikely. No suitable habitat found on site	No
<i>Emys marmorata</i> Western pond turtle	-/-/SSC	Western pond turtles are found in ponds, marshes, rivers, streams, and irrigation ditches containing aquatic vegetation. They are usually seen sunning on logs, banks, or rocks near banks. Individuals move up to three or four miles within a creek system, especially during “walk-about” before a female lays egg. They nest in burrows which can be up to several hundred feet away	None. No suitable habitat found on site	No

		from river or pond banks and may be found in woodlands, grasslands, and open forest.		
<i>Phrynosoma blainvillii</i> coast horned lizard	-/-/SSC	Can be found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. It is often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills. The Coast horned lizard is never abundant where found and due to its protective coloration and form is difficult to locate even in ideal habitat.	Unlikely. No suitable habitat occurs on site.	No
<i>Thamnophis hammondi</i> two-striped gartersnake	-/-/SSC	Among the most aquatic of the garter snakes. Generally found near water sources - pools, creeks, cattle tanks, and others, often in rocky areas. Associated vegetation: oak woodland, willow, coastal sage scrub, scrub oak, sparse pine, chaparral, and brushland.	Unlikely. No suitable aquatic habitat occurs on site or nearby.	No
Birds				
<i>Ardea Herodias</i> great blue heron	-/-/- Breeding areas "rookeries" completely protected	The great blue heron is fairly common all year throughout most of California, in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills.	Unlikely.	No
<i>Athene cunicularia</i> Western Burrowing owl	-/-/SSC	Open grassland habitats with low-growing vegetation and abandoned burrows, especially of ground squirrels, for roost and nest sites. Prefer such areas interspersed with some raised perches (bushes or fence post). Forage on small mammals, lizards and insects.	Unlikely.	No
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	T/-/SSC	Dunes and open sandy beaches along the Coast	None	No

<i>Coturnicops noveboracensis</i> Yellow rail	-/-/SSC	The Yellow Rail occurs year-round in California, but in two primary seasonal roles: currently as a very local breeder in the northeastern interior and as a winter visitor (early Oct to mid-Apr) on the coast and in the Suisun Marsh region (Grinnell and Miller 1944; McCaskie et al. 1979; NAB56:482, 57:541; CBRC 2007).	unlikely	No
<i>Cypeloides niger</i> Black Swift.	-/-/SSC	An insect eater that occupies difficult to assess habitat like damp cliffs (e.g., near waterfalls) montane areas (inland populations) and damp coastal caves (coastal populations) as nesting sites. Not much is known of the full range of breeding or distribution	Unlikely	No
<i>Lanius ludovicianus</i> loggerhead shrike	-/-/SSC	Breeds mainly in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground. Requires tall shrubs or trees for hunting perches, territorial advertisement and pair maintenance, open areas of short grasses, forbs or bare ground for hunting. Chaparral, oak woodland or oak savannah.	Unlikely, though some potential habitat occurs. Aside from rare migrants, Loggerhead shrikes are not known to breed or forage in Carmel Valley or the western slopes of the Santa Lucia mountains.	No
<i>Laterallus jamaicensis coturniculus</i> California black rail	-/Th/FP	rail Breeding populations are confined to a few remaining patches of habitat in central and southern California and western Arizona Historic breeding range: apparently from Tomales Bay and San Francisco Bay area (including Sacramento/San Joaquin Delta) south along coast to northern Baja California Various habitats, from high coastal marshes to freshwater marshes along the lower Colorado River. Along the coast, favors marshland with unrestricted tidal influence (estuarine, intertidal, emergent, regularly flooded) (Evens et al. 1991). In coastal and estuarine saltmarshes, favored areas are	Unlikely	No

		dominated by pickleweed, bulrushes, and matted salt grass and other marsh vegetation; has an affinity for tidal sloughs (Biosystems Analysis		
<i>Passerculus sandwichensis alaudinus</i> Bryant's savannah sparrow	DL/-/FP	This sparrow occupies low tidally influenced habitats, adjacent ruderal areas, moist grasslands within and just above the fog belt, and, infrequently, drier grasslands	Unlikely	No
<i>Pelecanus occidentalis californicus</i> . California Brown pelican	DL/DL/FP	The brown pelican is found in estuarine, marine subtidal, and marine pelagic waters along the California coast. Breeds on Channel Islands: Anacapa, Santa Barbara, and Santa Cruz (Garrett and Dunn 1981) from March to early August; most numerous then within 20 km (12 mi) of those islands (Briggs et al. 1981).	Unlikely	No
<i>Rallus obsoletus obsoletus</i> - California Ridgway's rail	E/E/FP	Found principally in California's San Francisco Bay to southern Baja California. This species is closely related to the clapper rail, and until recently was considered a subspecies	Unlikely	No
<i>Setophaga petechia</i> yellow warbler	-/-/SSC	Breeding distribution includes from the coast range in Del Norte County, east to Modoc plateau, south along coast range to Santa Barbara and Ventura counties and along western slope of Sierra Nevada south to Kern county. Frequents open to medium-density woodlands and forests with a heavy brush understory in breeding season. In migration, found in a variety of sparse to dense woodland and forest habitats	Low.	No

Federal status **E**: Endangered

T: Threatened

California Status - **E**: Endangered

T: Threatened

SSC = California Species of Special Concern

FP = Fully protected in State of California

RBHC

WL = Watch list

Plant community	Description and Primary components	Likelihood to naturally occur within the Project Site	Observed on project site
Central Maritime Chaparral	A variable sclerophyll scrub of moderate to high cover (50-100%) dominated by forms of <i>Arctostaphylos tomentosa</i> plus one or more other narrowly distributed manzanita. Survives at scattered locations near Monterey and Ft. Ord and in the Carmel Highlands	Present	Yes, Present along East and South portions of Lot
Monterey Pine Forest	Dominated by <i>Pinus radiata</i> . Canopies may reach 30m and be 80% Monterey Pine. <i>Quercus agrifolia</i> usually is the next most abundant tree. Understories are variable in both composition and density.	Present on and nearby site	Yes
Valley Needlegrass Grassland	A mid-height (to 2 feet) grassland dominated by perennial, tussock forming <i>Stipa pulchra</i> . Native and introduced annuals occur between the perennials, often actually exceeding the bunchgrasses in cover.	Unlikely	No

Special status natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status species or their habitat.

APPENDIX

Compensatory Planting Plan

1.0 Summary

Mr. and Mrs. Bob and Joy Walker are proposing to develop a Single-family dwelling on 1.62 Acre parcel at 1634 Sonado Road in Pebble Beach CA. A Biological assessment has been completed for this project in January of 2022. (See the WALKER FAMILY SINGLE FAMILY DWELLING. 1634 SONADO ROAD PEBBLE BEACH CA *Biological Assessment, Regan Biological and Horticultural Consulting*) This document will serve as an addendum to that report for the purpose of describing the measures for offsetting the removal of 63 *Arctostaphylos hookeri* ssp *hookeri* California Rare Plant Rank 1B.1), and an estimated 50 (uncounted) plants of *Lomatium parvifolium* - Rare plant rank 4.2) as a result of the lot development. Approximately 4000 feet of disturbed native plant community will be impacted by the project. To consolidate all potential impacts and measures to offset them into one document, this plan will also contain specifics about Pine Tree removal and replacements including timing of Tree removal.

The Project will consist of 4704 square foot two-story single-family residence with a 106 square foot covered entry and a 988 square foot detached garage with a 356 square foot guest house above. The House will include a 1027 square foot main floor terrace on the south and west side and 105 square foot second floor balcony. The property will be fully fenced with 173 linear feet of 6' tall wood fence and 241 linear feet of 6' tall wooden fence. The lot is 68,636 square feet and the total coverage of the development will be 9000 square feet. The property is vegetated with remnants of maritime chaparral and Monterey Pine woodland. Because of the topography and shape of the lot, much of the maritime chaparral habitat will be unavoidably impacted. Rare, Threatened and Endangered species of plants found on the property will be avoided to the greatest extent possible or transplanted to an area set aside for habitat enhancement and or restoration in the NE portion of the property or replaced with plants grown from propagules taken from the site or nearby.

All replanting and habitat enhancement will take place within the 1.62-acre lot at 1634 Sonado road¹. Planting objectives include enhancement of a 3500 square feet area of Central Maritime Chaparral, by planting *Arctostaphylos hookeri* ssp *hookeri* to replace 63 plants that will be permanently lost due to construction; 2) Planting of 18 Monterey pine trees² that will be removed by the project; and planting 50 *Lomatium parvifolium* plants.

2.0 Purpose

This *Replanting Plan* serves as an appendix to the WALKER FAMILY SINGLE FAMILY DWELLING. 1634 SONADO ROAD PEBBLE BEACH CA *Biological Assessment* and provides planting and habitat enhancement techniques to offset the removal of 63 plants of Hookers manzanita, 50 small leaved lomatium and 9 Pine Trees resulting from the construction project.

¹ It is possible that the site does not have enough open space to replant 18 new Pine Trees, and offsite planting in Del Monte Forest conservancy lands is one potential option in lieu of onsite planting

² The Monterey Pine trees are addressed in the Ono Consulting Forest management plan. The Pebble Beach company requires that homeowners replace Monterey Pine Trees at a 2 for 1 ratio

Specific project impacts addressed in this plan include: 1) permanent loss of approximately 4000 square feet of Central Maritime Chaparral; 2) removal of 9 Pine trees (*Pinus radiata*) of varying age class and size, from 6” dbh and up, 3) removal of 63 individual Hooker’s manzanita from within the impacted Central Maritime Chaparral and removal of approximately 50 plants of *Lomatium parvifolium*.

Proposed minimization or mitigation measures for each impact are summarized in Table 1 below.

Table 1. Impacts addressed and proposed minimization measures.

Summary of potential impacts and actions to offset

Species or Plant Community	Impact	Action
Maritime Chaparral plant community	Permanent loss of approximately 4000 square feet	Preserve, restore and enhance with Chaparral species, approximately 3500 square feet of land along the northerly east side of the Walker property
<i>Arctostaphylos hookeri</i> ssp <i>hookeri</i> – Hookers manzanita	Permanent loss of up to 63 <i>Arctostaphylos hookeri</i> ssp <i>hookeri</i> plants from the project impact area. (Some may be possible to transplant into the restoration area if timing is ideal.)	Collect cuttings to grow out plants for use restoration area. Transplant shrubs as feasible to restoration area.
<i>Lomatium parvifolium</i> – small leaved <i>lomatium</i>	Permanent loss of approximately 50 plants from the project impact area, (Some may be possible to transplant into the restoration area if timing is ideal.)	Collect seed to grow out plants for use in the restoration area. Transplant existing plants to restoration area as feasible.
<i>Pinus radiata</i> - Monterey pine	9 Pine trees of varying age class and size, from 12” caliper to 22”(including 2 that are dead and one that is dying that were identified as hazard trees by the Arborist), will be removed by project impacts.	Replant 18 Monterey Pine trees on site. Replacement will be grown from seed collected on site or Within the Del Monte forest as feasible. Trees will be planted with appropriate spacing in areas on the east and south sides of the project.
Raptors and migratory birds	Nests of Raptors and songbirds could be present in the Pines and chaparral shrubs slated for removal for the development project during the typical nesting season. Nesting birds are protected by state, federal and international laws.	For any tree removal activity or ground disturbing activity that occurs during the typical bird nesting season (February 15-August 15), the project applicant shall retain a qualified biologist to perform a nesting survey to determine if any active raptor or migratory bird nests occur within the project site or within 100 feet (for songbirds) or 300 feet (Raptors) of proposed tree removal activity. During the typical nesting season,

		<p>the survey shall be conducted no more than 7 days prior to ground disturbance or tree removal. If nesting birds are found on the project site, an appropriate buffer plan shall be established by the project biologist.</p> <p>No more than 7 days prior to ground disturbance or Tree removal the Applicant shall submit to the planning director a nest survey prepared by a qualified biologist to determine if any active raptor or migratory bird nests occur within the project site or immediate vicinity.</p>
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3.0 Responsible Parties

The project proponent shall be responsible for ensuring completion of all planting, maintenance, and monitoring. In addition, the project proponent shall submit copies of the annual monitoring report to the County of Monterey Housing and Community Development Planning Department.

All planting and maintenance shall be performed under the direction of the Project Biologist by a restoration ecologist or landscape contractor with experience in planting and maintaining native plants for habitat restoration purposes (henceforth referred to as the Landscape Contractor). The Landscape Contractor shall be responsible for conducting all site preparation, planting, and maintenance according to the details and specifications provided herein.

A qualified biologist (from the Monterey County list of approved consulting biologists) shall conduct all monitoring and preparation of annual monitoring reports.

Figure 1: *Arctostaphylos hookeri* in proposed project impact area.



4.0 Goals

Goals are listed below according to the specific impacts

Central Maritime Chaparral Restoration Site

- 2) Replace all trees removed during construction.
- 3) Replace all Hooker’s manzanita and Small leafed Lomatium plants removed for construction.

4) Prevent invasive non-native plant species from colonizing soil disturbed during construction in the restoration area and throughout the building envelope.

5.0 Proposed Restoration site

5.1 Restoration Site

5.1.1 Location, Size, and Current Status of Restoration Site. (Area C)

One continuous strip of land running north to south along the east side of the Walker Lot will be restored to a mix of Central Maritime Chaparral and Monterey Pine woodland. This strip of land is approximately 3500 square feet running approximately 100 feet from end to end and is bounded on the north by the proposed fence line along Sonado Road and on the south by open space and Monterey Pine woodland. The site is currently occupied by a mixture of young coast live oaks, Monterey pine and shrubs such as chamise and Shaggy bark manzanita, and annual weedy grasses such as Rattlesnake grass. The soil in this area is sandy and rapid draining as in other portions of the property.



Figure 2: View looking east from Proposed driveway entry off Sonado Road, to area proposed for restoration.



Figure 3: View looking South through maritime chaparral area that will be removed for the proposed project

5.2 Monterey Pine Planting Site

Monterey pines replacement is required and noted in the Forest management plan but is not currently specified as to location. Locations could be incorporated into the landscape plan throughout the approximately 1.25-acre project or in coordination with the Del Monte Forest Conservancy, on greenbelt property somewhere within the Del Monte Forest. As Monterey Pines are presently scattered over much of the project area in sizes varying from seedlings to over 40 feet tall, it is apparent that soil is suitable for establishing new container grown trees throughout.

5.3 The Project proponent or Landscape Contractor shall be responsible for procuring all container stock and ensuring that all plant materials specified as site specific are produced from site-specific materials (seed, divisions or cuttings). All container stock shall be healthy, pest-, and disease-free. Root-bound trees shall be rejected. The Landscape Contractor shall also verify that plant materials match the genus, species, and size specified in the planting list for each area. ***It is critical that the project proponent and or owner identify a nursery to begin collecting and growing the specified plants as soon as possible to ensure availability for the eventual Landscape contractor.**

The number of plants specified for the replanting site assumes that roots of all existing trees and shrubs in this area will remain intact after weed eradication efforts. The quantity (1.5 times the number to be removed) is set to guarantee a 3rd year minimum survival equaling or exceeding the number of plants removed. Spacing of new plants will be done with existing tree canopy, root competition and ultimate mature sizes of plants in mind. An average spacing of approximately 3 feet on center will be applied to all plant species. The Landscape Contractor, in consultation with the project Biologist, may adjust quantities based on observed site conditions after all construction and weed control is finished. A list of all plant materials recommended for the restoration area is provided below in Table 2.

Table 2: Plants for Restoration and Preservation Areas

Common Name	Scientific Name	Quantity	Size
Restoration area / Pine replacement area			
Hooker’s manzanita	<i>Arctostaphylos hookeri ssp hookeri</i> <i>From cuttings taken on the project site</i>	94 (= to 1.5 x the number removed)	1-gallon container
small leafed lomatium	<i>Lomatium parvifolium</i> <i>From seed or transplant from impact zone</i>	50	3.5” or 1-gallon
Monterey Pine	<i>Pinus radiata</i>	18	Tall Tree-pot or 5 gallon

Container sizes referenced: 1 gallon = 6.5” diameter by 7.5” deep. 3.5” square = 3.5” wide and 3” deep
Tree-pot 4” square by 12” deep

6.2 Planting Schedule

The timing for planting is dependent upon the construction schedule and how it interfaces with seasonal environmental conditions. There is an ideal time and there is need to adapt if the ideal time is not in sync with the project schedule. If water hookups are available by early October, the preferable transplant and container planting time would be late October to mid-November 2023. Plants would be hand watered once a week until the rainy season begins. If construction scheduling is delayed and water hookups are not in place in time, planting shall begin after rains have saturated the soil to at least 6” depth and more rain is expected - typically December 1st- January 15th. Regardless of start time, Planting should be completed by February 15th.

Transplanting of Hooker’s manzanita and small leafed lomatium from within the project impact area into the restoration area should only take place between October 15 and December when the Plants are still dormant and before the rainy season begins.

All planting for the restoration area shall begin after initial weed control efforts have been completed.

6.3 *Site Preparation*

The Restoration/preservation site will require little preparation aside from hand pulling invasive weeds that have migrated in, including Ice plant and *Genista*. Sites for the transplanted *Arctostaphylos* will be selected based on similarities to the areas they are transplanted from. To the greatest extent possible, entire root systems shall be excavated and moved intact into the restoration area

6.4 *Planting Methods*

6.4.1 Replacement plants shall be installed according to the 3' OC average minimum spacing and numbers provided in Table 2. The locations of planting areas are not specified at this time and are open to the discretion of the Landscape contractor in coordination with the project Biologist, based on existing shrubs and trees and results of weed eradication activities. Manzanitas shall be placed at least 5 feet from existing Monterey pines.

Container stock shall be planted with the minimum amount of soil disturbance possible to ensure the least amount of exposure of old weed seeds in the soil. Holes should be excavated with narrow trench shovels or post-hole diggers. Holes just deep enough for the container size shall be excavated and soil temporarily "stored" in a bucket to prevent spreading onto undisturbed areas. Plants should be placed into holes with the top of the root ball flush with the surrounding soil level and carefully firmed into place with the excavated soil then gently watered in.

6.4.2 Small transplanted shrubs shall be prepared for transplant by carefully pruning back top growth (30% or less) and excavating around the root system to free up the entire root mass. Receiver sites shall be prepared ahead of time with holes dug wide and deep enough to hold the entire root system and well-watered to hydrate the surrounding soil. Plants shall be removed from the impact area and transplanted to the receiver site as soon as physically possible. Plants should be placed so that the root crown sits at the same height in relation to surrounding soil as it did in its original location. Excavated soil is then replaced around the plant and thoroughly soaked to settle the soil around the roots.

All container plants shall be mulched with 3" of weed-free mulch (e.g., shredded redwood bark, arborist wood chips, or coconut fiber) in a 4-6" ring around the plant. Mulch shall be pulled back 2-3 inches from the base/trunk/stem of plants to prevent holding moisture against the trunk and causing rot. All plants shall be watered well after planting.

7.0 *Maintenance During Monitoring Period*

7.1 *Maintenance Activities*

Watering

Container stock and transplants shall be watered by hand using on-site irrigation connection if low rainfall conditions threaten plant survival between the winter planting date and June 1st. Plants are not expected to require regular summer water, provided all container stock is installed prior to February 15, planted

according to specifications, and adequately watered (by hand if necessary) through June 1st. However, it is the responsibility of the Landscape Contractor to ensure the plants' survival. Therefore, it is recommended that the Landscape Contractor monitor plant performance during spring/summer weed control visits and hand water once every 2 weeks through the first summer *if necessary*. All watering may cease after the start of winter rains the year after planting. Overwatering in summer is frequently more fatal than underwatering with native plants that are adapted to long dry spells.

Weed Control

The goals of weed control on site are to: 1) prevent the spread of invasive non-native species to areas disturbed during construction; 2) reduce or eliminate weed competition with planted stock; and 3) eradicate existing invasive weeds from the property.

Following planting, the restoration area shall be weeded for at least three years until success criteria are met. Weeding efforts shall target annual grasses, *Genista*, Pampas grass, *Acacia*, and Ice plant in the restoration site, but extend to all non-native species. Excess rain and supplemental irrigation often only favor weed growth. Weed management is most critical in late winter into spring

7.2 *Maintenance Schedule*

The maintenance period shall begin after planting is completed and continue for at least three years until success criteria have been met. Weeding shall be performed at least three times each year between February and May. Container stock shall be watered by hand if low rainfall conditions threaten plant survival between the winter planting date and June 1st. Plant performance should be monitored by the Landscape Contractor during spring/summer weed control visits and plants watered once every 2 weeks through the first summer *if necessary*.

8.0 *Monitoring Plan*

8.1 *Intermediate Performance Standards and Final Success Criteria*

Intermediate performance standards for Years 1 and 2 and final success criteria for Year 3 are listed below by area.

Restoration site

Intermediate performance standards:

- 1) 85% survival of all container stock combined in fall of Year 1 (the first fall after planting) 70% of *transplanted* manzanita and Lomatium plants in fall of year 1.
- 2) Total non-native species cover 10% or less in spring of Year 1; 10% or less in spring of Year 2

Final success criteria:

- 1) 75% survival of all container stock in fall of Year 3 and 50% survival of *transplanted* manzanita and Lomatium plants in fall of year 3.

- 2) Total non-native species cover 5% or less in spring of Year 3

Monterey Pine Planting Sites

Intermediate performance standard:

- 1) 100% survival of planted pines in fall of Years 1 and 2

Final success criterion:

- 1) 90% survival of planted pines in fall of Year 3

8.2 *Monitoring Methods*

All monitoring shall be completed by a qualified biologist from the Monterey County list of approved consulting biologists. Percent cover monitoring shall be performed in the spring. Percent cover of Annual grasses, Genista, and other nonnative weeds may be visually estimated after searching the entire area thoroughly. Survival/mortality shall be determined quantitatively in the Fall of each year for container plants and those transplanted from the project impact area.

8.3 *Annual Reports*

In December of each year, the project proponent shall submit annual monitoring reports to the County of Monterey for a total of 3 years. The first report shall be submitted approximately 1 year after planting. Monitoring reports shall include methods, results, analysis of results, photo documentation, discussion of results relative to performance standards/success criteria, and recommended remedial measures if necessary.

8.4 *Monitoring Schedule*

Monitoring of *Arctostaphylos* transplants into the restoration area shall occur once a month for the first 6 months after transplant. Annual monitoring for all plants shall be performed in the spring and fall of Years 1, 2, and 3. If final success criteria are met Year 3, all monitoring may cease. If final success criteria are not met Year 3, remedial planting and weed control shall be performed and the site monitored the following year.

9.0 *Completion of planting plan*

This replanting plan shall be considered complete once all success criteria have been met to the satisfaction of the County of Monterey Planning Department and Year 3 annual monitoring report has been submitted. If the site does not meet final success criteria at the end of the 3-year monitoring period, contingency measures shall be implemented (see below) or success criteria modified with approval of the Director of Planning. Success criteria shall be waived in the event of high plant mortality due to prolonged drought, or other adverse circumstances beyond the project proponent's control.

10.0 *Contingency Measures*

If the site does not meet final success criteria at the end of 3 years, additional planting and weed control shall be implemented the following winter to meet success criteria. Monitoring shall be repeated in the spring and fall following planting, and an annual report submitted to the agencies in December of each year.

Figure 4: Closeup of Lomatium parvifolium in proposed driveway area . January 11, 2022



Figure 5: Hemi-parasitic Pedicularis densiflora in Proposed driveway area. January 11,2022



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