Habitat Conservation Plan for the Federally-Endangered Smith's Blue Butterfly and Other Species of Special Concern on the North of Playa Project Site, Sand City, California

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TABLE OF CONTENTS

LIST OF TABLES, FIGURES AND PLATES

EXECUTIVE SUMMARY

D.B.O. Development Company has applied for a permit pursuant to Section 10 (a)(1)(B) of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884) (Act), as amended from the U.S. Fish and Wildlife Service (Service) for the incidental take of the Smith's blue butterfly (*Euphilotes enoptes smithi*). The proposed incidental taking would occur within the 32.56 acre area known as North of Playa within Sand City, Monterey County, California. The North of Playa area also supports a small colony of the federally listed endangered sand gilia (*Gilia tenuiflora* ssp. *arenaria*), the federally listed threatened Monterey spineflower (*Chorizanthe pungens* var. *pungens*), and the black legless lizard (*Anniella pulchra nigra*) which has been proposed for federal listing as endangered and sandmat manzanita (*Arctostaphylos pumilla*) and Monterey ceanothus (*Ceanothus rigidus*), both federal Candidates for listing (Category 2). In accordance with the Service's "assurances policy," the effects of the proposed action on these species will also be addressed by the Section 10 (a)(1)(B) permit. To meet the requirements of law for a Section 10 (a)(1)(B) permit, D.B.O. Development Company proposes to implement the habitat conservation plan (HCP) described herein which provides measures for minimizing and mitigating adverse effects on the Smith's blue butterfly, sand gilia, Monterey spineflower, black legless lizard, sandmat manzanita and Monterey ceanothus. D.B.O. Development Company is requesting the Section 10 (a)(1)(B) permit be issued for a period of five years.

This Habitat Conservation Plan and attached Implementation Agreement delineate the responsibilities of the Service, the City of Sand City, and D.B.O. Development Company, and is designed to allow project development in such a way as to result in conservation of the Smith's blue butterfly and all other species addressed in the HCP. This Habitat Conservation Plan also describes measures that will minimize impacts to all species considered, including: measures that govern construction activities on the project site; salvage and relocation of species from the developed portions of the site; and other measures to reduce adverse effects of the proposed action on the species considered in the HCP. This Habitat Conservation Plan also discusses the possibility of unforeseen events occurring, and proposes actions to address those events. Funding for the Habitat Conservation Plan, alternatives to the proposed project, and other measures required by the Service are also discussed.

1.0 INTRODUCTION

1.1 Site Description

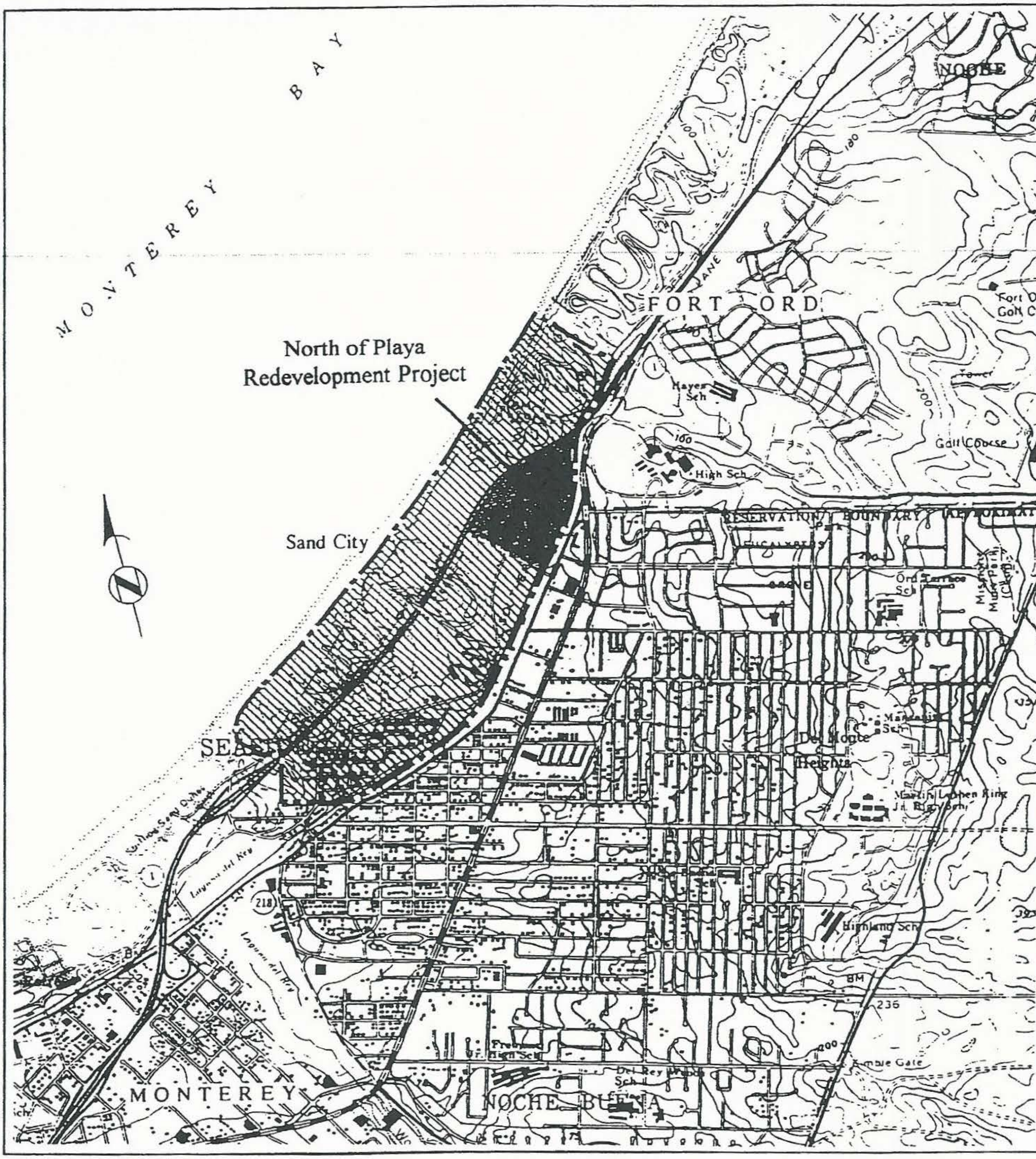
The City of Sand City is located along the coast of northern Monterey County, between the City of Monterey and Fort Ord (Figure 1). The North of Playa project site is within the City of Sand City and is situated north of Playa Avenue, between Highway 1 and the right-of-way of the Southern Pacific Railroad. The existing Sand Dollar Shopping Center is directly to the south, on the opposite side of Playa Avenue. The North of Playa project site is located within the USGS Seaside Quadrangle Township 16S and Range 1E.

As shown in Figure 2 the project area includes 32.56 acres in ten assessor's parcels and seven ownerships. The parcels and ownerships are as follows:

Parcel ID	APN	Owner	Area (Acres)
A	011-01-22	Heiland	0.89
B	011-01-11	Cardinale	1.38
C	011-01-10	Cardinale	1.55
D	011-01-03	Meadows	0.57
E	011-01-25	Narom	1.29
F	011-01-09	Calabrese	4.00
G	011-502-05	Granite Construction	11.00
H	011-01-32	Playa Development Co., Ltd.	1.59
I	011-01-33	Playa Development Co., Ltd.	6.024
J	011-01-34	Playa Development Co., Ltd.	4.262

These parcels are developed to varying degrees of intensity with commercial, industrial, and warehouse uses, a stormwater drainage facility, and three residences. Surrounding land uses consist of the Sand Dollar Shopping Center to the south, Fort Ord to the north, and the Southern Pacific Railroad right of way and the City of Seaside, with a variety of small industrial and heavy commercial uses to the East.

The project site varies in topography with the northern portion approximately 30 feet higher in elevation than the remainder of the area. Highway 1, which borders the project on the northern and western boundaries, is elevated above the entire site. Of the approximate 33-acre site, 20 acres are currently developed and the remaining 13 acres contain elements of coastal dune scrub and central maritime chaparral plant communities that have been degraded as a result of sand mining operations, the spread of non-native ice plant, and off-road vehicle use. The existing development lies in the north and central portions of the site, bisecting the two areas of remaining coastal dune scrub vegetation (see Figure 4 for aerial photograph). The coastal dune



ZANDER ASSOCIATES

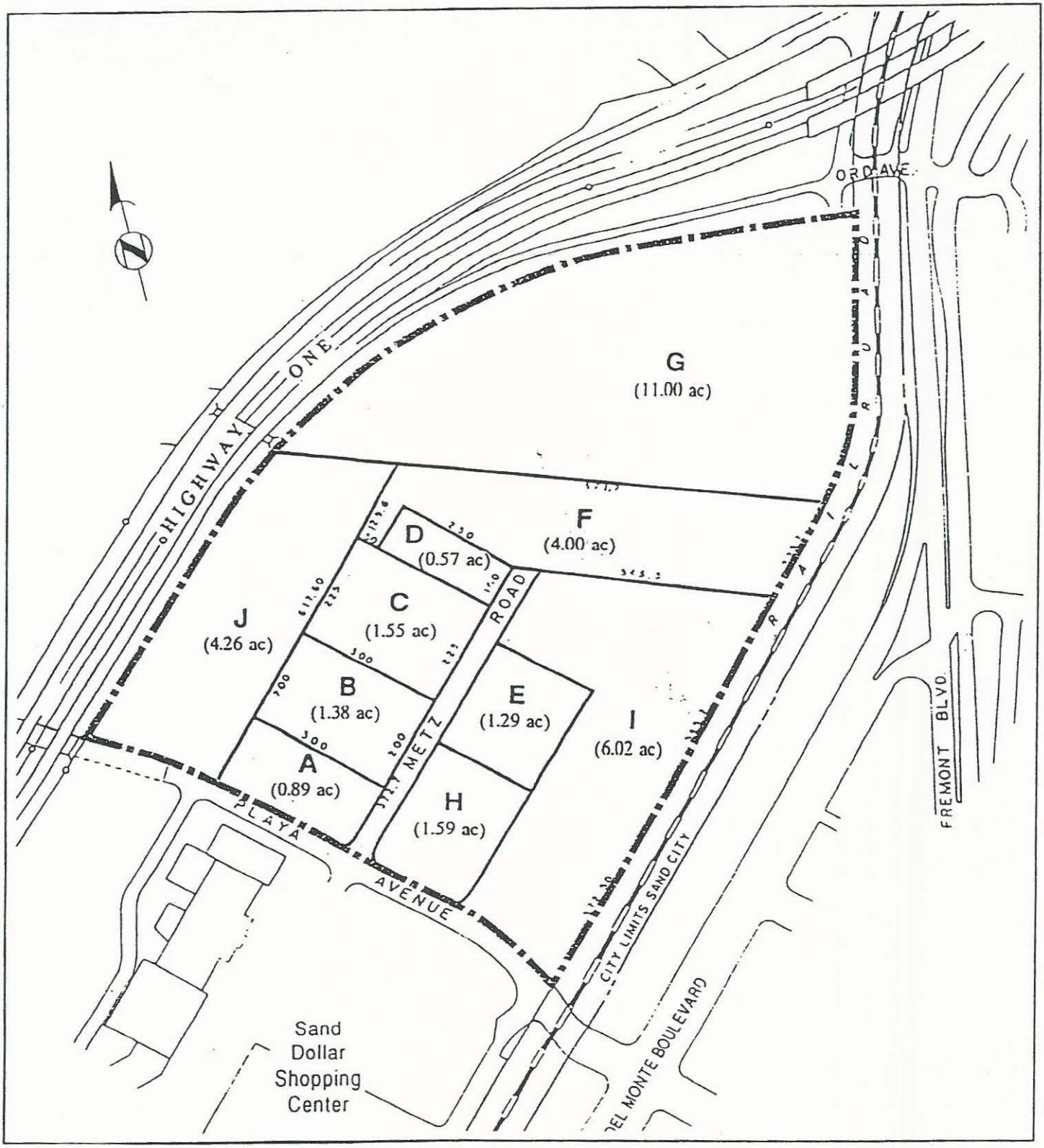
Environmental Consultants

Source: LSA

FIGURE 1

Regional Location
North of Playa Redevelopment Project
Sand City, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
DBO1		8/1/95		



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Source: LSA

FIGURE

Location of Parcels A-J
North of Playa Redevelopment Project
Sand City, California

2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
DB01		8/1/95		

scrub east of the existing development also contains elements of central maritime chaparral vegetation.

Although the existing coastal dune scrub habitat is degraded, there are several special status species typically associated with the scrub and central maritime chaparral plant communities that are known to occur on the site. These species include the federally listed endangered Smith's blue butterfly (*Euphilotes enoptes smithi*), the state and federally listed endangered sand gilia (*Gilia tenuiflora var. arenaria*), the federally listed threatened Monterey spineflower (*Chorizanthe pungens* var. *pungens*), the black legless lizard (*Anniella pulchra nigra*) which is proposed for federal listing as endangered, and sandmat manzanita (*Arctostaphylos pumilla*) and Monterey ceanothus (*Ceanothus rigidus*), both federal Candidates for listing (Category 2).

1.2 History of the Habitat Conservation Planning Process

Sand City has been engaged in habitat conservation planning efforts for a number of years. In 1993 the City prepared and submitted a draft city-wide HCP to the Service and the California Department of Fish and Game (CDFG) for review and comment. In late 1994, the City and the Service agreed to a major re-structuring of the HCP effort to result in a feasible implementation program.

The City, in consultation with the Service, developed a "City-Wide Habitat Conservation Strategy" which encompasses the various conservation efforts currently underway in the city. These efforts include the existing and planned dune restoration as part of the Sand Dollar I Shopping Center development, the proposed residential development in the East Dunes Planning Area, and this HCP which is focused on the North of Playa area.

Sand Dollar I Dune Restoration

In 1990 a regional shopping center (Sand Dollar Center) was constructed east of Highway 1 and north of Tioga Avenue in Sand City. As part of the project, a 7.6 acre dune restoration and habitat preservation program was undertaken by the developers as a City permitting requirement. Although a Section 10a Permit was not required, both the Service and CDFG were parties to an agreement which provided for the establishment of habitat and monitoring for several species of concern including the endangered Smith's blue butterfly and the sand gilia. The project has resulted in the successful introduction of coast and dune buckwheat (host plants for the Smith's blue butterfly), Monterey spineflower, black legless lizard, coast wallflower (*Erysimum ammophilum*), Monterey ceanothus, sandmat manzanita, in addition to the sand gilia.

North of Playa Dune Restoration

The North of Playa project is adjacent to the existing Sand Dollar Center. Smith's blue butterfly habitat has been identified to occur on the project site and a Section 10 (a)(1)(B)

Permit is required for development. This HCP proposes to minimize and mitigate impacts to the Smith's blue butterfly and other species addressed by creating a 4.6 acre dune restoration and habitat preservation area along Highway 1 as a continuation of the Sand Dollar Center Dune Restoration project. An additional 1.4 acre area which offers an opportunity for dune restoration is located north of the proposed mitigation area. The East Dunes HCP proposes to enhance, preserve, and maintain this area for mitigation for habitat impacts in the East Dunes Planning Area.

East Dunes HCP

The City is in the process of preparing an HCP for the East Dunes Planning Area in support of an application to the Service for a Section 10 (a)(1)(B) permit to allow for the future development of a residential neighborhood on the undeveloped portions of the Planning Area. Mitigation for impacts to species of concern which have been identified to exist in this area is proposed to include a 4.5 acre enhanced habitat preserve within the Planning Area and a one acre enhanced habitat preserve in the northern portion of the proposed North of Playa commercial project. Implementation of the East Dunes HCP, in conjunction with the existing and proposed dune restoration efforts for the Sand Dollar Center and the North of Playa project, will result in a total of approximately 18 acres of restored generally continuous coastal dune habitat on the east side of Highway 1 in Sand City.

Coastal Habitat Conservation

The City's General Plan and certified Local Coastal Program (LCP) allows a variety of uses to be developed west of Highway 1, including visitor-serving commercial and residential developments, public and private recreation uses, and open space. The coastal area has been the subject of numerous biological surveys which have concluded that the current dune environment has been highly degraded by previous sand mining and industrial uses. The only Species of Concern which has been identified in the area is the snowy plover, a federally listed threatened species. The biological studies have indicated that the coastal area may offer opportunities for the establishment and enhancement of dune-related habitat which potentially could support Species of Concern in limited areas. Consistent with the City's LCP, planning efforts are underway to prepare documents which provide a comprehensive planning framework for the area. Provisions and requirements for coastal dune enhancement and appropriate native landscaping will be specified for both public and private development and state and federal permits which may be required.

The resulting restored and enhanced dune environment will complement the city's habitat conservation efforts occurring on the east side of Highway 1 and the restoration efforts currently underway and planned for coastal areas south of the City in Seaside and Monterey and north of the City in Fort Ord, extending into Marina.

1.3 Project Description

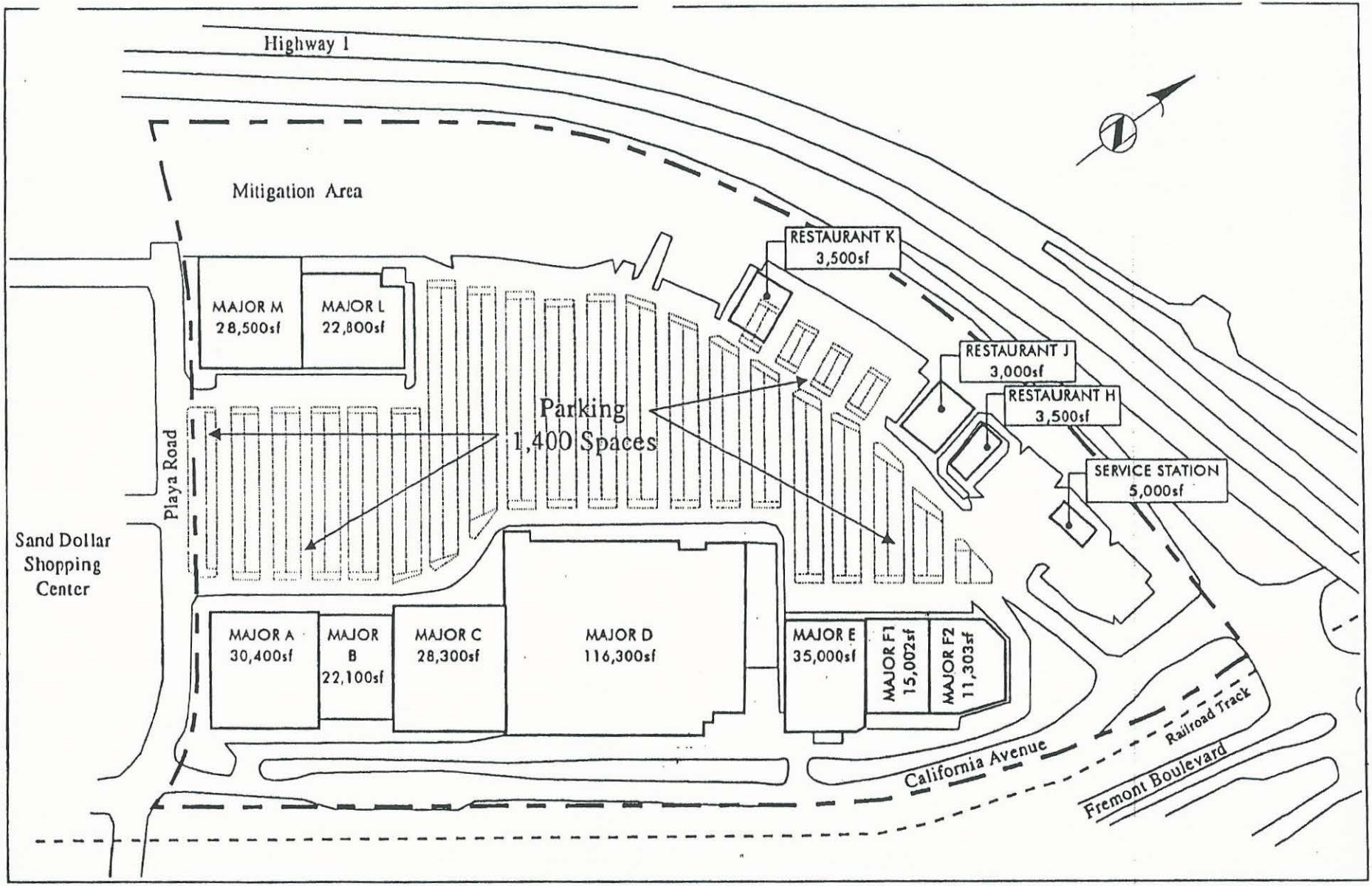
The City of Sand City Redevelopment Agency, in conjunction with D.B.O. Development Company, proposes an approximately 325,000 square foot regional commercial shopping center. The center will consist of thirteen buildings housing a mixture of major retail uses, four restaurants and one service station. There will be a total of 1,400 parking spaces and loading areas will be located to the rear and sides of the proposed retail buildings (Figure 3). Landscaping will be installed throughout the interior and periphery of the site.

As a component of the project, California Avenue will be extended north from its current terminus at Playa Avenue to the Fremont Boulevard/Ord Avenue intersection at the Highway 1. The California Avenue extension right-of-way will occupy a portion of the 100-foot coastal zone corridor along the east side of the project site. Bus turnouts will be provided to accommodate public transit to the commercial center. A traffic signal will be installed at the newly redesigned intersection of Fremont Boulevard and Highway 1.

The total project site comprises approximately 32.5 acres, about 20 acres of which are currently developed. The remaining 12.5 acres consist of an approximately 4.3 acre disturbed sand dune area along the site's western boundary (Parcel J), an approximately 6 acre undeveloped area consisting of mixed coastal dune scrub and ruderal vegetation along the southeastern boundary (Parcel I), and about 2.2 acres of additional "fingers" of undeveloped disturbed areas adjacent to roadways, paved maintenance yards and other developed areas of the site. These "fingers" are colonized primarily by ice plant and other invasive plant species.

The project as proposed will remove all of the existing habitat in the 6 acre undeveloped area of Parcel I and portions of the 2.2 acres of the additional undeveloped "finger" on the site. As mitigation for the removal of this habitat, the project includes the establishment of a 4.6 acre mitigation area along the western edge of the project which includes the 4.3 acres of disturbed sand dune in Parcel J. This mitigation area is the focus of the habitat restoration program described in this HCP. An additional 1.4 acres will be set aside north of the mitigation area and dedicated to the City of Sand City for coastal dune restoration to offset losses in other parts of the city. Both parcels are due north of the existing Sand Dollar Center habitat preserve and would essentially extend and enlarge the preserve from 7.6 acres to almost thirteen acres, an increase of about 40 percent.

Because the site presently consists of two distinct topographic levels, it will be graded such that the upper level will be lowered and the cut material will be used as fill to raise the lower level. Leveling of the site will accommodate the development and facilitate positive drainage. As a result, cut and fill will be balanced onsite.



ZANDER ASSOCIATES

Environmental Consultants

Source: LSA

FIGURE

3

Proposed Site Plan
North of Playa Habitat Conservation Plan
Sand City, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
DBO1		8/1/95		

1.4 Expected Impacts

The City of Sand City, which is the lead agency for compliance with the California Environmental Quality Act for this action, prepared a draft environmental impact report (EIR), conducted public review and certified the final EIR on September 28, 1995. The draft EIR identified the following issues as having the potential to have significant impacts on the environment: geology and soils, hydrology and drainage, vegetation and wildlife, traffic and circulation, noise, air quality, cultural resources, services, and health and safety. However, the EIR determined that all of the potential significant impacts identified were mitigable to a less than significant level. A mitigation and monitoring program to ensure compliance with all conditions of approval, including mitigation measures recommended in the EIR has been prepared and certified by the City of Sand City. A summary of the effects on biological resources resulting from the project is provided in this section.

The proposed development footprint will expand into the 6 acres of Parcel I which are currently undeveloped. This parcel is characterized by a degraded coastal dune scrub plant community with elements of central maritime chaparral and considerable ruderal vegetation. This parcel is on the eastern portion of the site and is isolated from the proposed mitigation area by existing development. West of the existing development is the 4.6 acre mitigation area where most of the coastal dune scrub habitat will remain unaffected.

Several of the special status species known to occur on the project site are found within Parcel I and will be affected as a result of project development. Approximately 0.5 acre of area containing five clusters of the buckwheat foodplants that have historically supported varying numbers of the Smith's blue butterfly will be removed for construction of the project. However, 1.5 acres of habitat for Smith's blue butterflies identified within the disturbed sand dune area of Parcel J west of the existing development will remain unaffected and will be included in the 4.6 acre mitigation area.

There are two special status plant species found within the 6 acre parcel to be disturbed that have not been observed in the proposed mitigation area; sandmat manzanita and Monterey ceanothus. It is estimated that approximately 260 sandmat manzanita and 200 Monterey ceanothus plants will be removed for this project.

Three colonies of sand gilia were documented on the project site in 1993. Two of these colonies are within the 6 acre parcel and the third is within the ruderal vegetation in Parcel F. In 1993 these colonies contained 700, 400, and 10 individual plants. A fourth colony was reported by Dorrell (1995) in 1993 that contained 75 individuals and was located in the proposed mitigation area about midway between the highway and existing buildings to the east. The proposed project would remove the three colonies outside of the mitigation area in Parcels I and F.

Approximately 1,200 Monterey spineflower plants have been identified within a 1.58 acre area to be disturbed for construction of the project. However, individuals of Monterey spineflower have

also been observed within the proposed mitigation area by Kreiberg (LSA Associates 1995) and during a spring, 1995 field reconnaissance conducted by Zander Associates.

Black legless lizards have been observed within the area of proposed disturbance but have also been found on the mitigation site. It is estimated that between 10 and 59 individual black legless lizards may be affected by the project. Habitat for the species exists in the mitigation area and efforts will be made to recover individuals within the proposed development area and relocate them to the mitigation site or the adjacent Sand Dollar Center habitat preserve during grading activities.

Section 3.0 of this plan describes in detail the mitigation measures proposed to address the expected impacts on the Smith's blue butterfly and other special status species resulting from development of the North of Playa project.

2.0 BIOLOGICAL DATA AND SPECIES OF SPECIAL CONCERN

2.1 Coastal Dune Scrub and Central Maritime Chaparral Vegetation

The non-ruderal vegetated areas on the North of Playa project site are characterized by a degraded coastal dune scrub plant community with elements of central maritime chaparral (Figure 4). Pure stands of coastal dune scrub and maritime chaparral communities are typically characterized by moderate to low-growing evergreen and drought-deciduous shrubs with scattered trees and patchy herbaceous cover. Coastal dune scrub is a dense scrub community of scattered shrubs, subshrubs, and herbs generally less than three feet tall and often developing considerable cover. Coastal dune scrub is dominated by soft-leaved drought-deciduous shrubs and winter deciduous shrubs such as beach sagewort (*Artemisia pycnocephala*), California croton (*Croton californica*), seacliff buckwheat (*Eriogonum parvifolium*), and coastal buckwheat (*Eriogonum latifolium*). Maritime chaparral is dominated by evergreen, hard-leaved shrubs such as chamise (*Adenostoma fasciculatum*), sandmat manzanita (*Arctostaphylos pumila*), and Monterey ceanothus (*Ceanothus rigidus*). These communities form on shallow soils, along dry rocky slopes and ridges, and on sand hills. Both coastal dune scrub and central maritime chaparral communities have a variety of associated special status species. A discussion of the special status species associated with these habitats on the North of Playa site follows.

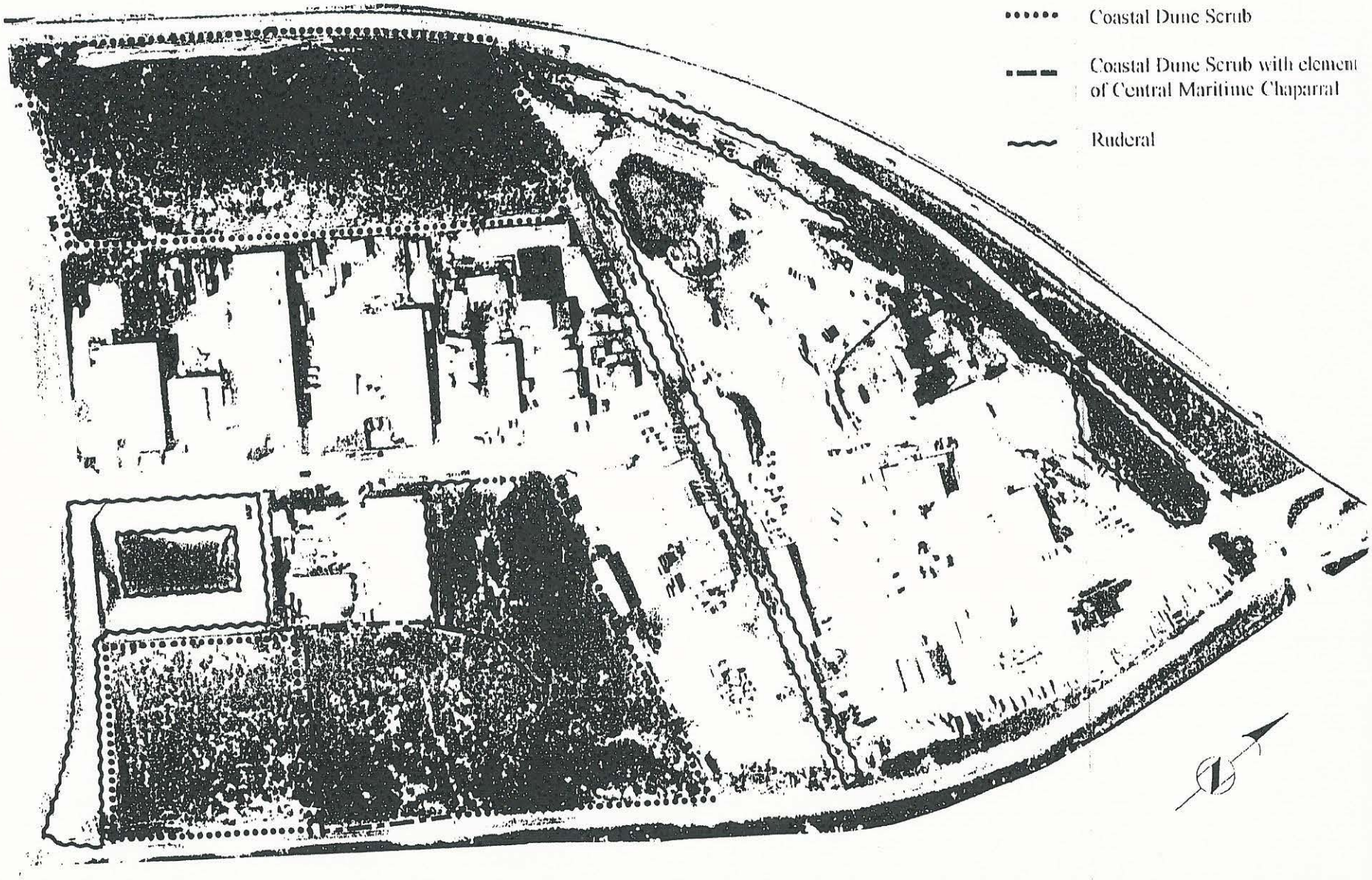
2.2 Special Status Species

Several special status species occur on the North of Playa project site. These species include the Smith's blue butterfly (*Euphilotes enoptes smithi*), a federally listed endangered species; sand gilia (*Gilia tenuiflora var. arenaria*), a state and federally listed endangered species; Monterey spineflower (*Chorizanthe pungens* var. *pungens*), a federally listed threatened species; black legless lizard (*Anniella pulchra nigra*), proposed for federal listing as endangered; sandmat manzanita (*Arctostaphylos pumilla*) and Monterey ceanothus (*Ceanothus rigidus*), both federal candidates for listing (Category 2).

2.2.1. Smith's Blue Butterfly (Euphilotes enoptes smithi)

Biological Data:

The Smith's blue butterfly is a small lycaenid butterfly, which, as an adult has a one-inch wingspan. Larvae are slug-shaped and vary from cream to pale yellow or rose in color, changing with the color of the flowerheads on which they are feeding (USFWS 1984). This subspecies is found along the coastal dunes of Monterey County north from Marina Dunes, south to Point Gorda. More inland populations are found in Carmel Valley. The larvae (caterpillar form) feed on two species of buckwheat: the seacliff buckwheat, *Eriogonum parvifolium*, generally used in



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Environmental Consultants

Source: LSA Associates, Inc.

FIGURE

4

Vegetation Types
North of Playa Redevelopment Project
Sand City, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
DB01		8/1/95		

the southern portion of their range, and the coast buckwheat, *Eriogonum latifolium*, generally used in the northern portion of their range. Both species of buckwheat are utilized by populations of Smith's blue butterfly within Sand City.

Female Smith's blue butterflies lay their eggs singly on flower heads of the host plants. The larvae hatch in about a week and begin eating the flowering heads of the buckwheat. As larvae grow they molt, passing through five instars (developmental stages). Following the fifth instar the larvae pupate sometime between August and November, and then overwinter in the leaf litter at the base of the plants. As with any other lycaenids, Smith's blue butterfly larvae may have a mutualistic interaction with ants during later instars (Arnold 1983). Arnold also observed predation by spiders and occasionally heavy parasitism by wasps. The role of other species in Smith's blue population dynamics is unknown.

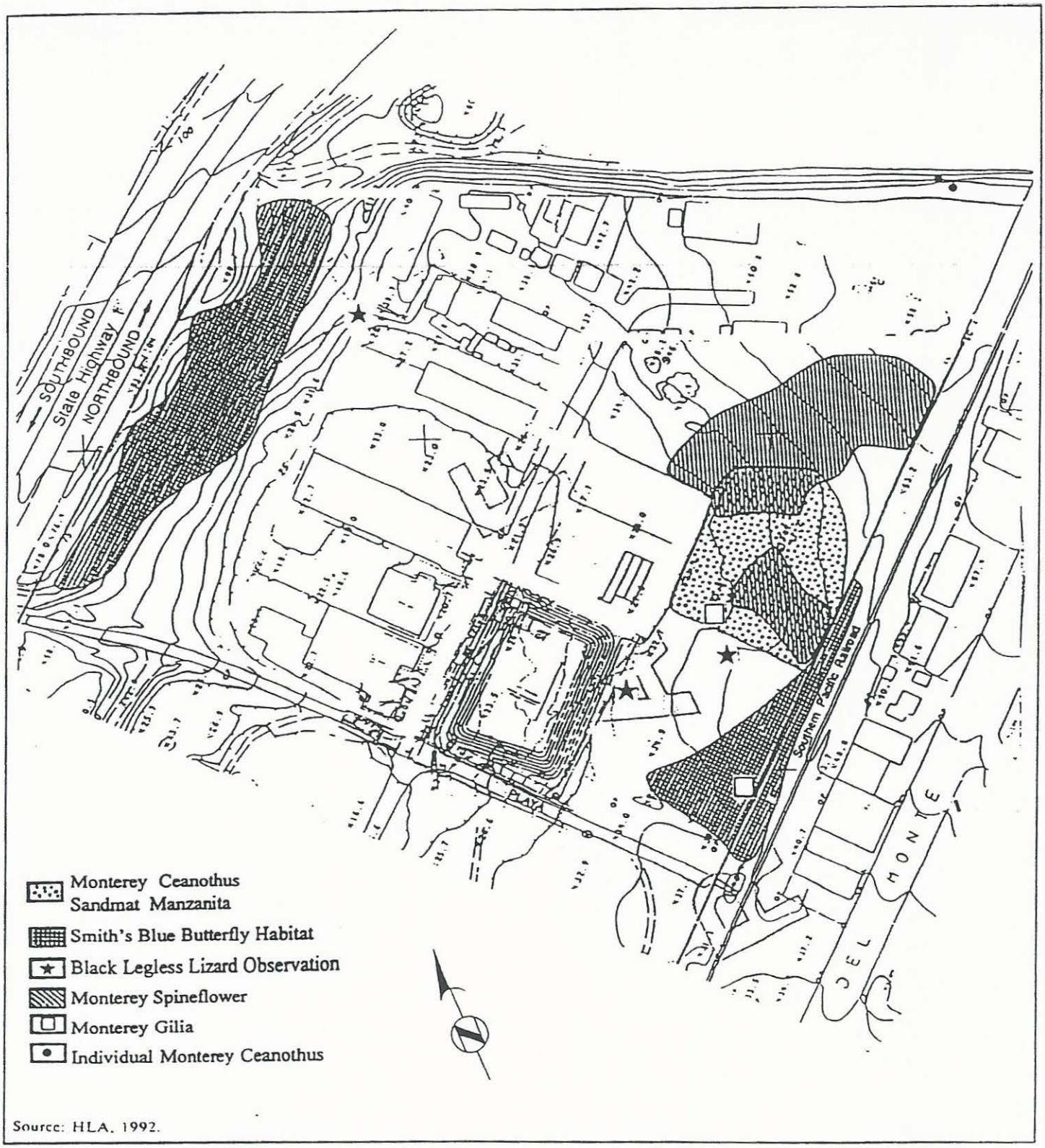
The Smith's blue butterfly is a weakly flying species; therefore, long distance dispersal is believed to occur only rarely. Arnold reported common dispersal of distances of up to a few hundred yards at Fort Ord and at the Marina State Beach (1983 and 1986). Flight usually occurs within one or two meters above the ground. Observations of extended flight - more than a few minutes for an individual butterfly - are rare.

Since the Smith's blue butterfly spends the majority of its time in short flights within patches of buckwheat, any area of non-habitat, such as active mining areas, large blow-outs on sand dunes, or extensive dense patches of vegetation which do not contain buckwheat (such as ice plant), will act as barriers to dispersal. Where visual continuity of habitat, as with areas of urban development or planting of shrubs or trees, does not exist, the barrier is likely to be significant. Some dispersal may be passive, by the wind, but the typical response of adults under high wind conditions is to avoid flight altogether.

Adult Smith's blue butterflies can find basic requirements (mating, nectaring, egg-laying) within a very small area (less than three acres). In locations where host plants are abundant, the local densities of Smith's blue butterflies may vary from year to year, and may shift spatially over a period of years, at least partially in response to declining buckwheat quality (Arnold 1980, 1986). The limited distribution and poor quality of host plants in Sand City has resulted in a locally limited distribution of Smith's blue.

Presence on the North of Playa project site:

A small population of Smith's blue butterflies has periodically existed in the southeastern corner of the site (Figure 5). This 0.5 acre area supports 60-70 individuals of both coast and seacliff buckwheat which are aggregated in five clusters. A small number of adult Smith's blue were observed there in 1986 and 1988 by Kellner (LSA Associates 1988). No adults were observed there in studies conducted in 1991 and 1992 by Arnold. Studies conducted in 1993 by Thomas Reid Associates (TRA) resulted in a sighting of one male on July 8 on the patch of *Eriogonum parvifolium* located at the southeastern corner of the site. Studies conducted by Arnold in 1993 resulted in a total of five sightings of adult Smith's blue in parcel I, two on 7/8/93, two on



Source: HLA, 1992.

ZANDER ASSOCIATES

Environmental Consultants

Source: LSA

FIGURE

Location of Special Status Species
North of Playa Redevelopment Project
Sand City, California

5

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
DB01		8/1/95		

7/15/93, and one on 7/22/93. TRA surveyed for Smith's blue on ten occasions between 6/8/94 and 8/22/94. On none of these occasions was there a sighting on parcels A through I, the parcels to be redeveloped.

TRA also looked for Smith's blue butterfly use on the buckwheat plants located in the proposed mitigation area during the ten 1994 site surveys. On seven of the ten occasions, a total of 25 Smith's blue butterflies were sighted within this portion of the project site. In 1993, Arnold sighted a total of 66 adult Smith's blue butterflies on the proposed mitigation parcel during seven of twelve survey days. The Smith's blue butterflies in the mitigation parcel have been observed among two patches of *Eriogonum parvifolium* found on the upper slopes in the middle and at the northern end of the Smith's blue butterfly habitat area indicated for this parcel on Figure 5.

Effect of the proposed project on Smith's blue butterfly:

Development of the project would result in the direct removal of five clusters of *Eriogonum parvifolium* in Parcel I that have periodically supported varying numbers of the Smith's blue butterfly. However, the patches of *Eriogonum parvifolium* located in the proposed mitigation parcel will remain unaffected and will continue to provide habitat for the Smith's blue butterfly. Increased equipment traffic in the vicinity of the butterfly habitat during construction may result in increased collisions with adult butterflies. However, since the adult Smith's blue butterflies are a weakly flying species and tend to have short flights within the patches of buckwheat, and the majority of grading activities are proposed for the winter and early spring months, the potential for collisons with equipment is reduced. The proposed land use changes for the project will help to control illegal dumping, trespass (encampments) and other unauthorized activities that currently occur on portions of the property and contribute to the degradation of the habitat for Smith's blue butterfly. By implementing the restoration, enhancement and protection measures described in this HCP, the quality of habitat for the Smith's blue butterfly on the project site and in the City of Sand City is expected to improve.

2.2.2. Sand Gilia (Gilia tenuiflora ssp. arenaria)

Biological Data:

Sand gilia, is a state listed threatened species and a federally listed endangered species. It was listed by both the federal and state governments because of its small number of known populations, limited distribution, and potential harm to its populations from development. The gilia is a small, erect annual plant of the Phlox family. At present the gilia is found in scattered populations in coastal dune scrub and maritime chaparral communities from Moss Landing to the Monterey Peninsula. There is a large population of sand gilia on the Fort Ord property (U.S. Army Corps of Engineers, 1992). Recreational uses, such as off-road vehicles, hiking, and horse back riding, as well as the introduction of African ice plant and European beach grass for dune stabilization, threaten sand gilia populations and habitat.

Sand gilia prefer sandy soils in open, yet wind-sheltered areas (Dorrell-Canepa 1994). The low average rainfall (10-15 inches) and foggy conditions around the Monterey Bay area provide sufficient moisture for gilia to survive. Gilia are most often found in level areas or on shallow slopes (up to 45 degrees), but may also occur on the cut banks of sandy drainages. In steep areas, gilia seed often washes to the bottom of the slope and germinates there. On sand dunes, gilia seem to prefer northern, western, and eastern slopes to southern slopes, which are the hottest and driest in the dunes. Gilia often thrive in slight depressions. These depressions may have higher soil moisture and dead vegetative matter, providing a slight increase in nutrients in otherwise nutrient poor soils. Found in the mid to hind dunes (coastal scrub) and in open pockets of maritime chaparral, gilia can tolerate a small amount of sand burial (probably < 1 cm). Gilia prefer stabilized sands and do not thrive in excessively windy areas. Previous physical disturbance to the sand seems to encourage germination in some areas, and healthy gilia populations may be found along old paths, in old vehicle tracks, or in areas where trenching has occurred.

Gilia prefer areas with little plant competition. Associated native species include spineflower (*Chorizanthe* spp.), popcorn flower (*Cryptantha leiocarpa*), beach primrose (*Camissonia cheiranthifolia*), coast and dune buckwheat (*Eriogonum latifolium* and *E. parvifolium*), pink sand verbena (*Abronia umbellata*), sea lettuce (*Dudleya caespitosa*), beach aster (*Lessingia filangifolia*), mock heather (*Ericameria ericoides*), silver beach lupine (*Lupinus chamissonis*) and California poppy (*Eschscholzia californica* var. *maritima*). Associated plant density rarely exceeds 30% cover in dune areas surrounding the gilia populations. In maritime chaparral, gilia survives in open pockets between taller species such as mock heather (*Ericameria ericoides*) and chemise (*Adenostoma fasciculatum*).

Gilia is a self-pollinating species, but insect pollination by the beefly has been observed in the related (non-endangered) subspecies, *Gilia tenuiflora* ssp. *tenuiflora* (Dorrell-Canepa 1994). Insect pollination of *Gilia tenuiflora* ssp. *arenaria* was never observed despite long hours in the field during the flowering stage.

Presence on the North of Playa project site:

LSA Associates reports the occurrence of three colonies of sand gilia on the project site (Figure 5) and that in 1993, these three colonies contained 700, 400 and 10 individual plants. One of these colonies is located toward the central portion of the project site (in Parcel F), another at the eastern boundary near the railroad tracks (in Parcel I), and the third near the eastern edge of the south-central portion of the site (in Parcel I). A fourth colony was observed on the site in 1993 by Dorrell (pers. comm. 1995). This colony was reported to contain 75 individuals and is located within an approximate 100 square foot area in Parcel J about midway between the highway and existing buildings to the east.

Effect of the proposed project on sand gilia:

The proposed project will result in the conversion of most of the currently undeveloped areas of the site except for the undeveloped portions of Parcel J (the mitigation site). As a result, three of the four existing colonies of sand gilia documented on the site will be removed and/or relocated into the mitigation area. The existing colony of sand gilia within the mitigation area will not be adversely affected by the project. Implementation of the measures described in this HCP to enhance and restore the disturbed dune scrub habitat in the mitigation area are likely to benefit the sand gilia on the project site. The removal of iceplant and other non-native invasive species, restoration of coastal dune scrub vegetation, controlled access and monitoring and maintenance of the habitat in perpetuity will improve the habitat for sand gilia on the site. As a component of the HCP, seed of sand gilia will be collected from the colonies to be removed on the site and used for establishing additional colonies of sand gilia within the mitigation area. It is estimated that the mitigation area could support up to 5,000 plants of sand gilia (Dorrell 1995). Propagation of seed will occur prior to the initiation of construction and seedlings will be installed during the first growing season following the removal of sand gilia habitat in Parcel I.

2.2.3 Monterey Spineflower (Chorizanthe pungens var. pungens)

Biological Data:

Monterey spineflower is a small, prostrate annual of the buckwheat family. Monterey spineflower occurs scattered on sandy soils within coastal dune, coastal scrub grassland, maritime chaparral, and oak woodland communities along and adjacent to the coast of southern Santa Cruz and northern Monterey Counties and inland to the coastal plain of Salinas Valley. Significant populations of Monterey spineflower representing upwards of 70 percent of the range of the plant were recently documented at Fort Ord (U.S. Army Corps of Engineers 1992). Monterey spineflower was recently listed as Threatened by the Service.

Monterey spineflower has a wide habitat range and tends to occur on bare sandy patches where there is not much vegetation cover. The species often colonizes recently disturbed sandy soils. Within grassland communities, the plant occurs along roadsides, in firebreaks, and other disturbed sites. In oak woodland, chaparral, and scrub communities, the plants occur in sandy openings between shrubs. In dense chaparral or scrub vegetation, Monterey spineflower typically is restricted to roadsides and firebreaks through these communities. The species is threatened by residential development, agricultural land conversion, recreational use, sand mining and dune stabilization due to the introduction of non-native species.

Presence on the North of Playa project site:

Approximately 1,200 individuals of Monterey spineflower were observed growing on about 1.6 acres within the undeveloped area of Parcel I on the northeastern portion of the project site (HLA 1992) (Figure 5). LSA reports that a few individuals of Monterey spineflower occur on the

mitigation site and during a spring, 1995 field reconnaissance by Zander Associates, Monterey spineflower was observed in several areas of the proposed mitigation site.

Effect of the proposed project on Monterey spineflower:

The proposed project would result in similar effects on the Monterey spineflower as those described for the sand gilia. Because all of Parcel I will be developed for the project, habitat for the Monterey spineflower currently present in this parcel will be removed. This will result in the loss of approximately 1,200 Monterey spineflower plants. However, overall habitat for the species on the site will be improved with implementation of the habitat restoration measures described in this HCP. Additionally, seed will be collected from the Monterey spineflower plants in Parcel I and will be used to establish additional colonies of the species within the mitigation area. Because construction and removal of the Monterey spineflower habitat in Parcel I will occur concurrently with restoration activities in the mitigation area, there may be one growing season where the number of Monterey spineflower plants on the site is reduced below current levels. However, because Monterey spineflower is an aggresive colonizer, particularly of disturbed areas, it is expected that the number of plants of the species will rise substantially above current levels in the second growing season following initiation of construction and restoration activities.

2.2.4 Black Legless Lizard (Anniella pulchra nigra)

Biological Data:

The black legless lizard was proposed for listing as Endangered by the Service on August 2, 1995. The black legless lizard is only known to exist from the Monterey Peninsula and the southern part of Monterey Bay (Stebbins, 1966). Its historic range extended along the coastal sand dunes from the Salinas River to the Carmel River. Human activity has disrupted the continuous distribution of the black legless lizard and the lizard has experienced a severe reduction in the area where it formerly occurred.

Black legless lizards live in a number of habitats in sand dunes from areas immediately above high tide, the crest of sand dunes, and the edge of the hind dunes (TRA 1987). They burrow in sand and leaf litter beneath plants that grow on the dunes. Black legless lizards feed on insects and other invertebrates that occur in the sand. At least a few plants need to be present as food for insects that, in turn, serve as food for the black legless lizards.

Black legless lizards are most abundant in dune habitats where native vegetation is present (Stebbins 1966). Although legless lizards have also been found along the edges of ice plant mats within dune ecosystems, the ice plant mat community is not considered suitable habitat for legless lizards (Papenfuss and Harris 1990). The dense root structure of African ice plant and lack of leaf litter and duff produced by the species appear to provide poor burrowing conditions for legless lizards.

Adults feed on small insects, larvae of insects, spiders, and other small food items. They are live-bearing and 1-4 young (usually 2) are born in the fall between September and November (Miller 1944). Young and adults spend most of the time underground, but may rest just under the surface of the sand or leaf litter layer.

The activity of legless lizards is controlled by temperature. The optimum temperature is from 15 degrees Celsius to 25 degrees Celsius. Below 13 degrees Celsius the lizards are inactive, although they can stand a temperature as low as 4 degrees Celsius. The lizards bask in the warm sand during the day. They are active and feed in the afternoon and evening.

Habitat destruction and modification are the primary threats to the black legless lizard. Extensive urban and agricultural development in the Monterey Bay region has eliminated many areas of black legless lizard habitat. Degradation or removal of native vegetation by urban or agricultural development, recreational activities, and introduction of non-native species such as African ice plant has made habitat conditions unsuitable for the black legless lizard in many areas (Bury 1985). Activities that compact soils, such as trail construction or off-road vehicle use, also degrade black legless lizard habitat (Bury 1985). Because black legless lizards travel underground, dispersal capabilities for the species are limited. Movement barriers include rivers, hard or rocky soils, roads or trails, and cultivated fields (Bury 1985). Habitat modifications in the Monterey Bay region have isolated many legless lizard populations. Isolated populations are highly susceptible to extirpation from catastrophic events and genetic erosion resulting from excessive inbreeding (Bury 1985).

Presence on the North of Playa project site:

Habitat for black legless lizards occurs on and adjacent to the project site. Habitat on-site has been degraded by the presence of ice plant, compacted substrate as a result of the previous mining activity, and the dumping of rubble and debris. However, black legless lizards were observed in three locations on the project site; within the proposed mitigation area and within the 6 acre parcel (Parcel I) on the southeastern portion of the site (TRA 1987; HLA 1992).

Effect of the proposed action on black legless lizard:

The conversion of Parcel I for development will result in the removal of about 6 acres of relatively low quality habitat for the black legless lizard. It is estimated that between 10 and 59 individual black legless lizards may occur in this portion of the site (LSA Associates 1995). Because the black legless lizard travels underground it is likely that individual lizards will be encountered during construction activities. Grading equipment such as backhoes can capture lizards in the load. All efforts will be made to recover black legless lizards encountered during grading but it is expected that some mortality will occur. Prior to the initiation of grading, sites within the mitigation area or in the adjacent Sand Dollar Center habitat preserve will be identified for release of black legless lizards captured during construction. Restoration of the coastal dune scrub in the mitigation area will improve overall habitat for the black legless lizard

on the project site. The removal of iceplant, removal of debris and rebuilding of dunes with clean sand in this area will be beneficial for the black legless lizard. Controlled access and maintenance of the mitigation area further protect the habitat for the species. No further impacts on the black legelss lizard are expected once construction and restoration activities are completed on the site.

2.2.5 Sandmat Manzanita (Arctostaphylos pumila)

Biological Data:

Sandmat manzanita is a federal candidate for listing (Category 2). Sandmat grows on pre-Flandrian dunes in the central maritime chaparral only around Monterey Bay (Griffin 1978). Sandmat manzanita is a mat- to mound-like evergreen shrub, generally less than 5 ft. tall, in the heath family. It blooms from February to May.

Sandmat manzanita is well adapted to shifting sand habitat forming large circular mats and mounds. It appears to be an early to middle successional species in maritime chaparral following burn events or ground disturbance, eventually yielding to taller chemise and shaggy-barked manzanita in older stands. It is typically associated with cropleaf ceanothus (*Ceanothus dentatus*), Monterey ceanothus, deer weed (*Lotus scoparius*), heliotrope *(Heliotropum curassavicum*), and beach mock heather (Zoger and Pavlik 1987a).

Sandmat manzanita prefers windy open areas close to the ocean's sandy soils. Reproduction occurs by seed and layering. The greatest threat to sandmat manzanita, other than development, is crowding out by noxious weeds and taller species within the maritime chaparral community.

Presence on the North of Playa project site:

Approximately 262 sandmat manzanita plants have been counted on the project site by Kreiberg (LSA Associates 1995). These plants occur with Monterey ceanothus in a 1.3 acre area of Parcel I (Figure 5). Individuals range in size from less than one foot in diameter to fifteen feet in diameter for large-sized clones (HLA 1992).

Effect of the proposed action on sandmat manzanita:

The proposed project would result in the removal of all of the sandmat manzanita currently identified on the project site. Efforts to propagate new plants and establish them in the mitigation area and within the project landscape are proposed as part of this HCP. However, since the focus of the mitigation site is restoration of coastal dune scrub habitat, plantings of sandmat manzanita, a component of central maritime chaparral, will be limited. The Environmnetal Impact Report for the project recommends that sandmat manzanita plants propagated from onsite material be planted along the perimeter of the project site in appropriate locations and potentially used as interior landscape material. The EIR also recommends that

salvaged plants from the onsite sandmat manzanita be installed in suitable offsite habitat areas as determined by CDFG, California Department of Parks and Recreation, or other appropriate agency. Additionally, funding for specific projects related to the protection of maritime chaparral habitats in the Monterey Bay Area in the amount of ten percent ($1,500) of the annual funding generated by the proposed project will be conveyed to CDFG once a year.

2.2.6 Monterey Ceanothus (Ceanothus rigidus)

Biological Data:

Monterey ceanothus is a federal Candidate for listing (Category 2). Monterey ceanothus is also found on pre-Flandrian dunes and flats within central maritime chaparral (Griffin 1978). This species only occurs in the vicinity of Monterey Bay with the largest population known from Fort Ord (U.S. Army Corps of Engineers 1992).

Monterey ceanothus is a medium-sized evergreen shrub with pale to bright blue flowers and is a member of the Buckthorn family. It occurs in maritime chaparral and closed-cone coniferous forests in the southern Monterey Bay region. Plant species associated with Monterey ceanothus are sandmat manzanita, beach sagewort, ripgut brome, cropleaf ceanothus, beach mock heather, and deer weed (Zoger and Pavlik 1987a). Removal of central maritime chaparral habitat for development is the primary threat to this species.

Presence on the North of Playa project site:

Approximately 203 individuals of Monterey ceanothus have been counted in the transitional chaparral community on the project site (LSA Associates 1995). These plants grow in one large area, primarily in association with the maritime chaparral vegetation on the eastern portion of the site (LSA Associates 1995). Two individual Monterey ceanothus plants were found growing in the ruderal vegetation community located on the slope that separates the higher and lower portions of the site - the Granite Construction and Calabrese properties. The plants were on the eastern side of the slope about 100 feet west of the railroad tracks.

Effect of the proposed action on Monterey ceanothus:

The proposed project would result in the loss of all of the Monterey ceanothus plants identified on the project site. All other effects of the project, including proposed mitigation are the same for Monterey ceanothus as described above for sandmat manzanita.

3.0 MEASURES INTENDED TO MINIMIZE AND MITIGATE THE TAKE OF SMITH'S BLUE BUTTERFLIES AND THE IMPACTS TO COASTAL DUNE SCRUB HABITAT AND ITS ASSOCIATED SPECIAL STATUS SPECIES

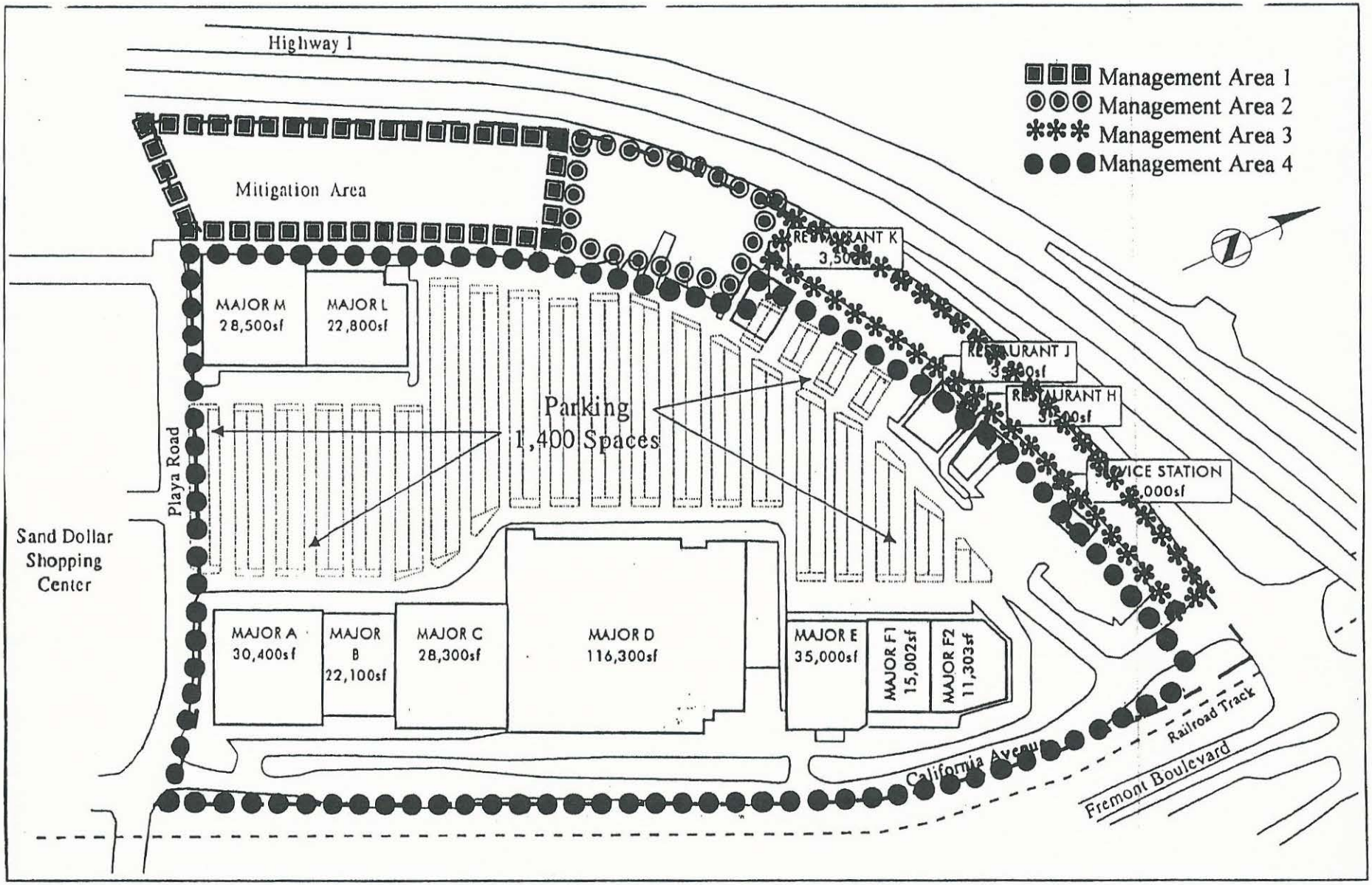
The North of Playa Redevelopment project site will include an approximate 4.6-acre mitigation area where coastal dune scrub habitat and associated special status species will be restored, re-created, and protected in perpetuity. The majority of the mitigation area (3.4 acres) consists of disturbed coastal dune scrub habitat located on the east-facing berm of Highway 1 and due north of the existing preserve established as part of the Sand Dollar Center. The remaining 1.2 acres is immediately north and consists of developed and ruderal areas that will be restored to dune habitat. The coastal dune scrub vegetation will contain habitat for federally listed and candidate species, including; Smith's blue butterfly, sand gilia, Monterey spineflower, and black legless lizard. Portions of the mitigation area will also be planted with elements of central maritime chaparral, specifically, sandmat manzanita and Monterey ceanothus. Both of these species are candidates for federal listing and both occur within the proposed development envelope. Ceanothus and manzanita plants salvaged from the development area will also be planted in the perimeter of the project site along Playa Road and California Street.

An additional 1.4-acre area located along the western edge of the project, north of the mitigation area, would be dedicated to the City as a site for potential coastal dune restoration to offset losses in other parts of the city. D.B.O. Development Company will grade, recontour and stabilize the dunes in this area in preparation for the City's restoration activities. Dune stabilization will be achieved using methods recommended by Ferreia and Gray (1987) and Kaplow (1989). The existing iceplant in this area will be sprayed and left in place to facilitate slope stabilization.

The management goals and techniques described in this chapter are intended to minimize and mitigate the take of Smith's blue butterflies and mitigate impacts to coastal dune scrub habitat and associated special status species. The following sections provide a description of these goals and techniques and how they will be specifically applied to the North of Playa Redevelopment project site.

3.1 Management Areas

Specific management areas have been designated for the project site based on existing habitat types, land uses, proposed development scenario, and the various restoration and management goals proposed. The entire project site has been divided into four management areas. Management Areas 1 and 2 comprise the designated 4.6 acre mitigation area. Management Area 3 is the 1.4-acre area located along the western edge of the project, north of the mitigation area, that would be dedicated to the city as a site for potential coastal dune restoration to offset losses



ZANDER ASSOCIATES

Environmental Consultants

Source: LSA

Management Areas
North of Playa Habitat Conservation Plan
Sand City, California

FIGURE 6

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
DB01		8/1/95		

in other parts of the city. Management Area 4 is the area of the site proposed for development. Each Management Area is delineated on Figure 6 and a description of each follows.

3.1.1 Management Area 1: Disturbed Coastal Dune Scrub (3.4 acres)

The vegetation in this area is primarily dune scrub and iceplant. The coastal dune scrub is dominated by beach sagewort, California croton (*Croton californica*), seacliff buckwheat, and coastal buckwheat. Occasional plants of poison oak and coffeeberry occur in Management Area 1. Cover of non-native grasses (primarily *Bromus diandrus*) and iceplant approximates 85 to 90 percent of the area (Dorrell 1995a). Special status species that occur in Management Area 1 are Smith's blue butterfly, black legless lizard and Monterey spineflower.

3.1.2 Management Area 2: Developed Dune (1.2 acres)

This area includes a sediment pond with ruderal vegetation around the perimeter, paved staging areas and some disturbed dune scrub habitat on the slope adjacent to Highway 1. No special status species are known to occur in this area.

3.1.3 Management Area 3: Reconstructed Slope (1.4 acres)

Iceplant dominates the vegetation in this management area which is the strip of disturbed dune paralleling the offramp from Highway 1. The area slopes down from the offramp toward the project site and has a eastern and southern exposure. No special status species are known to occur in this area.

3.1.4 Management Area 4: Proposed Development Area (27 acres)

This area is comprised of both existing developed (20 acres) and undeveloped (7 acres) portions of the project site. The developed portions have some associated ruderal vegetation and the undeveloped portions are characterized by a degraded coastal dune scrub plant community with elements of central maritime chaparral and considerable ruderal vegetation. Sandmat manzanita, Monterey ceanothus, sand gilia, Monterey spineflower, black legless lizard and buckwheat plants that have periodically provided habitat for Smith's blue butterfly are all known to occur in this area.

3.2 Management Goals

The primary goal of the management program is to provide 4.6 acres of an enhanced, contiguous, and permanently maintained and protected area of coastal dune scrub habitat that will support

microclimates suitable for expansion of the resident population of Smith's blue butterfly, sand gilia, Monterey spineflower, and Black legless lizard, in conjunction with commercial development on a portion of the remainder of the site.

Specific goals for each of the defined management areas are as follow:

Management Area 1:

- Removal and control of exotic vegetation
- Enhancement of existing coastal dune scrub habitat including expansion of buckwheat species and Monterey spineflower, and establishment of sand gilia and other appropriate plant species
- Establishment of Monterey ceanothus and sandmat manzanita in one portion of the area
- Slope stabilization
- Permanent protection of habitat values
- Monitoring and maintenance of habitat values

Management Area 2:

- Removal of sediment pond and existing pavement
- Backfill with clean sand and contour to emulate natural dune conditions in adjacent management area
- Slope stabilization
- Removal and control of exotic vegetation
- Establishment of coastal dune scrub vegetation in recontoured areas
- Expansion of buckwheat species, sand gilia and Monterey spineflower
- Permanent protection of habitat values
- Monitoring and maintenance of habitat values

Management Area 3:

- Reconstruct slopes and recontour to emulate natural dune topography
- Slope stabilization
- Control of exotic vegetation

Management Area 4:

- Commercial development

3.3 Management Techniques

The following provides descriptions of the array of management techniques that will be used to meet the goals for each defined management area. Specific prescriptions for each management area are provided in a subsequent section.

3.3.1 Avoidance of Sensitive Habitats

The project site includes approximately 10 acres of coastal dune scrub that supports a number of special status species, including the federally endangered Smith's blue butterfly. This coastal dune scrub occurs in two areas of the site that are separated by the existing development. About 6 acres of this coastal scrub habitat, east of the existing development, will be removed for the proposed project. The project has been designed to avoid direct disturbance of approximately 3.4 acres of coastal dune scrub vegetation west of the existing development that contains about 1.5 acres of habitat for the Smith's blue butterfly. Sand gilia, Monterey spineflower and Black legless lizard also occur in this area. The area of coastal scrub habitat on the project site to be avoided is contiguous with the existing Sand Dollar Shopping Center restoration area to the south.

3.3.2 Slope Stabilization

The existing and newly created slopes in the mitigation area will be stabilized through a combination of grading to between 2-1/2:1 and 3:1, revegetating, and placement of retaining walls. Retaining walls will be constructed by digging a footing trench, approximately 4 to 5 feet deep and filling with concrete. The wall will also be constructed of poured concrete and will be about 15 feet high at the center and taper to a grade within 90 feet in each direction. The footing will vary up to ten feet in horizontal width and a sheetpile will be driven to hold the sand slopes behind the wall. Disturbance is expected to occur within 12 horizontal feet behind the face of the wall. Screw-type anchors will be installed on the sheetpile and left in place to provide support and to anchor the wall to the slope.

Grading and backfill operations as well as placement of the retaining walls will be designed to avoid slope failures in areas that currently support stands of buckwheat. A temporary fence will be constructed between the limit of grading and existing buckwheat stands and heavy equipment will not be permitted beyond the fence. Equipment operators will be informed of the reasons for installation of the fence and will be required to stop work and notify the project engineer immediately should bank failure appear imminent.

3.3.3 Control of Exotic Species

Iceplant has been used by Caltrans as a bank stabilizer along the Highway 1 embankment that borders the western portion of the project site. Because iceplant is an aggressive colonizer, it has spread throughout the coastal dune scrub habitat on the site, outcompeting buckwheat plants and other native species.

In order to expand the cover of native plant species and enhance habitat values, iceplant will be eliminated from the project site. Several methods are available for removal of iceplant. The

most efficient method is to spray with Roundup® or a similar herbicide and allow the iceplant to die on-site without removal. Left in place, dead iceplant will dry, providing mulch for revegetation efforts and a temporary erosion control method to hold soil in place. This method was used successfully for the adjacent Sand Dollar Shopping Center restoration area.

Herbicides such as Roundup® break down rapidly (within two weeks) and shall be applied at a rate consistent with label directions. The herbicide shall be applied by a certified applicator using selective, low-drift spray equipment to cover individual iceplants only. Label directions involving application rates, methods, and wind speed should be closely followed. The nozzle of the sprayer shall be placed as close to the individual iceplant as possible to decrease the possibility that the herbicide will drift inappropriately (Ferreira and Gray 1987; TRA 1987).

Special care is required in areas where iceplant and native plants (such as buckwheat) are growing together. The applicator shall be informed of the need to protect native plants in the area of spraying, and, in some cases, native plants should be flagged for avoidance. It may be necessary to remove iceplant by hand within a one- to two-foot diameter around native plants. Temporary covers for buckwheat plants may also be required during spraying operations to prevent wind drift of the herbicide onto nearby plants.

A qualified professional will monitor the effectiveness of the herbicide and assess whether an additional application is required. Application of additional herbicide will not occur any earlier than six weeks after the previous application. Up to three applications may be necessary to completely eliminate the iceplant.

3.3.4 Revegetation and Habitat Enhancement

Establishment of viable populations of native plants is proposed for Management Areas 1 and 2.

Site Preparation: Several methods of establishing new populations or enhancing existing populations of native species are available, including seeding, propagation, planting of nursery stock, and natural succession; all of these methods will be used on the project site. Prior to any revegetation effort, slopes will need to be stabilized, newly created dunes will need to be graded to create appropriate contours and the soils will need to be prepared in order to maximize the potential for vegetation establishment.

To ensure that proposed revegetation efforts will be successful, physical characteristics of the targeted areas must be compatible with the particular species targeted for revegetation. These characteristics include topography, soil condition, hydrology, and microclimatic features. For example, Smith's blue butterfly typically uses those buckwheat plants that are located in sheltered locations and are not exposed to the full force of the maritime winds, therefore, planting of buckwheat on exposed ridgetops would not likely yield as substantial an increase in habitat value for the butterfly as would planting in sheltered depressions. Similarly, planting

sandmat manzanita and Monterey ceanothus low on the slopes and close to buildings would likely increase their chance of survival (Kreiberg, pers. comm. 1995).

Planting of buckwheat, or other species, may also present difficulties if soil conditions are not suitable for plant survival. Site preparation techniques to improve soil conditions will include: vegetation removal, mulching, soil compaction, application of fertilizer, raking, scarifying, and irrigation.

Seeding: Seeding will include the hand-broadcast of specific seed mixes directly onto the soil of the management areas either prior to or following site preparation. Plants to be considered for seeding include the host buckwheats for the Smith's blue butterfly, Monterey spineflower, sand gilia and a full palette of other coastal dune scrub species. Seed will be collected by local experts from specified native plants either on site or in nearby areas, and will be prepared or treated as required for each species or mix of species. Specific seed mixes are prescribed for each management area and are provided in a subsequent section of this plan. These mixes are guidelines, and percentages may change with the practicality of collection for each species.

Sand Gilia: Seed will be collected from the populations that occur in the proposed development area on the project site. Collection and propagation of sand gilia will follow methods described by Dorrell-Canepa (1994). The seed will be collected when capsules are just starting to dehisce, late April through early June. Bi-weekly visits to the site by the restoration specialist or environmental monitor will ensure proper timing of seed collection. Seed can be collected by inverting the ripe capsules and gently tapping contents into an envelope. The seed can be stored without refrigeration for up to four years. Most of the seed collected will be used for germination in supercells; a small amount will be cold-stored until the following winter. Collection of soil in the immediate area of the sand gilia population proposed for "take" will capture the seed bank and should occur after plants have seeded and/or been relocated. The soil will be properly stored for distribution in areas of the mitigation site.

Propagation: Propagation of seed collected for all species will be achieved through germination in stubby supercell containers (available from Stuewe and Sons, Inc.). The propagation medium will consist of an appropriate germination mix (such as McCalif's Sunshine Mix #3) combined at a 3:1 ratio with soil collected from the portions of the site supporting native vegetation. For coastal dune scrub species, Nutracote® pelleted fertilizer is recommended. A liquid soluble fertilizer (Plantex® 20-20-20) at quarter strength may be used when seedlings are 1 to 2 months old if growth is slow. For sand gilia, low doses of Nutracote® pelleted fertilizer (14-14-14) will be added to the soil medium to provide slow release nutrients over the growing period of 3-4 months. Some propagation of sandmat manzanita and Monterey ceanothus will be conducted using cuttings from existing plants within the proposed development area. However, according to Kreiberg, (pers. comm. 1995) propagation of Monterey ceanothus using cuttings is difficult and is probably better achieved by collecting seed. Seed and/or cutting collection of coastal dune scrub and maritime chaparral species will occur in June - October for later germination in August - October and outplanting in November - January.

Planting of Nursery Stock: It is assumed that many of the native shrubs and forbs that inhabit the site are either available through local commercial native plant nurseries or can be propagated readily. Nursery stock will be used as much as necessary to establish appropriate habitat composition and diversity. Either nursery flats or 1- or 5-gallon stock will be used and will be planted during appropriate seasons using methods that will facilitate the highest degree of success.

Fertilizing, mulching, irrigation, monitoring, and maintenance will likely be required for each plant. Specific revegetation prescriptions and methods are provided in subsequent section of this report for each of the Management Areas.

3.3.5 Transplant and Salvage of Existing Plants

Prior to land disturbance in each parcel, seeds, cuttings and/or salvaged plants of sand gilia, Monterey spineflower, Monterey ceanothus, sandmat manzanita, and Smith's blue butterfly host plants will be collected and/or relocated into the mitigation area where appropriate.

Relocation of and seed collection from sand gilia and Monterey spineflower that occur within the proposed development area will be conducted during the natural life cycle of these annual species, February through June. Plants of sand gilia that occur within the proposed development envelope will be collected and transplanted into the mitigation area. Plants will be excavated by hand and as much of the surrounding soil as possible will be collected in-tact. Excavated plants will be directly relocated into prepared sites in the mitigation area.

Collection and relocation of buckwheat plants that occur in the development area will also be undertaken. Seeds will be collected prior to removal of the plants and stored for use in later revegetation efforts. Buckwheat has a fairly extensive taproot system which makes successful transplanting difficult. However, attempts will be made by collecting as much of the root system as possible with each plant and by collecting as much soil and leaf litter under each plant as possible.

3.3.6 Salvage and Relocation of Black Legless Lizard

Prior to the initiation of construction in the developable area, capture and relocation efforts will be conducted for the black legless lizard. Designated areas will be identified on the project site or in the adjacent Sand Dollar Center habitat preserve for release of captured black legless lizards before surveys commence. All measures for slope stabilization, control of exotic species and revegetation and enhancement will be implemented prior to relocation of black legless lizards into the mitigation areas on the site.

Surveys will consist of raking the leaf litter and sand under each shrub within the area to be disturbed to a minimum depth of eight inches. Surveys will take place in the mornings and

evenings when black legless lizards have been most frequently captured in the Monterey Bay Region (Bury, 1985). In addition to raking, "coverboards" may be used to capture black legless lizards. Coverboards are pieces of untreated lumber, sheet metal, corrugated steel, or other flat material used to survey for reptiles and amphibians. The coverboards are placed flat on the ground in survey areas and checked periodically. Reptiles and amphibians congregate under the boards to seek cover, because of the favorable thermal environment under the boards, and to feed on invertebrates that are also attracted to the boards. If used, coverboards will be placed in the survey area two weeks before surveys begin and will be checked once a week during raking surveys. Captured lizards will be put immediately into containers containing moist paper towels and released at the base of bush lupines or mock heather in designated release areas no more than three hours after capture (U.S. Army Corps of Engineers, 1994).

During construction activities, a qualified biologist will be on hand to recover any black legless lizards that may be excavated with the native material. If the animals are in relatively good shape, they will be immediately relocated to the protected mitigation area. If they are injured, the animals will be turned over to a specialist who will care for them until they are in a condition to be released into the mitigation area.

3.3.7 Habitat Protection During Construction

In order to ensure that existing coastal dune scrub habitat and, particularly, existing buckwheat plants are not disturbed during construction, a temporary fence will be constructed within 15 feet of the limit of grading proposed in Management Area 1. A qualified biologist will stake the temporary fence location with the project engineer prior to initial grading. Signs will be placed on the fence at 100-foot intervals informing grader operators of the presence of sensitive species. Signs will include the following language:

"NOTICE: SENSITIVE HABITAT AREA. GRADING PROHIBITED."

Temporary fences will be constructed of 3-strand wire, wooden lathe, or "snow fence". Permanent fence designs are described in a subsequent section.

All equipment operators and field supervisors will attend a pre-construction conference to be conducted by a qualified biologist who will oversee construction activities. The purpose of the conference will be to inform equipment operators and field supervisors of the presence of endangered species on and adjacent to the project site, conduct a site visit to show participants where grading can and cannot occur, and inform operators of appropriate protocol should they encounter specific species (primarily Black legless lizard) during construction. All heavy equipment operators and field supervisors will sign a standard form acknowledging their understanding of the resource values on the site and the penalties they may incur if those values are disturbed. Signed statements will follow this format:

> "I understand that certain areas on the project site contain endangered, threatened, and sensitive species - Smith's blue butterfly, Black legless lizard, Monterey ceanothus, sand gilia, sandmat manzanita, and Monterey spineflower. I also understand that grading is permitted only inside fenced areas. I understand that grading beyond the fence is not permitted and that it may be a violation of federal and state law to grade beyond the fenced area."

A qualified biologist will monitor activities on a daily basis during the initial grading, retaining wall installation, and construction phases. Should the identified resource values be disturbed, a "stop work" order will be issued immediately. The Service will be contacted and the "stop work" order will remain in effect until the issue is resolved.

3.3.8 Permanent Fencing

Permanent fencing will be installed around the perimeter of the mitigation area following completion of construction. It is expected that such fencing will be of a similar nature to that used in the adjacent Sand Dollar Shopping Center restoration area. Signs posted at approximately 100-foot intervals along the fence will prohibit entry of unauthorized persons and explain the value of the site for sensitive species.

3.3.9 Permanent Protection

In order to provide for the long-term protection of sensitive habitat areas on the project site, D.B.O. Development Company will grant a conservation easement in perpetuity over the 4.6-acre mitigation area (Management Areas 1 and 2). The 1.4 acre area (Management Area 3) located north of the mitigation area will be dedicated to the City of Sand City as a site for coastal dune restoration to offset losses in other parts of the city. This conservation easement will permit the use of the areas only for purposes of habitat restoration, enhancement, protection, and activities consistent therewith, and will prohibit further development of the property. The conservation easement will be granted to the City of Sand City or some other governmental or conservation entity, approved by Sand City and the property owner, and the covenants and restrictions of the conservation easement shall be enforceable against the owners by the entity that is granted the conservation easement.

3.3.10 Monitoring and Maintenance

D.B.O. Development Company or its assignees and/or successors will provide funding for a qualified individual to monitor implementation of this HCP for a period of five years. This individual could be a privately hired biologist, a local citizen familiar with the project, or a local CDFG warden (funding in the case of using a warden would be directed through the State of California). It is anticipated that this individual would visit the site daily during the initial

grading and retaining wall installation, and approximately twice a month during project construction and implementation of the various management measures. This allows for timely solutions to problems that may arise during construction or mitigation implementation. Brief progress reports would be prepared and forwarded to responsible or interested agencies such as the Sand City Planning Department, CDFG, and the Service.

Once habitat improvements have been completed, a continuing assessment of the success of these measures will be necessary. Specific goals for survival and success rates for each enhancement will be defined for each Management Area in subsequent sections of this HCP. The individual responsible for monitoring success will visit the site once every four months for the first three years of the project and will provide a brief written report to the project owners, the City of Sand City, CDFG, and USFWS outlining success of the management efforts, problems encountered, and suggested remedies for any problems. Should the management efforts not be effective following the end of the third year, a new plan will be developed that will meet the same goals. Specific monitoring field forms will be developed for use on this project.

After the first three years, monitoring will occur once every year, up to the fifth year from initiation of the measures. A yearly progress report will be prepared and forwarded to appropriate agencies. Every effort should be made to maintain continuity in the personnel responsible for monitoring and maintenance of the management areas.

In order to quantify changes in the vegetation cover over time, several permanent line transects will be established in the revegetation and enhancement areas. Data gathered from the transects will provide adequate assessments of the relative success or failure of the management measures. Vegetation cover will be assessed using standard line-intercept methods (Canfield 1941). Data collected will include species types, relative cover, species abundance, species diversity, and relative vigor of individual plants. Transect data will be collected prior to any management action to provide a baseline from which to compare future conditions. Data will be collected once a year for the first five years of the project.

Vertical color infrared aerial photographs of the site will be obtained of the project site in the fifth year of the project. These aerials will provide documentation of vegetation cover over the entire site. In addition to aerial photography, six permanent photo points will be established and both color prints and slides of the revegetation areas will be obtained each year for the first five years. Copies of the photographs will be forwarded with progress reports to Sand City Planning Department, CDFG, and the Service.

Surveys to assess use by Smith's blue butterfly of revegetated and enhanced habitat areas will be conducted each year for the first five years of the project. Data to be collected will include number of adults observed flying, location of butterfly use, plant species of use (if known), date, time, and weather conditions. Because a goal of this HCP is to increase the habitat use and perhaps population numbers of Smith's blue butterfly on the site, these surveys will document observable changes in these parameters.

If, at the end of five years, or at any point during the monitoring period, the survival and success rate goals are not met, the biological monitor will provide an analysis of the cause(s) of failure and, in consultation with the Service, propose remedial action. A range of alternative actions will be pursued; choice of one or the other would depend upon such causal factors as severity of mortality, year observed, rate of recurrence, etc. Alternatives could include: 1) revegetation, 2) alteration of created dune topography or engineered structures (retaining walls), and/or, 3) development and implementation of a restoration plan at contingency site. If contingency measures are required beyond the third year and/or final success criteria are not met at the end of five years, the monitoring program will be extended for a minimum of five years beyond the time that such contingency measures are implemented.

Maintenance activities for Management Areas 1 and 2 will be conducted throughout the monitoring period, as applicable. A maintenance program providing recommended activities for maintaining the habitat areas in perpetuity will be prepared and included in the final monitoring report. The City of Sand City will be responsible for long-term maintenance of the habitat. The types and schedule of maintenance activities for the Management Areas during the five-year establishment period are described in the following section.

3.3.11 Funding

Initial funding for implementation and monitoring will be borne by the project owners through utilization of construction funds, or dedication of funds to a special account specifically established for this purpose. Initial costs for implementing management efforts are estimated to be approximately $560,000, with an additional $77,000 for five years of monitoring. Long-term funding for maintenance of the habitat will be provided through an annual assessment fee and deposited in an account specifically established for this purpose. The City of Sand City will be designated as the entity responsible for long-term maintenance of the habitat. Specific funding requirements are described in Section 4.0 of this plan.

3.3.12 Schedule for Implementation

The various management techniques described above will be implemented according to the following schedule. Plant collection and propagation will begin in the spring prior to the initiation of grading. Seeds of sand gilia and Monterey spineflower, host buckwheats for the Smith's blue butterfly and a full palette of other coastal dune scrub species will be collected when appropriate, considering the phenology of these species, and stored or propagated by a designated native plant specialist until planting of the mitigation area occurs. Cuttings from Monterey ceanothus, sandmat manzanita and buckwheat plants will also be collected and propagated in the spring or summer prior to initiation of grading. Timing of collection will be at the discretion of the native plant specialist who will also be responsible for propagating the plant materials.

Efforts to capture and relocate black legless lizard will begin on month prior to grading of the area. Animals recovered will be released to predetermined locations within the mitigation area or in the adjacent Sand Dollar Center habitat preserve at the same depth in the soil as captured.

Removal of exotic iceplant will be achieved by selective use of herbicide. Application of the herbicide will occur in September or October, at least two months prior to seeding or planting of the mitigation area.

Temporary fencing to protect the habitat in Management Area 1 will be constructed before any grading commences. A qualified biologist will assist in staking the limit of grading and alignment of the fence. This biologist will also conduct pre-construction meetings with site personnel to inform equipment operators et.al. of the presence of special status species and describe appropriate protocol if these species are encountered. Approximately 0.4 acre of Management Area 3 will be temporarily disturbed along the eastern boundary when grading commences in this area.

Before grading occurs in the 0.5 acre area with the host buckwheat plants, these plants will be collected and potted with as much of the soil and leaf litter under the plant as is possible. The potted plants will then be transplanted into the mitigation area in the vicinity of the existing stand of buckwheat.

The biologist monitoring construction activities will be present at the initiation of grading and periodically throughout mass grading to assure operators are working within the parameters established in the HCP and to recover any species, particularly black legless lizard, that may be encountered during these activities.

The creation and stabilization of dune habitat in Management Area 2 will occur concurrently with mass grading of the developed portions of the site. Stabilization of the dunes will occur prior to installation of plantings. Plantings should be installed at the beginning of the rainy season (November - December).

The spraying of iceplant in Management Area 3 will occur in September or October. Grading is expected to commence in the following winter-spring months. Once grading is completed in this area, the straw plugging will be installed and hydromulch applied.

Following completion of grading, permanent fencing will be installed. At the completion of plant installation, monitoring and maintenance will commence. Maintenance of Management Area 3 will also be conducted until the City of Sand City installs plants into the area. Once the City completes installation, monitoring and maintenance similar to what is described for Management Areas 1 and 2 will commence.

3.4 Specific Treatments Per Management Area

This section provides specific prescriptions for each Management Area and includes guidelines for applying the various management techniques described in the previous section.

3.4.1 Management Area 1

Avoidance of Sensitive Habitat: About 3.0 acres of existing coastal dune scrub habitat will be avoided and 0.4 acre of this habitat will be temporarily disturbed for recontouring and stabilizing slopes.

Slope Stabilization: The temporarily disturbed slope will be backfilled with clean sand to create a relatively flat toe (ca. 0.5% slope) that will tie into the existing undisturbed slope (Plate 1).

Control of Exotic Species: Iceplant will be removed from the 3.0 acres of avoided coastal dune scrub by hand and through careful application of herbicide. The technique for herbicide application is as follows:

- Herbicide will be applied by a qualified applicator who can distinguish between native vegetation and iceplant. The iceplant will be hand sprayed using selective low-drift equipment with an herbicide mix of 1.5% to 2% Roundup® and 1% surfactant.

Dead iceplant will be left in place as a mulch.

Revegetation and Habitat Enhancement: Seeding and planting will occur in this management area to increase the cover of native coastal dune scrub vegetation and to establish sand gilia populations. Coastal dune scrub elements will be planted throughout the area. Sand gilia will be planted on the temporally disturbed slope and in areas with existing native vegetation on slopes with north, east or west aspect. An attempt to establish elements of central maritime chaparral, such as sandmat manzanita and Monterey ceanothus, will be made near the toe-of-slope along the temporarily disturbed area.

Coastal Dune Scrub

1. Site preparation:
   Apply mulch in areas of bare sand and iceplant that are greater than 10 feet in diameter. Hand apply vertical straw mulch at 2000 lbs/acre wheat or rice straw (32 person hours/acre). Handful planted 3 - 4" deep (6-10" exposed) and bundles 1-2 feet apart.

2. Planting specifications:
   Apply seed and install nursery stock plantings in the Fall at the following rates. (Table 1)
   Seed mix number 1; applied at a rate of 25 lbs/acre
   Seed mix number 2; applied at a rate of 10 lbs per acre
   Seedling mix number 1 planted at a rate of 1000 plants per acre
   Seedling mix number 2 planted at a rate of 500 plants per acre
   Add fertilizer (Osmocote® 14-14-14 to planting holes.
   Irrigate by hand immediately following planting

Table 1. Proposed Seed and Seedling Mixes for Revegetation and Enhancement Efforts

SEED MIX 1

Common Name	Scientific Name	Percent of Mix
Yellow Sand Verbena	*Abronia latifolia*	10
Pink Sand Verbena	*Abronia umbellata*	10
Dune Sagebrush	*Artemisia pycnocephala*	7
Dune Saltbush	*Atriplex leucophylla*	7
Coyote Bush	*Baccharis pilularis*	7
Beach Primrose	*Camissonia cheiranthifolia*	10
Beach Aster	*Lessingia filaginifolia*	5
Liveforever	*Dudleya caespitosa*	10
Lizard Tail	*Eriophyllum staechadifolium*	10
California Poppy	*Eschscholzia californica* var.*maritime*	5
Mock Heather	*Ericameria ericoides*	10
Eastwood's Golden Fleece	*Ericameria fasciculata*	1
Dune Lupine	*Lupinus chamissonis*	5
Dune Bluegrass	*Poa douglasii*	5

SEED MIX 2

Coast Buckwheat	*Eriogonum latifolium*	50
Dune Buckwheat	*Eriogonum parvifolium*	50

Table 1 (con't). Proposed Seed and Seedling Mixes for Revegetation and Enhancement Efforts

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SEEDLING MIX 1

Common Name	Scientific Name	Number of Seedlings	Percent of Mix
Yellow Sand Verbena	*Abronia latifolia*	900	7.5
Pink Sand Verbena	*Abronia umbellata*	480	4
	Ambrosia chamissonis	1200	10
Dune Sagebrush	*Artemisia pycnocephala*	3000	25
Coyote Bush	*Baccharis pilularis*		
Beach Primrose	*Camissonia cheiranthifolia*	2400	20
Beach Aster	*Lessingia filaginifolia*	1200	10
Lizardtail	*Eriophyllum staechadifolium*	1800	15
Mock Heather	*Ericameria ericoides*	300	2.5
Eastwood's Golden Fleece	*Ericameria fasciculata*	40	0.2
Dune Lupine	*Lupinus chamissonis*	60	0.5
	TOTAL:	12,000	

SEEDLING MIX 2

Coast Buckwheat	*Eriogonum latifolium*	2500	50
Dune Buckwheat	*Eriogonum parvifolium*	2500	50
	TOTAL:	5,000	

SEEDLING MIX 3

Sandmat Manzanita	*Arctostaphylos pumilla*	500	50
Monterey Ceanothus	*Ceanothus rigidus*	500	50
	TOTAL:	1000	

Sand Gilia and Monterey Spineflower

1. Site Preparation:

   If sand movement becomes a problem due to location or construction activities, straw plugging on 1-2 foot centers will stabilize the soil. Stored topsoil collected from sand gilia habitat within the proposed development will be spread over areas that are sparsely occupied by existing native seedlings. All areas where this topsoil is applied will be mapped and flagged.

2. Planting Specifications:

   Direct seeding in the mitigation area will occur after the first rains in the fall. Seeding will occur in open sandy areas with appropriate slope aspect where vegetation does not exceed 50% cover. Measured quantities of seed will be broadcast by hand at a rate of about 0.2 gram per meter squared. The seeds will be raked in by hand and lightly covered with sand.

   Seedlings germinated in supercells will be planted in November and December, as their roots fill the container; after the first rains of the winter season. Seedlings will be planted in 6" deep holes spaced on one foot centers evenly across selected sites. If the sand is dry, the seedlings will be watered to saturation immediately after planting to ensure root-soil contact.

Sandmat Manzanita and Monterey Ceanothus

1. Site preparation:

   Sand stabilization may be necessary at the newly constructed toe of slope where these plants will be installed. Straw plugs or erosion control netting may be appropriate for this stabilization. Determination of the exact method will be made following completion of construction of the slope.

2. Planting Specifications:

   Seedlings germinated will be planted in October and November after the first rains. Seedling mix number 3 planted on approximate 5 foot centers near the toe of slope.

Habitat Protection: Temporary fence and signing during initial grading and construction. Permanent fence and signing along property boundary.

Maintenance Requirement:

Irrigation: by hand immediately following planting and periodically through the establishment period (typically 3 years) if rainfall is erratic.

1. Pruning: None

2. Iceplant control: monitor re-emergence of iceplant and treat once a year by hand pulling or spraying using guidelines described above.

3. Weeding: Remove by hand in areas where native seedlings are germinating

Monitoring Requirement:

1. Monitoring Transects
   Three permanent 200 foot-long transects established in a north-south direction across the Management Area. The end points of each transect will be marked using rebar.

2. Collect data using a line-intercept method. Include a) species, b) cover, c) vigor.

3. Photo Documentation
   Two permanent photo points that capture an aerial view of the Management Area will be established and photos taken annually (in the spring) for comparison.

   Vertical color aerial photos will be obtained after year five to assess the success of revegetation efforts.

4. Butterfly Use: Use of the habitat by Smith's blue butterfly will be monitored to assess the actual use of revegetated areas by endangered species. Surveys for Smith's blue butterfly will be conducted on site, once every two weeks from mid May through mid August. Numbers of individuals, areas of use and plant species used will be recorded.

Success Criteria

Seed Mix 1: 60% total cover
Seed Mix 2: 400 plants per acre
Seedling Mix 1: 70% of installed plantings
Seedling Mix 2: 70% of installed plantings
Sand Gilia: 30 - 50% cover of initially planted areas
Monterey Spineflower: 30 - 50% cover of initially planted areas
Smith's blue butterfly: establishment of seed mix 2 per above criteria and observed use of the area by a "stable" population of the species.

3.4.2 Management Area 2

Dune Creation: The majority of Management Area 2 will be cleared of existing debris, graded down to parent sandstone material and backfilled with approximately 20,000 to 30,000 cubic yards of clean sand. The sand will be manipulated to create natural dune topography similar to surrounding sites.

Slope Stabilization: The slopes of the newly created dunes will not exceed 3:1. Retaining walls may need to be installed in selective areas to be determined at the time of recontouring. Straw planting will be used to stabilize the bare sand: hand apply vertical straw mulch at 2000 lbs/acre wheat or rice straw; handful planted 3 - 4" deep (6-10" exposed) and bundles 1-2 feet apart.

Revegetation and Habitat Enhancement: New coastal dune scrub vegetation and associated special status species are to be established in this Management Area. Coastal dune scrub vegetation will be planted throughout the area. Sand gilia will be planted on slopes with north, east or west aspect.

1. Site preparation:
   Apply mulch as described under slope stabilization.

2. Planting specifications:
   Apply seed and install nursery stock plantings in the Fall at the following rates.
   Seed mix number 1; applied at a rate of 50 lbs/acre
   Seed mix number 2; applied at a rate of 20 lbs per acre
   Seedling mix number 1 planted at a rate of 2000 plants per acre
   Seedling mix number 2 planted at a rate of 800 plants per acre
   Spread fertilizer (Osmocote® 14-14-14) by hand during reseeding effort at a rate of 200 lbs per acre and to planting holes.
   Irrigate immediately following planting; none thereafter

Sand Gilia and Monterey spineflower

1. Site Preparation:
   Stored topsoil collected from sand gilia habitat within the proposed development will be spread over areas determined to be appropriate for restoration of this species.
2. Planting Specifications
   Direct seeding will occur after the first rains in the fall. Measured quantities of seed will be broadcast by hand at a rate of about 0.2 gram per meter squared. The seeds will be raked in by hand and lightly covered with sand.

   Seedlings germinated in supercells will be planted in November and December, as their roots fill the container; after the first rains of the winter season. Seedlings will be planted in 6" deep holes spaced on one foot centers evenly across selected sites. If the sand is dry, the seedlings will be watered to saturation immediately after planting to ensure root-soil contact.

Habitat Protection: Temporary fence and signing during initial grading and construction. Permanent fence and signing along development and property boundary.

Maintenance Requirement:

1. Irrigation: by hand immediately following planting and periodically through the establishment period (typically 3 years) if rainfall is erratic.

2. Pruning: None

3. Iceplant control: monitor emergence of iceplant and treat once a year by hand pulling or spraying using guidelines described previously.

4. Weeding: Remove by hand in areas where native seedlings are germinating

Monitoring Requirement:

1. Monitoring Transects
   Three permanent 100 foot-long transects established in a north-south direction across the Management Area. The end points of each transect will be marked using rebar.

2. Collect data using a line-intercept method. Include a) species, b) cover, c) vigor.

3. Photo Documentation
   Two permanent photo points that capture an aerial view of the Management Area will be established and photos taken annually (in the spring) for comparison.

   Vertical color aerial photos will be obtained after year five to assess the success of revegetation efforts.

4. Butterfly Use: Use of the habitat by Smith's blue butterfly will be monitored to assess the actual use of revegetated areas by endangered species. Surveys for Smith's blue butterfly will be conducted on site, once every two weeks from mid May through mid August. Numbers of individuals, areas of use and plant species used will be recorded.

Success Criteria

Seed Mix 1: 60% total cover
Seed Mix 2: 400 plants per acre
Seedling Mix 1: 70% survival of installed plantings
Seedling Mix 2: 70% survival of installed plantings
Sand Gilia: 30 - 50% cover of initially planted areas
Monterey spineflower: 30 - 50% cover of initially planted areas
Smith's blue butterfly: establishment of seed mix 2 per above criteria and observed use of the area by a "stable" population of the species.

3.4.3 Management Area 3

This management area will be recontoured and stabilized as a component of this HCP. Installation of native coastal dune scrub vegetation in this area will be the responsibility of the City of Sand City. Since the timing of native dune scrub plant installation is not likely to be concurrent with stabilization, interim slope stabilization techniques as recommended by Ferreia and Gray (1987) and Kaplow (1989) will be applied to this area. Planting specifications for this area will be comparable to those prescribed for Management Areas 1 and 2, as will maintenance and monitoring measures. Planting, maintenance and monitoring of this management area will be the responsibility of the City of Sand City.

Reconstruct Slope: The existing slope between the proposed development and Highway 1 will be reconstructed and stabilized as part of this program. Portions of the slope will be graded during construction of the adjacent development and recontoured to a maximum 2 1/2:1 slope. Clean sand will be used as backfill and natural undulating dune topography will be created.

Slope Stabilization: Retaining walls will be installed at the toe of slope for these newly constructed areas. Iceplant will be sprayed as described below and left in place as mulch and to facilitate stabilization of the slopes. Straw planting will be used to further stabilize bare slopes and will be accomplished by hand applying vertical straw mulch at 2000 lbs/acre (wheat or rice). Plant a handful 3-4" deep leaving 6-10" exposed and place bundles 1-2 feet apart. A nurse crop of zorro fescue (*Festuca megalura*) at 5 oz/acre, and blando brome (*Bromus mollis*) at 7oz/acre will be applied as hydromulch to the areas where straw planting occurs.

Control of Exotic Species: Slopes undisturbed by grading that have a cover of iceplant will be treated through application of herbicide as follows:

> Hand spray iceplant using selective low-drift equipment with an herbicide mix of 1.5% to 2% Roundup® and 1% surfactant.

Dead iceplant will be left in place as mulch and to facilitate stabilization of the slopes.

3.4.4 Management Area 4

Commercial development will occur in this area.

Salvage Prescription: Individual buckwheat will be transplanted from Management Area 4 to Management Area 1. Plants will be excavated with as much of the surrounding leaf litter as possible, potted and relocated to the mitigation area. Seed will be collected from sand gilia, Monterey spineflower, sandmat manzanita and Monterey ceanothus prior to development in this area to be propagated and used as stock for revegetation efforts in other Management Areas. Soil containing the seedbank for sand gilia and Monterey spineflower will also be collected and stored for distribution into Management Areas 1 and 2. Pre-construction surveys for black legless lizards will be conducted to attempt to recover individuals and relocate them into the

mitigation area (Management Areas 1 and 2). Surveys will be conducted as described in Section 3.3.6 of this plan.

Native Landscape: Propagated material of sandmat manzanita and Monterey ceanothus will be used in the landscape for the commercial development.

3.5 Species-Specific Mitigation Measures

This section summarizes the various management techniques that will be employed to minimize and/or mitigate impacts on specific special status species. The methods for carrying out these techniques are described in the previous sections.

3.5.1 Smith's Blue Butterfly

Minimization of impacts

- Avoidance of disturbance of 3.4 acres of coastal dune scrub with existing buckwheat plants, which provide habitat for the Smith's blue (Management Area 1). Removal of 0.5 acre of existing buckwheat plants which provide habitat for the Smith's blue butterfly (in Management Area 4).
- A temporary fence will be constructed at the boundary between the areas that will be graded/disturbed and the mitigation area.

Mitigation for impacts

- Revegetation and enhancement of coastal dune scrub habitat
- Transplant and salvage of existing buckwheat plants within the development envelope.
- Permanent protection of 3.4 acres of existing habitat and an additional 1.2 acres of created habitat
- Monitoring and maintenance

3.5.2 Sand Gilia

Mitigation

- Seed collection and relocation of plants within the development envelope
- Permanent protection of new habitat
- Monitoring and maintenance:

3.5.3 Monterey Spineflower

Minimization

- Avoidance of existing population within the 3.4 acres of disturbed coastal dune scrub.

- A temporary fence will be constructed at the boundary between the areas that will be graded/disturbed and the mitigation area which contains Monterey spineflower.

Mitigation

- Revegetation and habitat enhancement of coastal dune scrub which provides habitat for Monterey spineflower
- Habitat protection during construction
- Seed collection and relocation of plants within the development envelope
- Permanent protection
- Monitoring and maintenance:

3.5.4 Black Legless Lizard

Minimization

- Avoidance of 3.4 acres of disturbed coastal dune scrub which provides habitat for the black legless lizard (Management Area 1). Potential affect on an estimated 10 to 59 individual black legless lizards within the 6 acre parcel to be disturbed.
- Pre-construction surveys in Management Area 4 to recover individuals and relocate them into the mitigation site (Management Areas 1 and 2).
- A temporary fence will be constructed at the boundary between the areas that will be graded/disturbed and the mitigation area where the black legless lizards are known to occur.
- Grading activities monitored by a qualified biologist

Mitigation

- Revegetation and enhancement of coastal dune scrub which provides habitat for the black legless lizard.
- Collection and relocation of individuals that may occur within the development envelope.
- Permanent protection of occupied habitat
- Monitoring and maintenance

3.5.5 Sandmat Manzanita

Mitigation

- Transplant and salvage of plants within the development envelope into the mitigation area and to be used as landscape material for the commercial development.
- Permanent Protection: Ten percent ($1,500) of the annual funding generated by the proposed project will be set aside for establishment and/or maintenance of sandmat manzanita plants in protected areas offsite as identified by CDFG. The funds should be conveyed to the CDFG once a year to be used for specific projects related to the protection of maritime chaparral habitats in the Monterey Bay Area.

3.5.6 Monterey Ceanothus

Mitigation

- Transplant and salvage of plants within the development envelope into the mitigation area and to be used as landscape material for the commercial development.
- Permanent Protection: Ten percent ($1,500) of the annual funding generated by the proposed project will be set aside for establishment and/or maintenance of Monterey ceanothus plants in protected areas offsite as identified by CDFG. The funds should be conveyed to the Department once a year to be used for specific projects related to the protection of maritime chaparral habitats in the Monterey Bay Area.

4.0 FUNDING FOR AND IMPLEMENTATION OF THE HABITAT CONSERVATION PLAN

In order to ensure success of this habitat conservation plan, adequate funding must be obtained. Funding must be available for implementation as well as continued monitoring and maintenance of the revegetation and habitat enhancement efforts. Table 2 provides a breakdown of expected initial management costs and estimates for yearly maintenance and monitoring for a five-year period following implementation. Total initial cost for implementing this management plan is estimated at $562,600 ($1.72 per square foot of development). Monitoring costs for the first three years are estimated to be $63,550 ($0.19 per square foot) and costs for monitoring in years four and five are estimated to be $13,200 ($0.04 per square foot). Maintenance of the habitat area in perpetuity will also be required and is estimated to cost approximately $15,000 annually ($0.46 per square foot).

The implementation costs described in Table 2 will be paid by D.B.O. Development Company. A letter of credit will be issued by D.B.O. Development Company in the amount of the estimated costs for implementation of the HCP prior to take of any Smith's blue butterfly habitat on the site. The costs for five years of monitoring will also be paid by D.B.O. Development Company. Annual maintenance costs will be dealt with in the following manner: D.B.O. Development Company will impose upon the project site recorded covenants and restrictions which will obligate present and future owners of the property to manage and maintain the sensitive habitat area in accordance with this plan. These covenants and restrictions, as part of this obligation, will require the landowners to pay the amounts necessary to cover the cost of monitoring for five years and for maintenance of the habitat in perpetuity. This fee imposed upon the landowners will be collected either by an association of the landowners, or an agent of the landowners designated for that purpose. These fees will be levied, collected, and devoted exclusively for the management and maintenance of the sensitive habitat area. A special account for these funds will be established and administered by D.B.O. Development Company until such time as the City of Sand City assumes responsibility for long-term management and maintenance of the area then administration of funds will be transferred to the City.

In order to provide for the long-term protection of sensitive habitat areas on the project site, D.B.O. Development Company will grant a conservation easement in perpetuity over the 4.6-acre mitigation area (Management Areas 1 and 2) to the City of Sand City who will maintain responsibility for long-term management and maintenance of the habitat. The 1.4 acre area (Management Area 3) located north of the mitigation area will be dedicated to the City of Sand City as a site for coastal dune restoration to offset losses in other parts of the city. This conservation easement will permit the use of the areas only for purposes of habitat restoration, enhancement, protection, and activities consistent therewith, and will prohibit further development of the property. The conservation easement will be granted to the City of Sand City or some other governmental or conservation entity, approved by Sand City and the property

Table 2: Estimated Costs for Implementation of the Habitat Conservation Plan for the North of Playa Project Site

IMPLEMENTATION COSTS

General Costs		
Seed collection		$25,000
Plant propagation		20,000
Fencing (temporary)	$7 per foot	6200
Fencing (permanent - split rail)	$15 per foot	20,700
Fencing (permanent - 3 strand barbed wire)	$8 per foot	21,600
	Total	$93,500
Management Area 1 (3.4 acres)		
Iceplant removal	$500 per acre	$1700
Straw plugging / slope stabilization	$7200 per acre	7200
Mulch/seed/plant	$3500 per acre	7000
	Total	$15,900
Management Area 2 (1.2 acres)		
Sand for dune creation	$10 per cubic yard	$300,000
Slope contouring	$3000 per acre	3600
Straw plugging / slope stabilization	$7200 per acre	8600
Mulch/seed/plant	$3500 per acre	4200
	Total	$316,400
Management Area 3 (1.4 acres)		
Retaining wall	$100 per foot	$70,000
Slope contouring	$3000 per acre	3000
Sand for dune creation	$10 per cubic yard	50,000
Iceplant removal	$500 per acre	300
Straw plugging / slope stabilization	$7200 per acre	5000
	Total	$128,300
Management Area 4 (27 acres)		
Transplant buckwheat plants		$3500
Survey for black legless lizard		5000
	Total	$8,500
TOTAL IMPLEMENTATION COSTS		$562,600

Table 2 (con't): Estimated Costs for Implementation of the Habitat Conservation Plan for the North of Playa Project Site

MONITORING COSTS

Year 0-3		
Staking of construction wall	1 day @ $850/day	$850
Transect set-up	2 days @ $700/day	1400
On-going construction monitoring		
Year 1	75 days @ $700/day	52,500
Year 2-3	12 days @ $700/day	8400
Ground Photos	4 yrs @ $100/yr	400
	Total	$63,550
Year 4-5		
On-going monitoring	11 days @ $1,000/day	$11,000
Ground photos	2 yrs @ $100/yr	200
Aerial photos	1 set @ $2,000/set	2000
	Total	$13,200
TOTAL MONITORING COSTS		$76,750

MAINTENANCE COSTS

Annual estimate for
- irrigation
- pruning
- iceplant control
- weeding
- trash removal

$15,000 annually

owner, and the covenants and restrictions of the conservation easement shall be enforceable against the owners by the entity that is granted the conservation easement.

D.B.O. Development Company, the City of Sand City Redevelopment Agency and the Service will enter into an agreement to implement all terms of this HCP. The purpose of this agreement will be to 1) ensure implementation of the HCP, 2) contractually bind each party to fulfill and faithfully perform the obligations, responsibilities and tasks assigned to it pursuant to the terms of the HCP, and 3) provide remedies and recourse should any party fail to perform its obligations, responsibilities and tasks set forth in the agreement. A copy of this Implementation Agreement is attached as Appendix A.

Amendments to this plan shall be in writing, may be proposed by any party, and shall become effective upon written approval of all parties. Technical specifications, including seed mix, herbicide concentrations, mulch type, application rates, planting techniques, iceplant removal and control techniques, and others should be subject to change without the requirement of a full round of signatures.

5.0 OTHER MEASURES REQUIRED BY THE U.S. FISH AND WILDLIFE SERVICE

Section 10(a)(2)(A)(iv) of the Endangered Species Act of 1973, as amended, states a Conservation Plan must specify "such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan." Because HCPs often include relatively complex systems of phased mitigation, and involve multiple parties, the Service requires that an Implementation Agreement be drafted and signed by each party to an HCP. An Implementation Agreement for this HCP has been drafted and reiterates the duties and responsibilities assigned to each party. It is attached as an accompanying document in Appendix A.

6.0 UNFORESEEN EVENTS

1) In the case of unforeseen events that preclude implementation of the terms of the HCP, D.B.O. Development Company shall immediately inform the Service staff who have functioned as the principal contacts for the proposed action.

2) Unforeseen events shall be considered to fall within one of two categories:

a. Type A events are those which do not significantly affect the outcome of the HCP or the level of impact to the species considered in the HCP. Type A events shall be resolved through coordination among staff from the Service's Ventura Field Office, the City of Sand City Representative, and D.B.O. Development Company. Examples of type A events could include modifications of survey or burrow excavation procedures, modifications of monitoring procedures or vegetation management protocols, changes in the authorized biologist, or minor changes in the funding mechanism.

b. Type B events are those which would significantly affect the outcome of the HCP or the level of impact to the species considered in the HCP, and which would require formal amendment of the Section 10 (a)(1)(B) permit. Resolution of type B events shall be initiated through coordination among staff from the Service's Ventura Field Office, the City of Sand City Representative, and the D.B.O. Development Company. Examples of type B events could include failure of one or more of the parties to implement its responsibilities as outlined in the Implementation Agreement, an unexpected increase in the number of Smith's blue butterflies on the site, or the failure of mitigation measures to reduce adverse effects to the species considered in the HCP.

If a type B event cannot be resolved through coordination among the parties noted in the previous paragraph, all activities that could result in the take of Smith's blue butterflies shall cease until the Section 10 (a)(1)(B) permit is amended. An amendment of this nature may require an additional notice in the *Federal Register*, reissuance of an environmental assessment, and reinitiating of the intra-Service consultation.

If any unforeseen event could cause undue additional adverse effects to any of the species considered in the HCP, all activities that could result in such mortality or injury shall cease until all hazards to these species are eliminated and the issue resolved.

7.0 ALTERNATIVES TO THE PROPOSED PROJECT

Three alternatives to the proposed project were considered as required pursuant to Section 10 (a)(2)(A)(iii) of the Endangered Species Act, as amended. These alternatives are: the no action alternative, the reduced intensity alternative and the no development alternative. A discussion of each alternative is provided below.

7.1 No Action Alternative

The no action alternative would occur if the Service was not required to issue a Section 10(a)(1)(B) permit for project because there was no take of Smith's blue butterfly. This alternative would result from buildout of the project as approved by the City of Sand City except that the approximately 0.5 acre area along the site's eastern boundary that supports five clusters of buckwheat would be avoided. The retail/commercial buildings, parking and other infrastructure planned for this area would be reconfigured to avoid this area while minimizing square footage losses. To preserve total building square footage and parking approved for the site, opportunities to relocate portions of these uses to the western boundary of the site along Hwy 1 would be considered since no dune restoration along the western boundary would be required. While the ultimate development footprint for this alternative would be slightly modified to avoid direct effects on the isolated patches of buckwheat, the net building square footage, parking and associated infrastructure would remain more or less the same to meet the project's (and Sand City's) goals and expectations.*

The no action alternative would not substantially benefit the Smith's blue butterfly or associated species. It would result in isolation of populations even further than they are under existing conditions and provide for no dune restoration. While the Smith's blue butterfly habitat on the development site would be avoided and physically protected from direct disturbance during construction under this alternative, according to Arnold (1991), the long-term viability of the population on the project site would be questionable due to its isolation from nearby populations and the effects that unchecked plant competition and human disturbance would have on the buckwheat plants. Avoidance of the Smith's blue butterfly habitat would also remove the requirement for an HCP and the measures specified therein to restore and enhance coastal dune scrub habitat which supports the Smith's blue butterfly and other special status species. While this alternative would avoid development of the dune along the site's western boundary in conformance with the Sand City land use designations, the dune would remain unrestored since no take would occur and no HCP would be required. Spread of iceplant and other non-native invasive species, trespass and other disturbance to the existing dune on the site would likely

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* In support of that expectation, the U.S. Department of Commerce, Economic Development Administration awarded the North of Playa project a $2 million Infrastructure Improvement grant (EDA project No. 07-01-04075) based on anticipated job generation of ± 700 full time equivalent jobs and 280 construction jobs. Such job generation is considered vital to the greater Monterey bay area economy in the context of the high unemployment rate that resulted from the closure of Fort Ord.

continue. No efforts to increase the population of Smith's blue butterfly on the site would be carried out under this alternative.

7.2 Reduced Intensity Alternative

Reduced intensity of the project (less building square footage and parking) as planned and approved could also result in avoidance of the five buckwheat clusters along the site's eastern boundary but is not considered a reasonable alternative for the purposes of this evaluation. The need for on-site balance of cut and fill material (especially after soil and groundwater remediation of the entire northern part of the site), development of infrastructure to support commercial uses, off-site access/egress improvements to Hwy 1 and other site-specific development requirements eliminates the option of partial site development. Given the relatively high basis in the land coupled with the added site development costs referenced above, the site cannot support a commercial (or any) development that does not result in net commercial square footage equivalent to that of the planned project. Consequently, the City of Sand City's goals and recent project approval for development of the site acknowledge and expect buildout at the intensity proposed. In addition, similar to the no action alternative, a reduced intensity alternative would not substantially benefit the Smith's blue butterfly or associated species because it would still result in isolation of populations even further than they are under existing conditions. While the Smith's blue butterfly habitat on the development site would be avoided and physically protected from direct disturbance during construction under this alternative, according to Arnold (1991), the long-term viability of the population on the project site would be questionable due to its isolation from nearby populations and the effects that unchecked plant competition and human disturbance would have on the buckwheat plants. Avoidance of the Smith's blue butterfly habitat would also remove the requirement for mitigation and minimization of impacts and measures to restore and enhance coastal dune scrub habitat. This alternative would thus leave the dune along the site's western boundary unrestored since no take would occur and no HCP would be required. For the above reasons, a reduced intensity alternative is not considered feasible for this site.

7.3 No Development Alternative

Under a no development alternative, the proposed project would not occur and the incidental take permit would not be issued. This alternative assumes a continuation of existing quasi-industrial and manufacturing use of the area and/or redevelopment within the existing developed portions of the site. Not only is such an alternative contrary to all plans, approvals and expectations discussed above, but it also leaves the site subject to piecemeal development and use, authorized or otherwise, for various purposes. Illegal dumping, trespass (encampments) and other unauthorized activities now occur on portions of the property. These activities presumably would continue to blight the Sand City community and would not benefit habitat for the butterfly or other sensitive species. Similar to the reduced intensity alternative discussed above, there would be no requirement for an HCP and as a result, the measures specified in the HCP to restore

and enhance coastal dune scrub habitat which supports the Smith's blue butterfly and other special status species would not be implemented; including control of the non-native iceplant. Spread of iceplant and other non-native invasive species would likely occur covering increasingly larger areas of the remaining coastal dune scrub and out competing the native species, including several special status plants. No efforts to increase the population of Smith's blue butterfly on the site would be carried out under this alternative. This alternative is considered infeasible because it contradicts approved plans and entitlements for the property and is inconsistent with the Service's goals established under the Smith's blue butterfly recovery plan (USFWS 1984) and with the city-wide habitat conservation strategy developed by the City of Sand City in cooperation with the Service.

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APPENDIX A

IMPLEMENTATION AGREEMENT

IMPLEMENTATION AGREEMENT:

NORTH OF PLAYA
HABITAT CONSERVATION PLAN

THIS AGREEMENT is made and entered into as of the _____ day of _____, 1995, by and among the City of Sand City Redevelopment Agency (City), D.B.O. Development Company, Inc. (Developer), and the United States Fish and Wildlife Service (Service), hereafter collectively referred to as the "Parties".

For and in consideration of the mutual covenants and conditions contained herein, the Parties do hereby agree as follows:

I. RECITALS

This Agreement is entered into with regard to the following facts:

A. LISTING

The Smith's blue butterfly (*Euphilotes enoptes smithi*) has been listed as an endangered species by the federal government, pursuant to the provisions of the Endangered Species Act, 16 U.S.C. §§ 1531, et. seq., as amended (ESA).

A1. PRESENCE

The species of concern is found in or may use or inhabit portions of the North of Playa area and as a consequence, urban growth foreseeable over the next twenty years may result in a diminution of habitat and an unintentional taking of individuals of the Federally Protected Species and/or other Species of Concern incidental to the normal course of urban development.

B. HABITAT CONSERVATION PLAN

Pursuant to the provisions of Section 10(a)(1)(B) of the ESA, the Developer, in consultation with the City, has prepared a Habitat Conservation Plan (HCP) and submitted it to the Service with a request that the Service issue a Permit to allow the Smith's blue butterfly ("butterfly") to be incidentally taken, as that term is defined in the ESA, at the site of the proposed North of Playa development project (see HCP for description). The HCP also proposes a program to minimize and mitigate adverse effects on Smith's blue butterfly habitat, sand gilia, Monterey spineflower, black legless lizard,

sandmat manzanita, and Monterey ceanothus through restoration, maintenance and permanent protection of 4.6 acres of coastal dune scrub habitat on the project site.

C. INCORPORATION OF HCP

The HCP and each of its terms are intended to be, and by this reference are, incorporated herein. In the event of any direct contradiction between the terms of this Agreement and the HCP, the terms of this Agreement shall control. In all other cases, the terms of this Agreement and the terms of the HCP shall be interpreted to be supplementary to each other.

D. LEGAL REQUIREMENTS

In order to fulfill the requirements which will allow the Service to issue the Permit, the HCP provides measures that are intended to ensure that: any take occurring within the development site will be incidental; that the impacts of the take will, to the maximum extent practicable, be minimized and mitigated; that adequate funding for the HCP will be provided; and that the take will not appreciably reduce the likelihood of the butterfly's survival and recovery in the wild. In order to fulfill these legal requirements, each party to this agreement must perform specific tasks delineated in this document.

E. PURPOSES

The purposes of this Agreement are:

1. To ensure implementation of the terms of the HCP;

2. To contractually bind each Party to fulfill and faithfully perform the obligations, responsibilities and tasks assigned to it pursuant to the terms of the HCP; and,

3. To provide remedies and recourse should any Party fail to perform its obligations, responsibilities and tasks as set forth in this Agreement.

F. TERMS USED

Terms defined and utilized in the HCP and the ESA shall have the same meaning when utilized in this Agreement, except as specifically noted.

II. TERM

A. STATED TERM

This Agreement shall become effective on the date that the Service issues the Permit requested in the HCP, and shall remain in full force and effect until termination of the Permit. The term of the Permit will be five years.

B. ACTIONS EXTENDING BEYOND STATED TERM OF AGREEMENT

Notwithstanding the stated term as herein set forth, the Parties agree and recognize that once the butterfly has been incidentally taken and their habitat modified within the project site, the take and habitat modification will be permanent. The Parties, therefore, agree that the mitigation area (Management Areas 1 and 2 identified in the HCP) shall likewise be permanent and extend beyond the term of this Agreement.

The parties also agree that monitoring of the mitigation area may extend beyond the term of the Permit if final success criteria are not met at the end of five years and\or contingency measures are required beyond the third year of monitoring.

The parties agree that City of Sand City will be the designated entity responsible for long-term maintenance of the mitigation area.

III. OBLIGATIONS OF THE PARTIES

A. MINIMIZATION AND MONITORING OF THE IMPACTS OF INCIDENTAL TAKE

In order to minimize and monitor the impacts of incidental take, the Parties agree that they shall undertake the following tasks, responsibilities and obligations:

1. The Developer

a. Shall provide an educational program to all workers, prior to construction, advising them of the presence of the special status species on and adjacent to the job site. This program shall be administered by a qualified biologist, as defined in 1(b) below. Construction personnel shall be informed that the Smith's blue butterfly is listed by the federal government as an endangered species, and that there are penalties for take of the species as specified in the 1990 edition of the Federal Criminal Code and Rules (18 § 3571).

b. Shall hire a qualified biologist approved by the Service whose duties shall include performing all of the actions described in the HCP involving the special status species addressed. The Developer shall provide the Service with resumes of prospective biologists at least 15 days prior to the start of any site-disturbing activities so that the Service may review and approve his/her qualifications. Included among his or her responsibilities, the authorized biologist:

(1) Shall stake the temporary construction fence location with the project engineer and be present on the site at the time of fence installation to ensure that installation does not result in harm to the species considered in the HCP;

(2) Shall organize seed and plant material collection by restoration specialist as described in HCP for sand gilia, Monterey spineflower, seacliff and coast buckwheat, sandmat manzanita and Monterey ceanothus;

(3) Shall collect and remove any buckwheat plants found on the developable portions of the site, following the protocols found in the HCP--and relocate them to the mitigation area.

(4) Shall remain on the site and monitor all site-disturbing activities for the presence and protection of the Smith's blue butterfly and black legless lizards until fencing, preconstruction surveys, grading, retaining wall installation and construction are completed

c. Shall take every precaution to ensure that no Smith's blue butterflies are killed or host buckwheat plants are removed outside of the proposed take area by grading and construction activities, regardless of the timing of construction. These precautions shall include:

(1) Fencing the site prior to conducting any site-disturbing activities;

(2) Ensuring that all construction vehicles, including heavy equipment and personal vehicles, use established roadways to reach the site, and ensuring--once the fencing and the preconstruction survey have been completed--that all vehicles are restricted to the project site and do not impact adjacent properties.

(3) Arranging, to the extent possible, for all grading and construction activities to occur when the butterflies are inactive.

d. Shall keep the Service informed as to the progress of construction and advise when construction has been completed.

e. Shall install permanent fencing around the perimeter of the mitigation area following completion of construction.

f. Shall hire a qualified individual to monitor implementation of the Habitat Conservation Plan for a period of five years. Included among his or her responsibilities, the qualified individual:

(1) Shall collect data regarding changes in vegetation cover over time once a year for the first five years of the project.

(2) Shall conduct surveys to assess use by Smith's blue butterfly of revegetated and enhanced habitat areas every year for the first five years of the project.

(3) Shall prepare brief progress reports during the five year monitoring period (as described in the HCP) and forward them to responsible or interested agencies such as the Sand City Planning Department, CDFG, and the Service.

2. The Service

a. Shall review and approve the education program prior to its use.

b. Shall review the credentials of any biologist(s) under consideration by the Developer (to determine if he or she is qualified to perform protection and monitoring actions), and shall approve the selection.

c. Shall maintain open communication with CDFG and project representatives to assist with compliance procedures.

d. Shall provide guidance to the Developer, as needed, relating to implementation of specific protective measures detailed in the HCP.

B. MITIGATION OF IMPACTS OF INCIDENTAL TAKE

In order to mitigate the impacts of incidental take, the Developer, the City and the Service shall undertake and fulfill the following responsibilities and obligations:

1. The Developer

a. Shall implement the measures described in the HCP to minimize the adverse effects on species considered in the HCP. These measures are prescribed for four different managment area and are summarized as follows:

(1) Management Area 1 (3.4 acres of primarily dune scrub and iceplant) will be stabilized and existing coastal dune scrub habitat will be enhanced and monitored regularly. Special status plant species propagated from onsite material will be installed in this area.

(2) Management Area 2 (1.2 acres of sediment pond, paved areas, disturbed dune scrub habitat) will be stabilized, backfilled with clean sand, and contoured. The and habitat will be enhanced with installation of native coastal scrub vegetation and associated special status species. The area will be maintained and monitored regularly.

(3) Management Area 3 (1.4 acres of primarily disturbed dune covered with iceplant) will be recontoured and stabilized in preparation for planting of native coastal scrub vegetation.

(4) Management Area 4 (27 acres of primarily developed areas with some coastal dune scrub and central maritime chaparral habitat) will be developed. Prior to initiation of construction, collection of seed, other plant material or topsoil will occur for the coastal dune scrub species, including special status species.

b. Shall grant a conservation easement in perpetuity over the 4.6 acre mitigation area (Management Areas 1 and 2) and dedicate the 1.4 acre area (Management Area 3) to the City of Sand City as a site for coastal dune restoration to offset losses in other parts of the city. The conservation easement will be integrated with covenants and restrictions for the commercial development in a manner that will assure that the provisions of the HCP, including the long-term financial responsibilities associated with it, will be carried out by the Developer or its assignees and/or successors).

c. Shall, prior to undertaking any activities that are inconsistent or materially differ from the terms and conditions of the approved HCP, consult with and obtain the approval of the Service.

d. Shall cooperate and maintain open communication with the Service and the City of Sand City to carry out the terms and conditions of the HCP.

2. The City

a. Shall be designated as the management entity for the 4.6 acre habitat preserve in perpetuity.

b. Shall ensure that annual maintenance activities on the habitat preserve are carried out consistent with the goals of the HCP.

3. The Service

a. Shall cooperate with and provide technical assistance to the Developer and any designees in carrying out the terms and conditions of the HCP and Section 10(a)(1)(B) permit, particularly with regard to acquisition and permanent management of replacement habitat.

C. FUNDING OF THE HCP

1. The Developer

a. Shall expend the funds necessary for implementation, monitoring and maintenance for 5 years in accordance with the terms of the HCP and in accordance with the provisions of (III)(B)(1) of this agreement.

b. Shall issue a letter of credit for the amount of estimated implementation costs as described in the HCP prior to any take of Smith's blue butterfly habitat on the site.

c. Shall establish the mechanism for generating annual funds for long term maintenance (in perpetuity following the first five years) of the mitigation area.

d. Shall establish a special acount to be administered by the City of Sand City for the annual funds generated for maintenance of the mitigation area

2. The City

a. Shall administer the special account established for long-term maintenance (in perpetuity following the first five years) of the mitigation area

IV. ENVIRONMENTAL REVIEW

Construction and operation of the proposed North of Playa project is an action subject to review under the California Environmental Quality Act. As lead agency under CEQA, the City of Sand City has completed and certified an Environmental Impact Report addressing project actions pursuant to CEQA Guidelines (certified September 28, 1995).

Sand City, the City of Seaside, and Seaside Sanitation District applied for a $2 million Infrastructure Improvement grant from the U.S. Department of Commerce, Economic Development Administration (EDA project No. 07-01-04075) for the project. Issuance of the grant is an action subject to review under the National Environmental Policy Act. An environmental Assessment was completed and a Finding of no Significant Impact (FONSI) was recommended by EDA on June 30, 1995.

Issuance of a Section 10 (a)(1)(B) permit to the Developer by the Service is an action subject the NEPA review. The Service is the lead agency under NEPA and has prepared an Environmental Assessment addressing the project Section 10 (a)(1)(B) permit and accompanying Habitat Conservation Plan.

V. ISSUANCE OF THE PERMIT

A. FINDINGS

The Service shall issue a Permit to the developer upon finding (after opportunity for public comment) that:

1. INCIDENTAL TAKE

Any permitted taking of the Smith's blue butterfly will be incidental to the carrying out of otherwise lawful activities; and,

2. MINIMIZE AND MITIGATE

The HCP and this Implementation Agreement will, to the maximum extent practicable, minimize and mitigate the impacts to the species considered in the HCP; and,

3. ADEQUATE FUNDING

The funding sources identified and provided for herein will ensure that adequate funding for the HCP will be provided; and,

4. NO LIKELY JEOPARDY

Any permitted taking of the Smith's blue butterfly will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and,

5. OTHER MEASURES

Any other measures set forth in the HCP and required by the Service as being necessary or appropriate for the purposes of the HCP (including any measures determined by the Parties to be necessary to deal with unforeseen circumstances) will be fulfilled;

The Service shall issue a Permit to the Developer concurrently with the execution of this Agreement by the Parties, and it is specifically agreed that this Agreement shall not become effective nor binding upon the Parties until and unless the Permit has been issued.

B. ISSUANCE AND MONITORING

After issuance of the Permit, the Service shall monitor the implementation thereof, including all of the terms of this Agreement and the HCP, including (but not limited to) the management, maintenance and monitoring of the coastal dune scrub habitat and associated special status species in order to assure compliance with the Permit, the HCP and this Agreement. In addition, the Service shall, to the maximum extent possible, ensure the availability of its staff to cooperate with and provide technical and research assistance to the Parties.

VI. REMEDIES AND ENFORCEMENT

A. REMEDIES IN GENERAL

Except as set forth hereinafter, each Party hereto shall have all of the remedies available in equity (including specific performance and injunctive relief) and at law to enforce the terms of this Agreement and the Permit, and to seek remedies and compensation for any breach hereof, consistent with and subject to the following:

1. NO MONETARY DAMAGES

None of the Parties shall be liable in damages to the other Parties or other person for any breach of this Agreement, any performance or failure to perform a mandatory or discretionary obligation imposed by this Agreement or any other cause of action arising from this Agreement. Notwithstanding the foregoing:

a. Retain Liability

Each Party shall retain whatever liability it would possess for its present and future acts or failure to act without existence of this Agreement.

b. Land Owner Liability

The Developer shall retain whatever liability he/she possesses as an owner of interests in land.

2. INJUNCTIVE AND TEMPORARY RELIEF

The Parties acknowledge that injunctive and temporary relief may be appropriate in certain instances involving a breach of this Agreement.

B. THE PERMIT

1. PERMIT SUSPENSION, REVOCATION OR TERMINATION

a. Suspension

In the event of any significant violation or breach of the Permit or this Agreement, the Service may suspend the Permit; however, except where

the Service determines that emergency action is necessary to protect the Smith's blue butterfly, it will not suspend the Permit without first:

(1) Requesting that the Developer take appropriate remedial, enforcement or management actions; and

(2) Providing the Developer notice in writing of the facts or conduct which may warrant the suspension and an opportunity for the Developer to demonstrate or achieve compliance with the ESA, regulations issued thereunder, the Permit and this Agreement.

b. Reinstatement

In the event the Permit is suspended, the Service shall, as soon as possible-- but no later than ten (10) working days after any suspension--consult with the Developer concerning actions to be taken to effectively redress the violation or breach that necessitated the suspension. At the conclusion of any such consultation, the Service shall make a determination of the actions necessary to effectively redress the violation or breach. In making this determination the Service shall consider the requirements of the ESA, regulations issued thereunder, the conservation needs of the Smith's blue, the terms of the Permit and this Agreement, and any comments and recommendations received during the consultations. As soon as possible, but not later than thirty (30) days after the conclusion of the consultations, the Service shall transmit to the Developer written notice of the actions necessary to effectively redress the violation or breach. Upon full performance of the necessary actions specified by the Service in its written notice, the Service shall immediately reinstate the Permit. It is the intent of the Parties hereto that in the event of any suspension of the Permit all Parties shall act expeditiously to cooperate to rescind any suspension to carry out the objectives of this Agreement.

c. Revocation or Termination

(1) The Service agrees that it will revoke or terminate the Permit for violation of the Permit or breach of this Agreement only if the Service determines that:

(A) Such violation cannot be effectively redressed by other remedies or enforcement action; and

(B) Revocation or termination is required to fulfill a responsibility of the Service under the ESA or regulations issued thereunder.

(2) The Service agrees that it will not revoke or terminate the Permit without first:

(A) Requesting the Developer to take appropriate remedial action; and,

(B) Apprising the Developer notice in writing of the facts or conduct which may warrant the revocation or termination, and providing a reasonable opportunity--but not less than sixty (60) days--to demonstrate or achieve compliance with the ESA, regulations issued thereunder, the Permit and this Agreement.

C. LIMITATIONS AND EXTENT OF ENFORCEABILITY

1. NO FURTHER MITIGATION OBLIGATION

It is acknowledged that the purpose of this Agreement is to set forth the obligations and rights of the Parties hereto with respect to the HCP, and to provide for the conservation of the Smith's blue butterfly and the mitigation and compensatory measures required in connection with incidental taking of the butterfly in the course of otherwise lawful activities within the project site. Accordingly, except as otherwise required by law and/or provided under the terms of the HCP, including unforeseen circumstances, no further mitigation or compensation will be required by the Service.

2. PRIVATE PROPERTY RIGHTS AND LEGAL AUTHORITIES UNAFFECTED

Except as otherwise specifically provided in this Agreement, nothing herein contained shall be deemed to restrict the rights of the Developer to manage the use of and exercise all of the incidents of land ownership over those lands and interests in lands constituting the project site subject to such other limitations as may apply to such rights under the Constitution and laws of the United States and the State of California. Furthermore, nothing herein contained is intended to limit the authority or responsibility of the United States government to invoke the penalties or otherwise fulfill its responsibilities under the Endangered Species Act.

VII. MISCELLANEOUS PROVISIONS

A. AMENDMENTS

1. AMENDMENTS TO THE IMPLEMENTATION AGREEMENT

Except as otherwise set forth herein, this Agreement may be amended only with the written consent of each of the Parties hereto.

2. AMENDMENTS TO THE HCP

Material changes to the HCP proposed by the Developer after the effective date of the Permit shall be processed by the Service as an amendment to the Permit in accordance with the ESA and permit regulations at 50 C.F.R. Parts 13 and 17, and shall be subject to appropriate environmental review.

B. NO PARTNERSHIP

Neither this Agreement nor the HCP shall make or be deemed to make any Party to this Agreement the agent for or the partner of any other Party.

C. SUCCESSORS AND ASSIGNS

This Agreement and each of its covenants and conditions shall be binding on and shall inure to the benefit of the Parties hereto and their respective successors and assigns.

D. NOTICE

Any notice permitted or required by this Agreement shall be delivered personally to the persons set forth below or shall be deemed given five (5) days after deposit in the United States mail, certified and postage prepaid, return receipt requested and addressed as follows or at such other address as any Party may from time to time specify to the other Party in writing:

United States Fish and Wildlife Service
Region 1, Eastside Federal Complex
911 Northeast Eleventh Avenue
Portland, Oregon 97232-4181

California Department of Fish and Game, Region 3
P.O. Box 47
Yountville, CA 94599

D.B.O. Development Company
c/o Coats Consulting
1200 Piedmont, Suite B
Pacific Grove, CA 93950

E. ENTIRE AGREEMENT

This Agreement supersedes any and all other Agreements, either oral or in writing among the Parties hereto with respect to the subject matter hereof and contains all of the covenants and agreements among them with respect to said matters, and each Party acknowledges that no representation, inducement, promise or agreement, oral or otherwise, has been made by the other Party of anyone acting on behalf of the other Party is not embodied herein.

F. ATTORNEY'S FEES

If any action at law or equity, including any action for declaratory relief, is brought to enforce or interpret the provisions of this Agreement, each Party to the litigation shall bear its own attorney's fees and costs provided that attorney's fees and costs recoverable against the United States shall be governed by applicable Federal law.

G. ELECTED OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress shall be entitled to any share or part of this Agreement, or to any benefit that may arise from it.

H. AVAILABILITY OF FUNDS

Implementation of this Agreement by the Service and CDFG shall be subject to the availability of appropriated funds.

I. DUPLICATE ORIGINALS

This Agreement may be executed in any number of duplicate originals. A complete original of this Agreement shall be maintained in the official records of each of the Parties hereto.

J. THIRD PARTY BENEFICIARIES

Without limiting the applicability of the rights granted to the public pursuant to the provisions of 16 U.S.C. § 1540(g), this Agreement shall not create the public or any member thereof as a third Party beneficiary hereof, nor shall it authorize anyone not a Party to this Agreement to maintain a suit for personal injuries or property damages pursuant to the provisions of this Agreement. The duties, obligations and responsibilities of the Parties to this Agreement with respect to third Parties shall remain as imposed by general law.

IN WITNESS WHEREOF, THE PARTIES HERETO have executed this Implementation Agreement to be in effect as of the date last signed below.

BY _____ Date _____

Deputy Regional Director
United States Fish and Wildlife Service
Portland, Oregon

BY _____ Date _____

Sand City Redevelopment Agency
Sand City, California

BY _____ Date _____

Donald Orosco
D.B.O Development Company
Pacific Grove, California

PLATE 1

GRADING PLANS AND CROSS SECTIONS

PLATE 1

GRADING PLANS AND CROSS SECTIONS

IMPLEMENTATION AGREEMENT:
NORTH OF PLAYA HABITAT CONSERVATION PLAN

THIS AGREEMENT is made and entered into as of the 25th day of April, 1996, by and among the City of Sand City (City), D.B.O. Development No. 25. (Developer), and the United States Fish and Wildlife Service (Service), hereafter collectively referred to as the "Parties".

For and in consideration of the mutual covenants and conditions contained herein, the Parties do hereby agree as follows:

I. RECITALS

This Agreement is entered into with regard to the following facts:

A. LISTING

The Smith's blue butterfly (*Euphilotes enoptes smithi*) has been listed as an endangered species by the federal government, pursuant to the provisions of the Endangered Species Act, 16 U.S.C. §§ 1531, et. seq., as amended (ESA). The black legless lizard (*Anniella pulchra nigra*) has been proposed for listing as an endangered species. The sand gilia (*Gilia tenuiflora* ssp. *arenaria*) has been listed as endangered, the Monterey spineflower (*Chorizanthe pungens* var. *pungens*) has been listed as threatened, and sandmat manzanita (*Arctostaphylos pumilla*) and Monterey Ceanothus (*Ceanothus rigidus*) are both federal "Species of Concern" (formerly category 2 candidates). All of these species are hereafter collectively referred to as the "species of concern."

A1. PRESENCE

The species of concern are found in or may use or inhabit portions of the North of Playa project site and as a consequence, urban growth foreseeable over the next twenty years may result in a diminution of habitat and an unintentional taking of individuals of the species of concern incidental to the normal course of urban development.

B. HABITAT CONSERVATION PLAN

Pursuant to the provisions of Section 10(a)(1)(B) of the ESA, the Developer, in consultation with the City, has prepared a Habitat Conservation Plan (HCP) and submitted

it to the Service with a request that the Service issue a Permit to allow the Smith's blue butterfly ("butterfly") to be incidentally taken, as that term is defined in the ESA, at the site of the proposed North of Playa development project (see HCP for description). The HCP also proposes a program to minimize and mitigate adverse effects on Smith's blue butterfly habitat, sand gilia, Monterey spineflower, black legless lizard, sandmat manzanita, and Monterey ceanothus through restoration, maintenance and permanent protection of 4.6 acres of coastal dune scrub habitat on the project site.

C. INCORPORATION OF HCP

The HCP and each of its terms are intended to be, and by this reference are, incorporated herein. In the event of any direct contradiction between the terms of this Agreement and the HCP, the terms of this Agreement shall control. In all other cases, the terms of this Agreement and the terms of the HCP shall be interpreted to be supplementary to each other.

D. LEGAL REQUIREMENTS

In order to fulfill the requirements which will allow the Service to issue the Permit, the HCP provides measures that are intended to ensure that: any take occurring within the development site will be incidental; that the impacts of the take will, to the maximum extent practicable, be minimized and mitigated; that adequate funding for the HCP will be provided; and that the take will not appreciably reduce the likelihood of survival and recovery in the wild of the species of concern. In order to fulfill these legal requirements, each party to this agreement must perform specific tasks delineated in this document.

E. PURPOSES

The purposes of this Agreement are:

1. To ensure implementation of the terms of the HCP and conservation of the species of concern;

2. To contractually bind each Party to fulfill and faithfully perform the obligations, responsibilities and tasks assigned to it pursuant to the terms of the HCP; and,

3. To provide remedies and recourse should any Party fail to perform its obligations, responsibilities and tasks as set forth in this Agreement.

F. TERMS USED

Terms defined and utilized in the HCP and the ESA shall have the same meaning when utilized in this Agreement, except as specifically noted.

II. TERM

A. STATED TERM

This Agreement shall become effective on the date that the Service issues the Permit requested in the HCP, and shall remain in full force and effect until termination of the Permit. The term of the Permit will be five years.

B. ACTIONS EXTENDING BEYOND STATED TERM OF AGREEMENT

Notwithstanding the stated term as herein set forth, the Parties agree and recognize that once the butterfly has been incidentally taken and their habitat modified within the project site, the take and habitat modification will be permanent. The Parties, therefore, agree that the mitigation area (Management Areas 1 and 2 identified in the HCP) shall likewise be permanent and extend beyond the term of this Agreement.

The parties also agree that monitoring of the mitigation area may extend beyond the term of the Permit if final success criteria are not met at the end of five years and\or contingency measures are required beyond the third year of monitoring.

The parties agree that City of Sand City will be the designated entity responsible for long-term maintenance of the mitigation area.

III. OBLIGATIONS OF THE PARTIES

A. MINIMIZATION AND MONITORING OF THE IMPACTS OF INCIDENTAL TAKE

In order to minimize and monitor the impacts of incidental take, the Parties agree that they shall undertake the following tasks, responsibilities and obligations:

1. The Developer

a. Shall provide an educational program to all workers, prior to construction, advising them of the presence of the special status species on and adjacent to the job site. This program shall be administered by a qualified biologist, as defined in 1(b) below. Construction personnel shall be informed that the Smith's blue butterfly is listed by the federal government as an endangered species, and that there are penalties for take of the species as specified in the 1990 edition of the Federal Criminal Code and Rules (18 § 3571).

b. Shall hire a qualified biologist approved by the Service whose duties shall include performing all of the actions described in the HCP involving the species of concern addressed. The Developer shall provide the Service with resumes of prospective biologists at least 15 days prior to the start of any site-disturbing activities so that the Service may review and approve his/her qualifications. Included among his or her responsibilities, the authorized biologist:

(1) Shall stake the temporary construction fence location with the project engineer and be present on the site at the time of fence installation to ensure that installation does not result in harm to the species of concern ;

(2) Shall organize seed and plant material collection by restoration specialist as described in HCP for sand gilia, Monterey spineflower, seacliff and coast buckwheat, sandmat manzanita and Monterey ceanothus;

(3) Shall coordinate and oversee capture and relocation efforts for the black legless lizard prior to the initiation of construction within the developable area.

(4) Shall collect and remove any buckwheat plants found on the developable portions of the site, following the protocols found in the HCP--and relocate them to the mitigation area.

(5) Shall remain on the site and monitor all site-disturbing activities for the presence and protection of the Smith's blue butterfly and black legless lizards until fencing, preconstruction surveys, grading, retaining wall installation and construction are completed

c. Shall take every precaution to ensure that no Smith's blue butterflies are killed or host buckwheat plants are removed outside of the proposed take area by grading and construction activities, regardless of the timing of construction. These precautions shall include:

(1) Fencing the site prior to conducting any site-disturbing activities;

(2) Ensuring that all construction vehicles, including heavy equipment and personal vehicles, use established roadways to reach the site, and ensuring--once the fencing and the preconstruction survey have been completed--that all vehicles are restricted to the project site and do not impact adjacent properties.

(3) Arranging, to the extent possible, for all grading and construction activities to occur when the butterflies are inactive.

d. Shall take every precaution to limit the number of black legless lizards killed by grading and construction activities, regardless of the timing of construction. These precautions shall include:

(1) Preconstruction surveys within the development footprint to capture and relocate individual black legless lizards from the construction area into the mitigation area or other appropriate site.

(2) Monitoring of construction activities by a qualified biologist who will recover any black legless lizards that may be excavated with the native material. If the animals are in relatively good shape, they will be immediately relocated to the mitigation area. If they are injured, the animals will be turned over to a specialist who will care for them until they are in a condition to be released into the mitigation area.

e. Shall consult the Service prior to on-site use of insecticides, herbicides, and rodenticides and use such materials in a manner acceptable to the Service.

f. Shall keep the Service informed as to the progress of construction and advise when construction has been completed.

g. Shall install permanent fencing around the perimeter of the mitigation area following completion of construction.

h. Shall hire a qualified individual to monitor implementation of the Habitat Conservation Plan for a period of five years. Included among his or her responsibilities, the qualified individual:

(1) Shall collect data regarding changes in vegetation cover over time once a year for the first five years of the project.

(2) Shall conduct surveys to assess use by Smith's blue butterfly of revegetated and enhanced habitat areas every year for the first five years of the project.

(3) Shall prepare brief progress reports during the five year monitoring period (as described in the HCP) and forward them to responsible or interested agencies such as the Sand City Planning Department, CDFG, and the Service.

i. Shall consent to and shall allow entry by agents or employees of the Service upon premises where the permitted activity is conducted at any reasonable hour..

2. The Service

a. Shall review and approve the education program prior to its use.

b. Shall review the credentials of any biologist(s) under consideration by the Developer (to determine if he or she is qualified to perform protection and monitoring actions), and shall approve the selection.

c. Shall maintain open communication with representatives to assist with compliance procedures.

d. Shall provide guidance to the Developer, as needed, relating to implementation of specific protective measures detailed in the HCP.

B. MITIGATION OF IMPACTS OF INCIDENTAL TAKE

In order to mitigate the impacts of incidental take, the Developer, the City and the Service shall undertake and fulfill the following responsibilities and obligations:

1. The Developer

a. Shall implement the measures described in the HCP to minimize the adverse effects on all species of concern considered in the HCP. These measures are prescribed for four different management areas and are summarized as follows:

(1) Management Area 1 (3.4 acres of primarily dune scrub and iceplant) will be stabilized and existing coastal dune scrub habitat will be enhanced and monitored regularly. Special status plant species propagated from onsite material will be installed in this area.

(2) Management Area 2 (1.2 acres of sediment pond, paved areas, disturbed dune scrub habitat) will be stabilized, backfilled with clean sand, and contoured. The habitat will be enhanced with installation of native coastal scrub vegetation and associated special status species. The area will be maintained and monitored regularly.

(3) Management Area 3 (1.4 acres of primarily disturbed dune covered with iceplant) will be recontoured and stabilized in preparation for planting of native coastal scrub vegetation.

(4) Management Area 4 (27 acres of primarily developed areas with some coastal dune scrub and central maritime chaparral habitat) will be developed. Prior to initiation of construction, collection of seed, other plant material or topsoil will occur for the coastal dune scrub species, including special status species.

b. Shall grant a conservation easement in perpetuity over the 4.6 acre mitigation area (Management Areas 1 and 2) and a second conservation easement over the 1.4 acre area (Management Area 3) in favor of the City of Sand City as a site for coastal dune restoration to offset losses in other parts of the city. The conservation easements shall give the Service the right to approve any amendments to the conservation easements and to approve any public agency or private association to which the grantee of the conservation easements assigns its rights.. The conservation easements will be integrated with covenants and restrictions for the commercial development in a manner that will assure that the provisions of the HCP,

including the long-term financial responsibilities associated with it, will be carried out by the Developer or its assignees and/or successors. The Developer shall not take any action which may effect a taking of Smith's blue butterfly until the City has accepted the conservation easements required by this paragraph.

c. Shall, prior to undertaking any activities that are inconsistent with or materially differ from the terms and conditions of the approved HCP, consult with and obtain the approval of the Service.

d. Shall cooperate and maintain open communication with the Service and the City of Sand City to carry out the terms and conditions of the HCP.

2. The City

a. Shall be designated as the management entity for the 4.6 acre habitat preserve in perpetuity.

b. Shall ensure that annual maintenance activities on the habitat preserve are carried out consistent with the goals of the HCP.

c. Shall provide the Service unlimited access to the habitat preserve.

3. The Service

a. Shall cooperate with and provide technical assistance to the Developer and any designees in carrying out the terms and conditions of the HCP and Section 10(a)(1)(B) permit, particularly with regard to acquisition and permanent management of replacement habitat.

C. FUNDING OF THE HCP

1. The Developer

a. Shall expend the funds necessary for implementation, monitoring and maintenance for 5 years in accordance with the terms of the HCP and in accordance with the provisions of Section III (B)(1) of this agreement.

b. Shall issue a letter of credit or give a corporate guarantee that funds are available and are a line item for the amount of estimated implementation costs as described in the HCP (including costs for implementing paragraphs c. and d. below) prior to any take of Smith's blue butterfly habitat on the site.

c. Shall establish the mechanism for generating annual funds for long term maintenance (in perpetuity following the first five years) of the mitigation area.

d. Shall establish a special account to be administered by the City of Sand City for the annual funds generated for maintenance of the mitigation area.

2. The City

a. Shall administer the special account established for long-term maintenance (in perpetuity following the first five years) of the mitigation area

IV. ENVIRONMENTAL REVIEW

Construction and operation of the proposed North of Playa project is an action subject to review under the California Environmental Quality Act. As lead agency under CEQA, the City of Sand City has completed and certified an Environmental Impact Report addressing project actions pursuant to CEQA Guidelines (certified September 28, 1995).

Sand City, the City of Seaside, and Seaside Sanitation District applied for a $2 million Infrastructure Improvement grant from the U.S. Department of Commerce, Economic Development Administration (EDA project No. 07-01-04075) for the project. Issuance of the grant is an action subject to review under the National Environmental Policy Act. An environmental Assessment was completed and a Finding of no Significant Impact (FONSI) was recommended by EDA on June 30, 1995.

Issuance of a Section 10 (a)(1)(B) permit to the Developer by the Service is an action subject the NEPA review. The Service is the lead agency under NEPA and has prepared an Environmental Assessment addressing the project Section 10 (a)(1)(B) permit and accompanying Habitat Conservation Plan.

V. ISSUANCE OF THE PERMIT

A. FINDINGS

The Service shall issue a Permit to the developer upon finding (after opportunity for public comment) that:

1. INCIDENTAL TAKE

Any permitted taking of the Smith's blue butterfly will be incidental to the carrying out of otherwise lawful activities; and,

2. MINIMIZE AND MITIGATE

The HCP and this Implementation Agreement will, to the maximum extent practicable, minimize and mitigate the impacts to the species considered in the HCP; and,

3. ADEQUATE FUNDING

The funding sources identified and provided for herein will ensure that adequate funding for the HCP will be provided; and,

4. NO LIKELY JEOPARDY

Any permitted taking of the species of concern will not appreciably reduce the likelihood of the survival and recovery of these species in the wild; and,

5. OTHER MEASURES

Any other measures set forth in the HCP and required by the Service as being necessary or appropriate for the purposes of the HCP (including any measures determined by the Parties to be necessary to deal with unforeseen circumstances) will be fulfilled;

The Service shall issue a Permit to the Developer concurrently with the execution of this Agreement by the Parties, and it is specifically agreed that this Agreement shall not become effective nor binding upon the Parties until and unless the Permit has been issued.

B. ISSUANCE AND MONITORING

After issuance of the Permit, the Service shall monitor the implementation thereof, including all of the terms of this Agreement and the HCP, including (but not limited to) the management, maintenance and monitoring of the coastal dune scrub habitat and associated special status species in order to assure compliance with the Permit, the HCP and this Agreement. In addition, the Service shall, to the maximum extent possible, ensure the availability of its staff to cooperate with and provide technical and research assistance to the Parties.

VI. REMEDIES AND ENFORCEMENT

A. REMEDIES IN GENERAL

Except as set forth hereinafter, each Party hereto shall have all of the remedies available in equity (including specific performance and injunctive relief) and at law to enforce the terms of this Agreement and the Permit, and to seek remedies and compensation for any breach hereof, consistent with and subject to the following:

1. NO MONETARY DAMAGES

None of the Parties shall be liable in damages to the other Parties or other person for any breach of this Agreement, any performance or failure to perform a mandatory or discretionary obligation imposed by this Agreement or any other cause of action arising from this Agreement. Notwithstanding the foregoing:

a. Retain Liability

Each Party shall retain whatever liability it would possess for its present and future acts or failure to act without existence of this Agreement.

b. Land Owner Liability

The Developer shall retain whatever liability he/she possesses as an owner of interests in land.

2. INJUNCTIVE AND TEMPORARY RELIEF

The Parties acknowledge that the species of concern are unique and that their loss as a species would result in irreparable damage to the environment and that therefore injunctive and temporary relief may be appropriate in certain instances involving a breach of this Agreement.

B. THE PERMIT

1. PERMIT SUSPENSION, REVOCATION OR TERMINATION

a. Suspension

In the event of any significant violation or breach of the Permit or this Agreement, the Service may suspend the Permit; however, except where

the Service determines that emergency action is necessary to protect the Smith's blue butterfly, it will not suspend the Permit without first:

(1) Requesting that the Developer take appropriate remedial, enforcement or management actions; and

(2) Providing the Developer notice in writing of the facts or conduct which may warrant the suspension and an opportunity for the Developer to demonstrate or achieve compliance with the ESA, regulations issued thereunder, the Permit and this Agreement.

b. Reinstatement

In the event the Permit is suspended, the Service shall, as soon as possible--but no later than ten (10) working days after any suspension--consult with the Developer concerning actions to be taken to effectively redress the violation or breach that necessitated the suspension. At the conclusion of any such consultation, the Service shall make a determination of the actions necessary to effectively redress the violation or breach. In making this determination the Service shall consider the requirements of the ESA, regulations issued thereunder, the conservation needs of the Smith's blue butterfly, the terms of the Permit and this Agreement, and any comments and recommendations received during the consultations. As soon as possible, but not later than thirty (30) days after the conclusion of the consultations, the Service shall transmit to the Developer written notice of the actions necessary to effectively redress the violation or breach. Upon full performance of the necessary actions specified by the Service in its written notice, the Service shall immediately reinstate the Permit. It is the intent of the Parties hereto that in the event of any suspension of the Permit all Parties shall act expeditiously to cooperate to rescind any suspension to carry out the objectives of this Agreement.

c. Revocation or Termination

(1) The Service agrees that it will revoke or terminate the Permit for violation of the Permit or breach of this Agreement only if the Service determines that:

(A) Such violation cannot be effectively redressed by other remedies or enforcement action; and

(B) Revocation or termination is required to fulfill a responsibility of the Service under the ESA or regulations issued thereunder.

(2) The Service agrees that it will not revoke or terminate the Permit without first:

(A) Requesting the Developer to take appropriate remedial action; and,

(B) Apprising the Developer by notice in writing of the facts or conduct which may warrant the revocation or termination, and providing a reasonable opportunity--but not less than sixty (60) days--to demonstrate or achieve compliance with the ESA, regulations issued thereunder, the Permit and this Agreement.

C. LIMITATIONS AND EXTENT OF ENFORCEABILITY

1. NO FURTHER MITIGATION OBLIGATION

It is acknowledged that the purpose of this Agreement is to set forth the obligations and rights of the Parties hereto with respect to the HCP, and to provide for the conservation of the species of concern and the mitigation and compensatory measures required in connection with incidental taking of these species in the course of otherwise lawful activities within the project site. Accordingly, except as otherwise required by law and/or provided under the terms of the HCP, including unforeseen circumstances, no further mitigation or compensation will be required by the Service.

2. PRIVATE PROPERTY RIGHTS AND LEGAL AUTHORITIES UNAFFECTED

Except as otherwise specifically provided in this Agreement, nothing herein contained shall be deemed to restrict the rights of the Developer to manage the use of and exercise all of the incidents of land ownership over those lands and interests in lands constituting the project site subject to such other limitations as may apply to such rights under the Constitution and laws of the United States and the State of California. Furthermore, nothing herein contained is intended to limit the authority or responsibility of the United States government to invoke the penalties or otherwise fulfill its responsibilities under the Endangered Species Act.

VII. MISCELLANEOUS PROVISIONS

A. AMENDMENTS

1. AMENDMENTS TO THE IMPLEMENTATION AGREEMENT

Except as otherwise set forth herein, this Agreement may be amended only with the written consent of each of the Parties hereto.

2. AMENDMENTS TO THE HCP

Material changes to the HCP proposed by the Developer after the effective date of the Permit shall be processed by the Service as an amendment to the Permit in accordance with the ESA and permit regulations at 50 C.F.R. Parts 13 and 17, and shall be subject to appropriate environmental review.

B. NO PARTNERSHIP

Neither this Agreement nor the HCP shall make or be deemed to make any Party to this Agreement the agent for or the partner of any other Party.

C. SUCCESSORS AND ASSIGNS

This Agreement and each of its covenants and conditions shall be binding on and shall inure to the benefit of the Parties hereto and their respective successors and assigns.

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Any notice permitted or required by this Agreement shall be delivered personally to the persons set forth below or shall be deemed given five (5) days after deposit in the United States mail, certified and postage prepaid, return receipt requested and addressed as follows or at such other address as any Party may from time to time specify to the other Party in writing:

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Region 1, Eastside Federal Complex
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D.B.O. Development No. 25
c/o Coats Consulting
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Pacific Grove, CA 93950

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This Agreement supersedes any and all other Agreements, either oral or in writing among the Parties hereto with respect to the subject matter hereof and contains all of the covenants and agreements among them with respect to said matters, and each Party acknowledges that no representation, inducement, promise or agreement, oral or otherwise, has been made by the other Party of anyone acting on behalf of the other Party is not embodied herein.

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If any action at law or equity, including any action for declaratory relief, is brought to enforce or interpret the provisions of this Agreement, each Party to the litigation shall bear its own attorney's fees and costs provided that attorney's fees and costs recoverable against the United States shall be governed by applicable Federal law.

G. ELECTED OFFICIALS NOT TO BENEFIT

No member of or delegate to Congress shall be entitled to any share or part of this Agreement, or to any benefit that may arise from it.

H. AVAILABILITY OF FUNDS

Implementation of this Agreement by the Service and the City shall be subject to the availability of appropriated funds. This paragraph shall not affect the City's authority or duty to manage the account referred to in Section III (C)(2)(a) of this Agreement.

I. DUPLICATE ORIGINALS

This Agreement may be executed in any number of duplicate originals. A complete original of this Agreement shall be maintained in the official records of each of the Parties hereto.

J. THIRD PARTY BENEFICIARIES

Without limiting the applicability of the rights granted to the public pursuant to the provisions of 16 U.S.C. § 1540(g), this Agreement shall not create the public or any member thereof as a third Party beneficiary hereof, nor shall it authorize anyone not a Party to this Agreement to maintain a suit for personal injuries or property damages pursuant to the provisions of this Agreement. The duties, obligations and responsibilities of the Parties to this Agreement with respect to third Parties shall remain as imposed by general law.

IN WITNESS WHEREOF, THE PARTIES HERETO have executed this Implementation Agreement to be in effect as of the date last signed below.

BY Thomas Dwyer Date 4/25/96
Deputy Regional Director
United States Fish and Wildlife Service
Portland, Oregon

BY Date 4/4/96
Steve Matarazzo, Community Development Director
City of Sand City
Sand City, California

D.B.O. Development No. 25
A California Limited Liability Company

BY Date 4/4/96
Donald Orosco, Member
Pacific Grove, California