Appendix C
Landscape Analysis

APPENDIX C

PROPOSED LANDSCAPING PLAN ANALYSIS

GENERAL DESCRIPTION OF THE LANDSCAPE

The proposed landscape plan can be divided into two sections based on the apparent criteria used to implement their designs. One section is characterized by efforts to beautify and screen the proposed buildings, their grounds, parking lots, and roadways. These are referred to as the "ornamental landscape" in this analysis. The second section is a habitat restoration effort that would create wetlands and surrounding habitat on approximately 12 acres within the project boundaries. The latter uses a plant palette that is entirely local in terms of the natural origins of its component species, and is dedicated to the authentic re-creation of specific habitats. This is called the "biological landscape" in this analysis.

The ornamental landscape shall be examined first. The annotated plant list (Table C-1) describes the planting palette for this section in tabulated form. As can be seen, most of its component species are native to the California floristic province, (a botanical region approximately conterminous with the political boundaries of the state but defined by climate and vegetation similarities). In fact, a majority of the plants in the planting list have representatives found growing naturally in Santa Barbara County.

Two planting patterns are evident in looking at the ornamental landscape plans. On the exterior edges of the property and around the wetland, a loose, naturalistic pattern is followed. This also appears along the proposed Cabrillo Park Drive. Nevertheless, there are regular and evenly spaced occurrences of skyline trees along Hollister Avenue and Los Carneros Road (e.g., *Platanus racemosa* and *Alnus rhombifolia*) within these otherwise informal plantings. The second pattern is regular and linear, being geometrically laid out in the parking lots and around some of the buildings. The plantings at maturity would partially obscure background views.

There is a low (3 ft.) undulating series of elongated mounds that run parallel to Los Carneros Road and Hollister Avenue. These would be covered with unmowed, drought-tolerant grasses, sporadic groups of shrubs, and small groves of trees. This line of mounds is discontinued adjacent to the proposed wetland enhancement area from Los Carneros Road.

A few specimen Canary Island date palms (*Phoenix canariensis*) would be transplanted from their present locations on the site and placed in roadway planters and the entry feature on Cabrillo Park Drive and Hollister Avenue.

EFFECTIVENESS OF THE PLANTINGS IN MITIGATING THE VISUAL IMPACT OF PROJECT FROM PUBLIC VIEW

The screening would be very effective after the 12 to 20 years it takes for the trees to reach their mature sizes. Though they are all fast growers, the tallest trees (alder and sycamore) are all deciduous, losing their leaves during the winter months, generally from November to March. Thus, there would be a seasonal fluctuation in the density of the screening. The evergreen oaks and the California laurel (*Umbellularia californica*) cannot be expected to attain a comparable stature within the same amount of time. Therefore, the upper portions of Building-2 type

structures can be expected to be visible behind a filter of twigs and branches from the months of November to April. The difference in landscape screening between summer and winter as viewed from the Los Carneros Road/Hollister Avenue intersection is shown in Figure C-1.

If structural screening is desired, it is necessary to augment the exterior screening plantings (primarily along Hollister Avenue) with a generous scattering of evergreen trees. Canary Island pines (*Pinus canariensis*) would combine well with the landscape palette and are used in some nearby landscapes. Australian silk oak (*Grevillea robust*) would also be suitable. These trees could be planted in groups so that there would be trees to break up the large scale volume of the buildings visible during the winter months.

An important consideration in increasing the year-round density of the screening canopy is that access to sunshine during the winter months is crucial to many of the understory native species used in this landscape palette. Under an extensive canopy of evergreen trees, the species of *Ribes, Iris, Sambucus, Cercis*, etc. could not be expected to perform well. Therefore, the general well-being of the landscape and its subsequent appearance are probably optimal if at least 50 percent of the upper canopy trees are deciduous.

ENVIRONMENTAL SUITABILITY OF THE LANDSCAPE PALETTE

Most of the native plants proposed for this landscape should perform well given that they occur naturally within the immediate vicinity in a healthy condition. This also makes them susceptible to waves of acute pest infestations that may occasionally compromise their appearance. Although some of the most important screening elements within this palette are riparian in origin, they are known to be drought tolerant once established and may be expected to tap into the ground water.

Sycamores (*Platanus racemosa*) are susceptible to sycamore blight, a chronic fungus induced ailment that can cause complete springtime leaf loss in bad years. Since there is no effective treatment for this affliction, the use of pesticides should not be precipitated by its appearance. Sycamore blight is not known to be lethal to the tree and in fact, it is likely that the disease is present in every sycamore. The sycamore is apparently co-adapted to the disease, but it does compromise the appearance of the tree and its ability to conceal structures behind it.

The oak trees used in the parking areas would certainly eventually be effective as screening elements, but they are subject to pest infestation as well. California oak moth (*Phryganidia californica*) can be expected to infest both the live oaks (*Quercus agrifolia*) and the cork oaks (*Q. Suber*) proposed for use in this landscape. The live oaks at the UCSB campus were in the summer of 2000 completely defoliated by an infestation of this insect. These infestations are cyclical in nature and can only be expected to reach this level of severity every seven years or so. It is not lethal to healthy oaks. Nevertheless, the presence of oaks as parking lot trees would probably spark a demand for spraying by motorists who are concerned about debris dropping on their cars. The oak moth can be controlled by *Bacillus thuringinensis* application, which is not considered environmentally harmful. It should not, however, be applied in the restored wilder portions of the project in order to avoid killing native caterpillars.

Existing View

Proposed Summer View

Proposed Winter View

Figure C-1. View Looking Southwest from the Los Carneros Road/Hollister Avenue Intersection

It is advisable to eliminate the mono-culture of parking lot shade oak tree plantings with other trees of similar size and stature that would not be susceptible to the same infestations. The male podocarpus (*Podocarpus gracilior)* tree and New Zealand Christmas tree (*Metrosideros excelsus*) are examples of the many evergreen trees of similar size and shape to oaks that are not susceptible to oak borne pests.

In general, pesticide use as a component of grounds maintenance should be prohibited. The landscape architect should be involved in the selection of maintenance personnel to insure that they are knowledgeable in the use of environmentally benign pest control methods. Signage on storage sheds should advise personnel not to use pesticides and signs could be posted along the borders of the wetland prohibiting the use of pesticides due to the sensitive nature of the habitat and the danger of runoff and aerosol drift.

The water requirements for this landscape should ultimately be modest. Even the grasses chosen are drought tolerant when compared to fescue lawn turf, for example. Because the tall trees (sycamore, alder, and cottonwood) are riparian in origin, they would require regular watering during their establishment phase, especially if they are to quickly attain a size efficacious for screening. These trees can tolerate mineral rich water quite well and would be good candidates for recycled water use. When established, however, this landscape would have an overall ability to withstand a water shortage, even to the extent of surviving a prolonged summertime drought.

Of the exotic species in the landscape, none are considered invasive. Only the Canary Island date palm is known to spread by seed into wild areas. It can be expected to appear opportunistically in the wetland areas and the bioswale. Because it is slow growing, however, it can be controlled by simple removal of the plant when it becomes visible. Mature palms harbor rats, so their presence in the restored areas would be detrimental to nesting birds.

CROSS-IMPACTS WITH PROPOSED AIRPORT EXPANSION

The land on the other side of Los Carneros road, opposite from the Cabrillo Business Park site, is part of the Santa Barbara Airport. Approximately 7.7 acres of this land would be impacted when the runway is extended as part of the airport expansion program. Because wetlands are involved, mitigation plans have been proposed. The proposed mitigation plans would affect much of the terrain directly east of Los Carneros Road and across from the areas designated "Alluvial Wetlands" on the Cabrillo Business Park landscape plan. According to the *Santa Barbara Airport Proposed Final Environmental Impact Statement of November, 2001*, the preferred mitigation plan would consist of

> "removal of invasive exotic vegetation and the restoration of wet grassland and seasonal wetland. . . Once weeds have been removed, the tops of the levees would be revegetated with [sic] Italian ryegrass, alkali weed, salt grass and alkali heath." (City of Santa Barbara, et al. 2001)

With the exception of Italian ryegrass (the report author probably meant the native alkali ryegrass [*Leymus triticoides*] because Italian ryegrass would hopefully not be used in this application due to its invasiveness), the other plants mentioned here are also part of the

extensive native plant palette listed on the Cabrillo Business Park conceptual landscape plan for wetland restoration and restored open space. Therefore, in terms of terrain and vegetation, it would be expected that there would be continuity of wetland habitat species on both sides of Los Carneros Road, at least where the wetlands restoration projects are located. On the western side of Los Carneros Road, views of the wetland would be partially screened through the proposed landscape buffer skyline trees. The skyline trees would not be relatively compatible with the proposed wetland enhancement plant palette on both sides of Los Carneros Road.

Appendix C-1. Cabrillo Business Park
Annotated List of Landscaping Plants
(This list does not include habitat restoration plants)

Botanical Name	*Common Name*	*Habit* [1]	*Growth Rate* [2]	*Water Use*	*Native Origin* [3]	*Average Maximum Size* [4]
TREES						
Alnus rhombifolia	White Alder	Dec	Fast	Mod	SB County	50 ft
Aesculus californica	California Buckeye	Dec	Mod	Low	CFP	25 ft
Cercis occidentalis	Western redbud	Dec	Fast	Low	CFP	15 ft
Feijoa sellowana	Pineapple guva	Evg	Mod	Low	South America	15 ft
Heteromeles arbutifolia	Toyon	Evg	Mod	Low	SB County	18 ft
Platanus racemosa	Sycamore	Dec	Fast	Mod	SB County	65 ft
Populus fremontii	Cottonwood	Dec	Fast	Mod	SB County	80 ft
Quercus sp	Oak	Evg	Slow	Low	SB County	30 ft
Sambucus mexicana	Elderberry	Dec	Fast	Low	SB County	12 ft
Umbellularia californica	California Bay	Evg	Slow	Low	SB County	30 ft
SHRUBS, ETC.						
Achillea millefolium	Yarrow	Prn	Fast	Low	SB County	groundcover
Arctostaphylos sp	Manzanita	Evg	Slow	Low	SB County	5 ft
Artemisia californica	California sagebrush	Evg	Fast	Low	SB County	3 ft
Carpenteria californica	Bush Anemone	Evg	Fast	Low	CFP	6 ft
Ceanothus sp	Wild Lilac	Evg	Fast	Low	SB County	2 - 15 ft
Cerastium tomentosum	Snow-in-summer	Evg	Fast	Low	Italy	groundcover
Dendromecon harfordii	Bush Poppy	Evg	Mod	Low	SB County	5 ft
Diplacus longiflorus	Monkey Flower	Evg	Fast	Low	SB County	3 ft
Erigeron glauca	Seaside daisy	Evg	Fast	Low	SB County	groundcover
Erigonum sp	Wild Buckwheat	Evg	Fast	Low	SB County	2 ft
Fremontodendron sp	Flannel Bush	Evg	Fast	Low	SB County	15 ft
Galvezia sp	Island Bush Snapdragon	Evg	Fast	Low	CFP	4 ft
Heuchera sp	Coral Bells	Evg	Fast	Mod	SB County	groundcover
Iris douglasiana	Pacific Coast Iris	Evg	Mod	Low	SB County	groundcover
Lonicera s. subspicata	Santa Barbara Honeysuckle	Evg	Fast	Low	SB County	vine

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Lupinus sp	Lupine	Ann	Fast	Low	SB County	groundcover
SHRUBS, ETC. (CONTINUED)						
Myrica californica	California waxmytrtle	Evg	Fast	Low	SB County	20 ft
Rhamnus californica	Coffeeberry	Evg	Mod	Low	SB County	5 ft
Rhus integrifolia	Lemonadeberry	Evg	Mod	Low	SB County	5 ft
Ribes speciosum	Fuchsia flowered gooseberry	Dec	Mod	Low	SB County	4 ft
Romneya coulteri	Matilija poppy	Prn	Fast	Low	SB County	6 ft
Rosa californica	Wild Rose	Evg	Mod	Low	SB County	4 ft
Rubus ursinus	Blackberry	Evg	Fast	Low	SB County	groundcover
Salvia sp	Sage	Evg	Fast	Low	SB County	4 ft
Sisyrinchium bellum	Blue-eyed grass	Prn	Fast	Low	SB County	groundcover
Zauschneria californica	California fuchsia	Prn	Fast	Low	SB County	groundcover
GRASSES						
Leymus condensatus	'Canyon Prince' Wild Rye	Evg	Fast	Low	SB County	6 ft
Muhlenbergia rigens	Deer grass	Evg	Fast	Low	SB County	3 ft
VINES						
Cissus striata	Cissus	Evg	Mod	Mod	So America	vine
Solanum jasminoides	Potato vine	Evg	Fast	Mod	So America	vine

1 Dec = deciduous; Evg = evergreen; Prn = perennial; Ann= annual

2 Growth rate is approximated relative to size of plant: A plant that can double in size in two years following installation is considered Fast. A slow plant may not double in size in four years following installation.

3 Plants shown as being found in Santa Barbara County are those which appear in Smith, Clifton F.; A Flora of the Santa Barbara Region, California, Santa Barbara Botanic Garden and Capra Press, 1998.

4 Average maximum size is determined by the sizes attained by like species in the nearby area, if present, and by consulting the sources listed in the Bibliography. Most of the tree species in the list can grow larger, however there is a trend towards less height as one approaches the ocean. In protected, well cared for locations they may exceed the observed heights.

CFP = California Floristic Province (A botanical region covering most of California except desert)

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