

City of San Diego
Planning Department



Environmental
Quality
Division
236-5775

Environmental Impact Report

EQD No. 84-0160
SCH No. 84030708

SUBJECT: Sea World Master Plan. COUNCIL ADOPTION of a Master Land Use Plan as a condition of a 32-acre, 50-year ground and water lease negotiated by Sea World and the City Manager. Key features include expansion of the theme park, marina and parking areas. Located between Sea World Drive and Mission Bay just east of Ingraham Street in the South Shores area of Mission Bay Park. Applicant: Sea World, Inc.

CONCLUSIONS:

Expansion of the Sea World facilities as proposed in its Master Plan would create several significant unmitigated impacts in the areas of traffic circulation (directly causing two intersections to function at an unacceptable level of service); pedestrian/bicycle circulation (no plans); urban design/visual quality (absence of plans for the aesthetic and design aspects of the park's periphery); biological resources (loss of eelgrass without compensation as required by state and Federal permitting agencies); dry boat storage (loss, without replacement, of 18 percent of the dry boat storage within Mission Bay).

These impacts remain unmitigated because of a lack of commitment to identify and accept responsibility for mitigation, as well as the lack of an implementation process which provides a mechanism to ensure construction of necessary mitigation measures concurrent with leasehold improvements.

SIGNIFICANT UNMITIGATED IMPACTS:

Traffic Circulation: The increased traffic from the expansion of Sea World would create unacceptable conditions at nearby intersections. Whereas an acceptable condition of traffic flow is considered to be level of service (LOS) C, the Sea World Drive/Sea World Way intersection would be reduced from the existing LOS D to LOS E, and the Ingraham Street/Perez Cave Way intersection would also degrade to LOS E. In addition, Sea World expansion would incrementally worsen existing congestion at the Interstate 8 off-ramp to Sports Arena Boulevard/Ingraham Street, which is currently operating at LOS F.

Bicycle/Pedestrian Circulation: A discontinuous system of bicycle/pedestrian pathways currently winds through Mission Bay Park. The Mission Bay Master Plan and Coastal Access Study stress the need to upgrade these paths and make them continuous and accessible to key portions of the Bay. The Master Plan does not provide for improvement of the system through or along the leasehold. Not only would absence of this link be an

impediment to a potentially upgraded system, but increased automobile traffic as a result of the theme park expansion would also affect safe bicycle travel along existing routes.

Urban Design/Visual Quality: The appearance of the perimeter of the facility and its large parking lot has a major effect on the design and aesthetic quality of Mission Bay. The Master Plan contains only limited and inadequate detail on proposed landscaping, signing, major entry treatments, fencing and lighting. Without greater attention to design features as part of the Master Plan an attractive interface of Sea World with the remainder of Mission Bay Park cannot be assured.

Biological Resources: Expansion of the Sea World Marina would eliminate approximately 6,250 square feet of eelgrass. Although the loss is a minor percentage of the total eelgrass within Mission Bay, any loss is considered significant because of its limited distribution in southern California waters. Redesign of the marina plans or replacement of the eelgrass will be necessary to obtain the permits required to implement the project.

Dry Boat Storage: Implementation of the Master Plan would eliminate 150 dry boat storage spaces, 18 percent of the total within the bay. The Mission Bay Master Plan cites an existing inadequacy of spaces which would thus be exacerbated by expansion of the Sea World facilities. No mitigation has been proposed.

RECOMMENDED MITIGATION OR ALTERNATIVES FOR SIGNIFICANT UNMITIGATED IMPACTS:

In order to satisfactorily mitigate the major impacts associated with the Master Plan, it is recommended that the City Council direct, and the City Manager include as part of the lease, the following conditions as part of the Master Plan:

Traffic Circulation and Bicycle/Pedestrian Circulation: The following phasing plan should be incorporated into the Master Plan.

- I. To be assured (bonded for) prior to building permits issued for construction of any facility within the theme park:
 - a. IMPROVE PEREZ COVE WAY/INGRAHAM STREET INTERSECTION as shown in EIR Fig. 4-4 (Perez Cove Way to be 66 feet wide), but not required prior to widening of Ingraham Street Bridge at Mission Bay Channel.
 - b. RECONSTRUCT DRIVEWAY ACCESS TO PEREZ COVE WAY as shown in EIR Fig. 4-4 (Perez Cove Way to be 66 feet wide).
 - c. PROVIDE CLASS II BIKEWAY ON PEREZ COVE WAY from Ingraham Street to Sea World Drive and CLASS I BIKEWAY from Sea World Drive/Perez Cove Way intersection to the intersection of Sea World Drive/Sea World Way.

- II. When the annual attendance at the theme park reaches 3,600,000 per year:
- a. RELOCATE SEA WORLD WAY approximately 500 feet east along sea World Drive and construct Sea World Way to its ultimate configuration (52 feet), plus all turn lanes to and from Sea World Way. Remove old traffic signal and install new signals to City standards. Extends Class I bikeway from present terminus to new intersection.
- III. When the annual attendance at the theme park reaches 4,000,000 per year:
- a. IMPROVE SEA WORLD DRIVE along leasehold frontage to half width of a six-lane primary arterial standard.

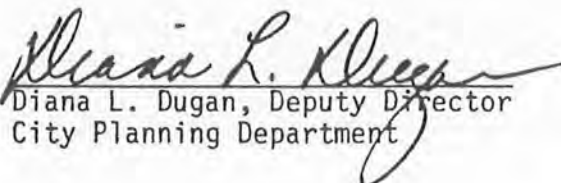
This phasing may be revised based upon the Engineering and Development Department's review of this draft EIR.

Visual Quality: Concurrent with approval of proposed facilities, exhibits shall be submitted to the Property Department and Planning Department for approval which include: landscape plans for the entire leasehold; a circulation diagram showing walkways, bikeways and on-site vehicular traffic; blow-ups of typical parking lot at a scale of 1" = 20' showing landscaping, pathways, etc.; major site entries from significant vantage points; and design guidelines for future buildings, marina, parking lots, signage, lighting and fencing.

Biological Resources: Prior to approval of the Marina expansion, a revised dock design as shown on EIR Figure 4-8 to mitigate eelgrass impacts shall be submitted for Environmental Quality Division review and incorporated into the marina expansion plans.

No mitigation is available for the loss of dry boat storage spaces.

Unless mitigation measures are adopted, project approval will require the decisionmaker to make Findings, substantiated in the record, which state that a) individual mitigation measures or project alternatives are infeasible, and b) the overall project is acceptable despite significant impacts because of specific overriding consideration.


Diana L. Dugan, Deputy Director
City Planning Department

December 3, 1984
Date of Draft Report

February 15, 1985
Date of Final Report

Analyst: MOSLEY

PUBLIC REVIEW

The following individuals, organizations, and agencies received a copy or notice of the draft EIR and were invited to comment on its accuracy and sufficiency:

Federal Agencies

U.S. Coast Guard
U.S. Army Corps of Engineers
National Marine Fisheries Service
U.S. Fish and Wildlife Service, Laguna Niguel
U.S. Fish and Wildlife Service, Endangered Species Office

State of California

CALTRANS, District 11
Department of Fish and Game, Region 5
Solid Waste Management Board
Regional Water Quality Control Board
State Clearinghouse
Coastal Commission, San Diego District
Department of Boating and Waterways

Air Pollution Control District, San Diego County

San Diego Association of Governments

City of San Diego

Engineering and Development Department
Property Department
Park and Recreation Department
Paratransit Administration

San Diego Transit Corp.

Metropolitan Transit Development Board

Clairemont Mesa Development Committee

Ocean Beach Planning Board

Mission Bay Associates

Mission Beach Precise Planning Committee

Pacific Beach Community Planning Committee

Community Planning Council

Copies of the draft EIR and any technical appendices may be reviewed in the office of the Environmental Quality Division, or purchased for the cost of reproduction.

RESULTS OF PUBLIC REVIEW

- () No comments were received during the public input period.
- () Comments were received but the comments do not address the accuracy or completeness of the environmental report. No response is necessary and the letters are attached at the end of the EIR.
- (x) Comments addressing the accuracy or completeness of the EIR were received during the public input period. The letters and responses follow.

SUMMARY

PROJECT DESCRIPTION

The proposed Sea World Master Plan describes improvements to the Sea World Theme Park, Sea World Marina and Atlantis Restaurant in Mission Bay Park. The site is bordered by Sea World Drive to the south, Ingraham Street to the west and the waters of Mission Bay to the north. The main components of the plan include expansion of the theme park, marina and parking areas and the construction of a 300-room hotel. The Master Plan, scheduled for implementation upon final approval, is designed to provide a conceptualization of the next 50 years of planned improvements. Approvals necessary for this project include City Council approval, a Coastal Development Permit and an Army Corps of Engineers Section 10 Permit.

Under the proposed Master Plan the exhibit area would increase by approximately 50 percent to accommodate an additional 1.1 million visitors annually (33 percent increase). Sea World presently hosts almost 3 million visitors annually. As a first phase of Master Plan implementation, the main entrance would be relocated to the center of the south-facing park front and a new, larger Shamu Stadium would be built. Additional theme park improvements include a variety of exhibit areas and are described in Section II. A 300-room hotel would be constructed between the existing marina and Atlantis Restaurant. The restaurant would serve meals for the hotel guests. A swimming pool would also be built as an accessory use to the hotel. The wet slips at the existing Perez Cove Marina would be doubled from 200 to 400 during a later phase of the Master Plan. This expansion would be built into the new 7.2-acre water lease. The three existing docks would be lengthened and a new western dock added. The existing dry boat storage facilities for 150 boats would be replaced by management and support offices. The launch would also be removed. New parking areas would be created and existing ones altered to provide adequate parking lot area for the expansions. The newly acquired 25 acre lease to the east of the property would provide new parking area for the theme park.

ENVIRONMENTAL ANALYSIS

Traffic

The Traffic Report for the Sea World Master Plan was revised January 9, 1985, and is on file with the Environmental Quality Division of the City of San Diego. While the revised report updates the traffic section and appendix of the Final EIR, it does not reflect recent negotiations between City staff and Sea World which have been incorporated into this Summary and Responses to Comments of the Final EIR, as of February 1985.

The adequacy of parking area proposed with full buildout of Sea World's Master Plan was examined based on standard parking requirements. The Master Plan indicates a net excess of 85 parking spaces in the immediate vicinity of the hotel, restaurant and marina, including the rental parking area. No impacts to parking availability are associated with the proposed project. The planned replacement of the Ingraham Street bridges is not expected to impact or be impacted by Sea World's Master Plan.

The potential for existing or future traffic circulation impacts associated with Sea World's Master Plan was evaluated by examining peak hour traffic counts, average summer weekday traffic volumes and intersection capacity utilizations (ICU). Traffic increases were estimated based on a 33 percent increase in theme park attendance and trip generation ratios for the expanded marina, new hotel and the existing Atlantis Restaurant. The additional traffic at ultimate buildout would be sufficient to adversely affect the two principal access points: Ingraham Street/Perez Cove Way and Sea World Drive/Sea World Way. Each intersection would experience a decreased level of service (LOS) (see Appendix A for description of levels of service), representing a significant impact at ultimate buildout.

Mitigation measures are available to adequately mitigate expected traffic impacts. Sea World agreed to implement all traffic circulation improvements requested by the City to ensure adequate mitigation of significant traffic impacts. These measures are listed below.

1. Prior to occupancy of the proposed hotel, Sea World shall complete and open to traffic the following:
 - a. Improve Perez Cove Way/Ingraham Street Intersection as shown in EIR Figure 4-4 (Perez Cove Way to be 66 feet wide). (This mitigation will not be required prior to widening of the Ingraham Street Bridge at Mission Bay Channel.)
 - b. Reconstruct Driveway Access to Perez Cove Way as shown in EIR Figure 4-4 (Perez Cove Way to be 66 feet wide).
2. When the annual attendance at the theme park reaches 3,600,000 per year, Sea World shall relocate Sea World Way approximately 500 feet east along Sea World Drive and construct Sea World Way to its ultimate configuration (52 feet), plus all turn lanes to and from Sea World Way. Sea World shall also remove the old traffic signal and install new signals to City standards. This would also include the installation of sidewalks, and preservation of landscape buffers installed during earlier development phases.
3. When the annual attendance at the theme park reaches 4,000,000 per year, Sea World shall improve Sea World Drive along the leasehold frontage to half width of a six-lane primary arterial standard.
4. Sea World agrees to continue participation in the transit system.

A discontinuous system of bicycle/pedestrian pathways currently wind through Mission Bay Park. The Mission Bay Master Plan and Coastal Access Study stress the need to upgrade these paths and make them continuous and accessible to key portions of the Bay. A pedestrian pathway currently crossing the Sea World lease would be retained and upgraded under the proposed Master Plan. However, to make the pedestrian pathway continuous, mitigation measures are proposed. A northwest-bound Class III bicycle route follows Perez Cove Way around the Sea World lease and would be impacted by increased traffic associated with Master Plan expansion. Because the Master Plan does

not propose to upgrade the bikeway or add a southeast-bound link, a significant unmitigated impact would occur. Partial mitigation has been agreed to by Sea World, as described below.

Sea World has recently updated their Master Plan with an overlay on file with the City Planning Department. A pedestrian pathway link is shown between South Shores and Sea World which follows the shoreline and perimeter of the exhibit area. Continuous access would thus be provided between South Shores and points west. While the overlay shows the pedestrian pathway linking the eastern and western perimeters of Sea World, it omits the pathway to Sea World Drive from the exhibit area, which is part of the original Master Plan (see Figure 4-6). Sea World Way would be relocated 500 feet to the east according to the overlay, yet no walkway is shown adjacent to Sea World Way. The original concept of providing pedestrian access to Sea World Drive must be retained with the new location of Sea World Way in order to avoid significant unmitigated impacts to pedestrian circulation.

The overlay also shows a bikeway on Perez Cove Way. The northwest-bound lane currently exists, however, the southeast-bound lane is a new addition. This new lane is shown crossing Perez Cove Way just before the forced right U-turn, at which point the bikeway becomes a Class I bike path up to the intersection of Sea World Way and Sea World Drive. At this intersection, the bike path terminates, showing no connection to South Shores. Sea World will grant an easement to the City for construction of a Class I bike path from the intersection to 600 feet west of the existing signal. Sea World will extend this easement to the future intersection located 500 feet further east with the relocation of their main entrance. Because Sea World has not committed to constructing a continuous bikeway linking the adjacent existing and proposed segments of the area-wide bike circulation system, a significant unmitigated impact will be incurred. The easement proposed by Sea World partially mitigates this impact.

Aquatic Biology/Water Quality

Perez Cove, a shallow, north-facing inlet in southern Mission Bay, is currently occupied by 200 wet berths and a fuel dock known as Sea World Marina. Biological resources in the cove include a variety of fish, invertebrates and vegetation, including a small patch of giant kelp and 1.9 acres of eelgrass. For the most part the eelgrass grows in a continuous bed in the shallow shore waters, although some patches grow in-between the docks. The proposed Master Plan would impact eelgrass by shading the plant, thereby eliminating conditions necessary for its growth. While the affected area would be a minor percentage of the total Mission Bay eelgrass, due to its limited regional distribution, any loss is considered significant.

The impact can be completely mitigated by redesign of the docks shading the eelgrass, as shown in Figure 4-8. No impacts to water quality would be associated with Master Plan approval.

Terrestrial Biology

The only undeveloped area is east of the main entrance off of Sea World Drive and the newly acquired 25-acre lease area east of the existing theme park. Vegetation in this area is reduced and highly disturbed in character. Dominant plants include chaparral broom, pampas grass, coastal isocoma and sea fig. Enough water accumulates in limited areas to support some salt marsh plant species. The principal wildlife component on the site is expected to be birds. While a variety of raptors are expected to hunt over the property, none are expected to nest onsite due to the lack of herbaceous cover. Nuttalls' lotus, a plant species rare in California but commonly found elsewhere, could be expected onsite, although it was not observed. A number of sensitive bird species that could utilize the area are discussed in the existing conditions section. The California Least Tern, a federally and state listed endangered species, has not been reported to nest in the new lease area but could use the area for resting. The proposed development would reduce available wildlife habitat in the area, including potential nesting habitats, raptor hunting area and marshy habitats. The loss of these habitats is not considered significant. The marina

area is not a preferred foraging habitat for Least Terns, and no adverse impacts would occur due to the proposed marina expansion. Project development would not impact Least Tern nesting habitats.

Visual/Landscaping

Sea World's landscaping plan is designed to be attractive and visually appealing since the appearance of the theme park, restaurant, and nearby areas is integral to the visitor-oriented nature of Sea World. Within the parking lots, landscaping occurs intermittently. Along the perimeter of the parking lots a vegetative mix of plants is designed to screen views into the property. While many of the trees and shrubs have not reached maturity and therefore do not yet afford a visual barrier, these plantings can be expected to block future visual access. Surrounding the Atlantis are a wide variety of plant species. Realignment of the Ingraham Street Bridge will partially remove the landscaping barrier adjacent to the Atlantis parking lot. Landscaping concepts would continue unchanged under the proposed Master Plan, including plantings around and within the theme park itself. While offsite views into the parking lots would not be prohibited due to the immaturity of the plantings, in the long term perimeter landscaping is expected to prevent visual access and mitigate the potential impacts associated with visual access to insignificance.

Sea World has submitted to the Planning Department an overlay to the Master Plan dated January 31, 1985. On this overlay, a "Landscaped Plaza" is shown extending south from the main entrance to approximately 100 feet from the southern property boundary. The Plaza would be approximately 40 feet wide and would be planted according to the latest landscaped drawings (revised January 18, 1985) recently submitted to the Planning Department. Sea World has indicated that additional Plazas would be developed throughout the parking lot. The applicant will incorporate low water use, salt tolerant material in accordance with the vegetation species list provided in the Findings. Due to the intrusion of salts from dredged bay deposits and groundwater in much of the area, the viability of parking lot landscaping varies throughout the leasehold. Therefore, Sea World has not committed to planting 10 percent of the

parking lots with landscape coverage. However, as required by previous agreements on Sea World permits, landscaping should cover a minimum of 10 percent of the parking lots as a minimum to ensure compliance with the Mission Bay Park Design principles. This lack of commitment represents an impact to urban design and visual quality, which is only partially mitigated by Sea World's landscape plans.

Several outstanding issues remain regarding the landscaping design. The plans show Coyote Bush planted as ground cover, except on the bermed planter (see Landscape Plan - Internal Parking Lot Screen) where English Ivy is shown. A ground cover other than English Ivy is recommended in order to conserve water and provide greater compatibility with the New Zealand Christmas Tree. Perimeter trees, designed to provide a visual screen between Sea World and adjacent properties, should be planted as specimen-size trees (e.g., 24-inch or 36-inch box) rather than the 15 gallon size shown on Figure 4-10. Additionally, the plans should specify the species that would be used for landscape screen planting (Figures 4-9 and 4-10), since eucalyptus and acacia are common names referring to literally hundreds of varieties.

Regarding the lighting, fencing and signage, no change or addition to the existing signage is proposed or contemplated as related to the exterior of the theme park. Since the signs have not yet been designed for the new entrance to the theme park or the Red Lion Hotel, and the Atlantis Restaurant sign may be replaced, these signs, as well as all lighting and fencing, are subject to the Mission Bay Park Design Principles (MBPDP) and Planning Department approval. The designs for the Red Lion Hotel have been approved conceptually only and, therefore, are subject to further review, including the MBPDP and City Planning Commission Resolution No. 3052.

Geology

The proposed Master Plan includes provision of a parking lot partially covering the Mission Bay Landfill. The lot would be located on the new 25-acre lease acquisition in the eastern portion of the property. Due to the nature of the landfill, several concerns with potential for impacts are addressed. Methane

gas being generated by the landfill poses potential hazards if the landfill site is covered with impervious materials. Under such conditions a combustible condition may be created given the fact that methane is highly explosive. Decomposed granite, a relatively permeable covering, is currently proposed for the parking lot surface material. Additional studies regarding the landfill and proposed surface materials should be completed prior to construction over the landfill area and all recommendations followed to assure that potential impacts are mitigated to insignificance. Differential settling of the parking lot may occur as the landfill decomposes at different rates. However, this settling would be gradual and the only possible constraint to use of the parking lot could be a need for increased parking lot maintenance. There is a potential for exposure to toxic materials should the landfill be exposed or penetrated during grading or landscaping. To avoid or mitigate any possible impacts, detailed studies should be conducted at the time of grading or construction as a condition of the Master Plan. Specific issues to be addressed are listed in Section IV-E.

Dry Boat Storage

Within Mission Bay Park there are currently approximately 843 dry boat storage spaces. The Mission Bay Master Plan cites an inadequacy of dry boat storage spaces. While documentation of this shortage is scarce, the high summer occupancy rate of existing dry boat storage facilities indicates the demand exceeds the supply during the summer. Under the proposed Master Plan, Sea World's 150 dry boat storage spaces would be converted to office and support facilities for the Sea World Theme Park and hotel. The lower winter occupancy rate at the remaining Mission Bay Park facilities could provide space for all but 25 of the displaced Sea World boats. No such space is available during the summer in Mission Bay Park. While there may be space available outside of Mission Bay Park for these displaced dry boat storage customers, within Mission Bay the loss of Sea World's facilities represents an 18 percent decrease in dry boat storage area. On a cumulative basis this decrease represents a significant impact.

No mitigation measure is available to Sea World to mitigate the impact to Mission Bay dry boat storage facilities other than the alternative of providing dry boat storage in its present form, as described in Section V on Alternatives.

Air Quality

Air quality in the South Shores area of Mission Bay Park experiences seasonal variability. In the fall and winter more stable meteorological conditions reduce the dispersion of atmospheric pollutants. In the spring and fall occasional surface inversions known as Santa Ana wind conditions contribute to high pollutant concentrations. Within the Sea World site approximately 70 acres of parking area serve the various facilities. Queues within these parking lots form infrequently and are relatively short, resulting in relatively no degradation to air quality. Using worst case parameters, carbon monoxide levels were estimated based on an ultimate attendance of 4 million visitors to the site. The worst case scenario represented only 10 percent of the Air Resources Board 1 hour standard. No impact to air quality is expected from the increased attendance.

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RESPONSES TO PUBLIC COMMENTS
SEA WORLD MASTER PLAN

Section 15132 of the State CEQA Guidelines requires that the lead agency respond to letters of comment received as a result of public review of a Draft EIR. The City of San Diego received seven letters of comments which required responses, and these are reproduced verbatim with responses directly following them. The letters of comment and responses and the findings and statement of overriding considerations, in conjunction with the EIR text, comprise the Final EIR for the Sea World Master Plan project.

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COMMENTS

CITY of SAN DIEGO
MEMORANDUM

RESPONSES

FILE NO.: 330.8
DATE: January 18, 1985
TO: Allen Jones, Deputy Director, Planning Department
FROM: Deputy Director, Transportation & Traffic Engineering
SUBJECT: Sea World Master Development Plan, E.Q.D. #84-0160

RECEIVED
JAN 23 1985
ENVIRONMENTAL QUALITY
DIVISION

The purpose of this memo is to respond to the Draft EIR dated December 3, 1984, regarding the Sea World Master Plan. The review of the EIR has resulted in the following comments:

- ① 1. On page 2-5, Figure 2-4, the proposed master plan graphic incorrectly shows driveway configuration on Perez Cove Way near the Ingraham Street intersection. It will also be necessary to further revise this graphic to show other required mitigation as specified later in this memo.
- ② 2. On page 4-3, level of service at Sea World Drive and both I-5 ramp intersections should address the affects of limited storage on the capacity of these intersections. The required storage length for the dual left-turning lanes and the free right-turning lanes should be specified and compared to the existing conditions.
- ③ 3. On page 4-9, it is stated that vehicle parking is permitted in a Class II bike lane. This is incorrect.
- ④ 4. On page 4-11, a trip generation rate for Marina berths is shown as 3.5 trips per berth per day. The City of San Diego's recommended weekday trip generation rates, as published on April 6, 1984, recommends a rate of four trips per berth. The four trips per berth rate should be used unless sufficient documentation can be provided to justify use of other rates.
- ⑤ 5. On page 4-11, the p.m. peak hour to ADT ratio for vehicles coming from the theme park is not shown. By calculation, it was determined that a 6% peak hour to ADT ratio was assumed. Based on a summer weekday counts taken on Sea World Way by the City during July 1982, July 1981, May 1979, and July 1975, a 10% p.m. peak hour to ADT ratio was found. Please correct your computations to indicate a 10% peak hour to ADT ratio.
- ⑥ 6. On page 4-13, it is stated that when theme park attendance reaches 4,000,000, 7,500 additional trips will be generated from the theme park. This is incorrect, only 3,750 additional trips will be generated from the theme park expansion. (The theme park does not include the proposed hotel or marina.)

1. A caveat has been added to Figure 2-4, stating that additional developments associated with the Master Plan are on file with the Planning Department. Figure 4-4, available in the EIR and on file with the Planning Department, shows detail of the Perez Cove Way/Ingraham Street intersection. The Master Plan graphic originally submitted to the City and reproduced on Figure 2-4 should not be considered final or complete, as it has been subject to extensive revision.
2. It is acknowledged that the limited storage capacity at these intersections does adversely affect the level of service at these locations. However, the Sea World Master Plan expansion will only have an incremental effect on these intersections, and no mitigation is required for limited storage capacity.
3. Vehicle parking is allowed adjacent to a Class II bike lane. The text has been revised to reflect this distinction.
4. The trip generation rate of 3.5 trips per berth has been approved by Allen Holden, Senior Traffic Engineer at the City of San Diego, as shown in Exhibit 19 in the DEIR Traffic Appendix.
5. City staff reported that their summer weekday counts revealed 9 percent to 10 percent of the daily Sea World Way traffic was traveling in and out of the project site between 4:30 and 5:40 p.m. The summer weekday volume shown on Figure 6 of the revised Traffic Study has been increased to reflect these counts. The 4:30 to 5:30 p.m. average summer weekday counts now show 675 out and 65 in, rather than 514 out and 51 in. The Traffic Study was revised January 9, 1985, and is on file with the Environmental Quality Division of the City of San Diego.
6. The revised Traffic Study has incorporated this correction as follows: "Since it has been shown that the theme park expansion will add 3750 ADT at the ultimate 4,000,000 attendance and the marina expansion 700 ADT, these two uses will add 4450 ADT total."

7. On page 4-18, Figure 4-5, the graphic showing the Sea World main entrance improvements should be changed. An acceleration lane should be shown on the north side of Sea World Drive, west of Sea World Way. The width of Sea World Way should be changed from 40' to 52' in order to provide standard size lanes.

8. On page 4-17, there is a discussion of the movement of Sea World Way to the east. City staff has determined that moving Sea World Way approximately 500 feet to the east would provide adequate weaving distance for a driver traveling northbound Ingraham Street to eastbound Sea World Drive, destined for Sea World Way. This would still allow proper intersection spacing for the two South Shore access points along Sea World Drive and, therefore, this relocation of Sea World Way should be incorporated in the project. Also, when the intersection is moved to the east, the signalization of the new intersection would be the responsibility of the applicant, to the satisfaction of the City Engineer. See our attached suggested phasing plan for timing.

9. In the mitigation section beginning on page 4-15, there is no mention of the widening of Sea World Drive from four to six lanes (including curb, gutter and sidewalk) along the leasehold frontage. In order to properly mitigate cumulative impacts within the area and the impacts from Sea World, this improvement should be included in the mitigation.

10. On page 4-21, it is stated that proposed total parking provided will be sufficient to handle a 50% park expansion. The figures used in this analysis are not documented in the report. (The current expansion represents a proposed attendance increase of about 33%.)

11. On page 4-32, it is stated that a fully detailed traffic engineering study is necessary to prove the feasibility of the combination Class I/Class II bikeway facility. It is also stated that the project proponent will not assume construction costs or assurance of support for implementation of this improvement. A recommended design of the bicycle facility should be incorporated in the EIR. It is further recommended that the project proponent be required to construct the needed bicycle facility.

12. Throughout the report, it is necessary that some of the information be presented in graphical or tabular form. This will make the information clearer to the reader, and will greatly facilitate future review. The information which should be shown is as follows:

- a. Existing plus project and future plus project ADT and peak hour flows.
- b. Traffic generation factors and projected traffic.
- c. Parking demand factors, required parking, and parking provided.

The overlay recently submitted by Sea World to the City Planning Department shows Sea World Way at 52 feet in width. While an acceleration lane is not shown, Sea World wrote a letter to the Planning Department January 30, stating: "We show these elements (traffic circulation improvements), as well as possible on our Master Plan overlay. Our commitment to satisfy City Traffic Engineering on this design should preclude showing items of construction details at this time." (This letter is provided in the Findings.)

8. Sea World has agreed to relocate Sea World Way 500 feet to the east as shown on the overlay on file with the Planning Department. While the overlay shows no implementation schedule, Sea World has committed to implement the improvement when the annual attendance reaches 3,600,000 per year, evidenced in Sea World's 1/30/85 letter provided in the Findings. In the same letter, Sea World also agreed to signalization of the intersection.

9. A commitment to improve Sea World Drive to half-width of a 6-lane primary arterial standard, when the annual attendance reaches 4 million, was made both on the overlay on file with the Planning Department and in Sea World's January 30 letter.

10. The Master Plan proposes to increase the theme park area by 50 percent. The attendance increase associated with this expansion would be only 33 percent, thereby requiring only a 33 percent increase in parking spaces. The number of required spaces associated with a 33 percent increase in attendance (7085) would be exceeded by 375 spaces, for a total of 7460 parking spaces to be provided by Sea World.

11. A recommended design of the bicycle facility was incorporated into the EIR (see page 4-32). Further development of the design is outside of the scope of the EIR. Sea World will dedicate an easement but will not construct the facility. This significant impact remains only partially mitigated.

12. The revised Traffic Study incorporates additional graphics and tables.

a. The Appendix contains worksheets showing existing plus project-generated ADT. Figure 12 provides a schematic representation of the 4:30 to 5:30 p.m. peak-hour traffic flows with the project. Future plus project-generated traffic was not presented in graphic or tabular form since the information has been revised and described clearly on page 34 of the revised Traffic Study.

b. Traffic generation factors and projected traffic are provided in Table 2.

c. Parking demand factors are provided on the first page of the Appendix in the revised Traffic Study. Table 2 shows the increased traffic associated with the different components of the Master Plan. Parking requirements and proposed parking is described in detail in the issue which addresses parking. No impacts were identified with the issue and no mitigation is necessary.

Page 3

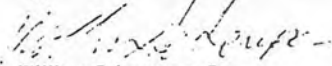
Sea World Master Development Plan, E.Q.D. #84-0160

- 3
13. On page 4-3, it is estimated that the 1983 ADT from Sea World was 22,500. It appears that the proper figure is 11,250.
- 14
14. During review of Appendix A, a number of inconsistencies in the calculations were found. In general they included a difference in volumes shown on pages A-2 through A-10 and those used in the ICU analysis.

15

Please note that these comments were originally contained in either our October 30, 1984 memo commenting on the preliminary DEIR or our November 28, 1984 memo commenting on the revised Traffic Study. Our suggested mitigation phasing attached to our November 28, 1984 memo, and included in the conclusions for this EIR, is still appropriate for use.

If you have any questions on our comments, please contact Walt Huffman at x7882.


William Schempers, Jr.

WS:JL:tg

cc: Sue Williams
Scott Montz
Allen Holden, Jr.
Tom Elder
Jim McLaughlin
Westec
Jim Federhart
Property Department
Park & Recreation

13. This correction has been made on page 14 in the revised Traffic Study, and carried through to the calculations.
14. An entirely new Appendix has been added to the revised Traffic Study. These changes are reflected throughout the study, including the traffic turning movement counts shown on Figures 2 through 12.
15. The basis for revising the Traffic Study were the comments contained in the Transportation and Traffic Engineering Department's letters of October 30, 1984 and November 28, 1984.

Memorandum

To : State Clearinghouse
Office of Planning and Research
Attention Mark Boehme

Date: January 14, 1985

File : 11-50-005

RECEIVED
JAN 18 1985
OFFICE OF PLANNING
& RESEARCH

From : DEPARTMENT OF TRANSPORTATION
District 11

Subject : Sea World Master Plan, SCH#84C30708

Caltrans District 11 comment on the draft EIR is as follows:

16. Projected average summer weekday peak-hour traffic impacts are analyzed on page 4-14. Caltrans District 11, however, is also concerned with possible summer weekend traffic impacts, especially peak-hour traffic impacts to the interchanges for Interstate 5 at Sea World Drive and Interstate 8 at West Mission Bay Drive.

Our contact person for traffic information is Kurth Barnes, District Project Studies Engineer, (619)237-6952.

for James T. Cheshire, Chief
Environmental Planning Branch

MO:jk

16. A separate analysis of weekend traffic was not completed. It is acknowledged that Sea World will contribute to weekend congestion in the area. However, weekend interchange peak hour volumes are significantly less than weekday peak hour counts (Caltrans data). Therefore, the EIR evaluates the "worst case" condition. The traffic mitigation measures discussed in the EIR, coupled with less distinct weekend peak conditions, would be effective at reducing potential impacts.

Memorandum

To : 1. Projects Coordinator
Resources Agency

Date : January 15, 1985

2. City of San Diego
Planning Department
Environmental Quality Division
202 "C" Street, M.S. 5A
San Diego, CA 92101

From : Department of Fish and Game

Subject: Sea World Master Plan, San Diego County - SCH 84030708

We have reviewed the EIR for Sea World Master Plan, a Master Plan for the Sea World Aquatic Theme Park, on 149 acres of land and 16.8 acres of water leased within a City park. We submit the following comments for your consideration:

17. 1. Areas within the new lease area east of the main entrance and areas adjacent to Sea World support salt marsh vegetation. We classify these areas as seasonally inundated wetlands. The document states that development of the new lease area will eliminate the small extent of coastal salt marsh present onsite. The document further states that the marsh areas onsite do not warrant preservation because of adjacent development; because they are disjointed from one another; and because they are expected to support limited wildlife use (Page 4-45). As we stated in our letter of February 15, 1983 to the City regarding the Mission Bay South Shores Master Plan Draft EIR (SCH 82012705), we consider seasonally inundated wetland areas to be "environmentally sensitive" pursuant to Coastal Act Section 30107.5. Wetlands are protected from fill deposition by the Coastal Act except under extenuating circumstances. If the Coastal Commission determines that fill deposition within these seasonally inundated wetlands is appropriate, then it appears that there are several areas in Mission Bay in which to compensate for this loss.
18. 2. The proposed additional docks would eliminate approximately 6,250 square feet (0.14 acres) of an existing eelgrass bed. The applicant has recommended (Page 3, Biological Resources) that prior to approval of the marina expansion a revised dock design as depicted on EIR Figure 4-8 shall be incorporated into the marina expansion plan. This revised dock design will significantly reduce impacts to the existing eelgrass bed. However, there will still remain a loss of eelgrass. This loss could be reduced further or eliminated by deletion of the southwestern dock. Therefore, we recommend that the proposed marina incorporate the dock design depicted on EIR Figure 4-8, and that the southwestern dock (depicted on Figure 4-8) be deleted from the project design.
17. The City of San Diego Planning Department is in the process of developing a comprehensive mitigation plan for the entire Mission Bay area. Should the City consider this small extent of coastal salt marsh a biological resource, then the City will include the area in the comprehensive mitigation plan.
18. The recommended dock design shown in Figure 4-8 is subject to further review by the San Diego Planning Department and the regulatory agencies having jurisdictional authority. While this proposed design mitigates the significant impact to eelgrass, deletion of the single southwestern-most dock (extending westward) would provide additional mitigation which the agencies may require during future review of the design.

Thank you for the opportunity to review and comment on this project. If you have any questions, please contact Fred A. Northley Jr., Regional Manager of Region 5; at 245 W. Broadway, Suite 350, Long Beach, CA 90802; telephone number (213) 590-5113.

Pete Dontrillo
for Jack C. Parnell
Director

①

W.C. Sullivan
Director



United States Department of the Interior

FISH AND WILDLIFE SERVICE

LAGUNA NIGUEL FIELD OFFICE
24000 Avila Road
Laguna Niguel, California 92677

15 January 1985

Environmental Quality Division
City of San Diego
202 "C" Street
San Diego, CA 92101

Re: DEIR 84-160, Sea World Master Plan

Dear Sir:

19 The Fish and Wildlife Service has reviewed the referenced document provided under your transmittal letter dated 4 December 1984. The document adequately addresses issues of concern to us and we have no comment. In addition, we support the City's recommendation that the proposed dock configuration be revised as indicated on Figure 4-8, page 4-39, in order to avoid significant impacts to the existing eelgrass beds. Feel free to contact Mr. Jack Panther or me at (714) 643-4270, should the need arise.

Sincerely yours,

Nancy M. Kaufman
Nancy M. Kaufman
Field Supervisor

cc: CDFG, MRR, Long Beach
NMFS, Terminal Island
CE, Reg Br, Los Angeles

19. Comment acknowledged, no response necessary. The proposed recommendation will be implemented as indicated in Figure 4-8, page 4-40, of the EIR.

Memorandum

- (1) Dr. Gordon F. Snow
The Resources
- (2) The City of San Diego
202 "C" Street
San Diego, California 92101

Date : JAN 07 1985

Subject: SCH #84030708: Sea
World Master Plan

From : Department of Boating and Waterways

The Department of Boating and Waterways (Cal Boating) has reviewed subject Draft Environmental Impact Report (DEIR) for Sea World Master Plan which includes a 300-room hotel, addition of 200 berths to an existing marina, and expansion of existing Sea World Park. We would like to offer the following comment:

20

If boating regulations are proposed (see page 2-12 of DEIR top portion), they must be prepared and submitted to our Department for review at least 30 days before enactment thereof, in accordance with Sections 660 and 662 of the Harbors and Navigation Code (copy enclosed).

- 20. Regulations associated with the expansion of the "No Wake" zone near the mouth of the cove will be submitted to the Department of Boating and Waterways for their review, when these regulations are established.

Thank you for the opportunity to review this document.

W.H.I.
WILLIAM H. IVERS
Director

Enclosure

HARBORS AND NAVIGATION CODE

Sections 660 and 662.

660. Application of chapter to all waters; local boating regulations. (a) The provisions of this chapter, and of other applicable laws of this state, shall govern the use, equipment, and all other matters relating thereto whenever any boat or vessel shall be used on the waters of this state, or when any activity regulated by this chapter shall take place thereon. Nothing in this chapter shall be construed to prevent the adoption of any ordinance, law, regulation or rule relating to vessels by any entity otherwise authorized by law to adopt such measures, including but not limited to any city, county, city and county, port authority, district or state agency; provided, however, that such measures relating to boats or vessels shall pertain only to time-of-day restrictions, speed zones, special-use areas, and sanitation and pollution control, the provisions of which are not in conflict with the provisions of this chapter or the regulations adopted by the department. Such measures shall be submitted to the department prior to adoption and at least 30 days prior to the effective date thereof.

(b) The department is authorized to make special rules and regulations with reference to the use of any boats or vessels on any body of water within the territorial limits of two or more cities, counties, cities and counties or other political subdivisions where no special rules or regulations exist or when required to establish uniformity in such special rules or regulations as the department may determine (1) are not uniform under local laws and (2) as to which uniformity is practicable and necessary.

(c) Any entity, including but not limited to any city, county, city and county, port authority, district or state agency, otherwise authorized by law to adopt measures governing the use and equipment, and matters relating thereto, of boats or vessels, may adopt emergency rules and regulations which are not in conflict with the general laws of the state relating to boats and vessels using any waters within the jurisdiction of the entity if such rules and regulations are required to insure the safety of persons and property, because of disaster or other public calamity. Such emergency rules and regulations shall become effective immediately upon adoption and may remain in effect for not to exceed 60 days thereafter. Upon submission of such emergency rules and regulations to the department, the department may authorize the entity to make the emergency rules and regulations effective for such period of time greater than 60 days as is necessary in view of the disaster or circumstances.

662. Filing of local boating regulations. A copy of the ordinances or local laws adopted pursuant to this chapter, and of any amendments thereto, shall be filed in the office of the department.



Metropolitan Transit Development Board

6201 C Street, Suite 400, San Diego, California 92101, 619-594-1400 (619) 231-1400

January 10, 1985

G-E 4

Ms. Ellen Mosley
Environmental Quality Division
City of San Diego
202 C Street
San Diego, CA 92101

Dear Ms. Mosley:

21 SUBJECT: SEA WORLD MASTER PLAN - COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) (EQD NO. 84-0161)

Thank you for the opportunity to comment on the above-referenced DEIR.

The DEIR states that the proposed project would have significant unmitigated adverse traffic/circulation impacts. Transit improvements can help mitigate such impacts. The report states that Sea World will work with San Diego Transit staff to provide barrier-free transit access. It also states that Sea World management will cooperate to support the future implementation of a shuttle tramway system. These are positive steps toward implementation of transit mitigations. However, the Master Plan contains no commitment to specific transit improvements which could be phased with project construction to help mitigate traffic impacts.

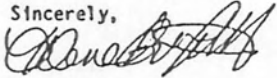
We suggest that consideration be given to including specific transit improvements in the Master Plan, and as part of the lease to be executed between Sea World and the City. Such improvements could include provision by Sea World of bus shelters, concrete pads, and other amenities at all bus stops which serve Sea World (as well as barrier-free design referred to in the DEIR).

Another transit improvement could be the irrevocable dedication by Sea World of parking spaces near the Sea World Drive/Sea World Way bus stop for Park-and-Ride (PNR) use by patrons of the various transit routes in the area. Primary use of the PNR lot would be for San Diego Transit's Sun Runner route, this would encourage use of transit to reach Mission Bay Park and Mission Bay destinations. The PNR lot could also be used by patrons of San Diego Transit Routes 9 and 80, which connect the Mission Bay area with other regional destinations. Use of such a facility could help contribute to a lessening of traffic congestion in the vicinity of Sea World.

21. As described in the revised summary, Sea World has agreed to mitigation of all traffic circulation impacts, outside of bicycle circulation. While this commitment precludes the need for further transit improvements, Sea World will continue its participation in the transit system and provide barrier-free designated bus stop shelters, concrete pads, and other bus stop amenities.

Please feel free to contact me if you have any questions concerning these comments.

Sincerely,



Helene B. Kornblatt
Senior Environmental/Transportation Planner

HBK:dkd

cc: Tim Price, San Diego Transit

CITY of SAN DIEGO
MEMORANDUM


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ENVIRONMENTAL QUALITY
DIVISION

FILE NO.:

DATE : December 18, 1984

TO : Environmental Quality Division Deputy Director


FROM : Park Development and Open Space Division Dep. Director via  Park & Recreation Director

SUBJECT: Sea World Master Plan, EIR No. 84-0160

The mitigation paragraph on page 4-66 of the EIR states that the City can mitigate the impact created by Sea World's deletion of the 130 dry boat storage spaces by amending the lease with the San Diego Mission Bay Boat and Ski Club. The Club would then offer dry boat storage to the public as well as its members. That proposal is possible but is not likely to occur.

22. If the use of a portion of the South Shores area was designated for dry boat storage, then the recipient of a lease for that commercial operation would be selected by the request for proposal process. The use of the South Shores Area for commercial dry boat storage was proposed and rejected during the development of the South Shores Master Plan.

22. The EIR acknowledges on page S-5 that no feasible mitigation is available for the loss of dry boat storage spaces. Although potential mitigations were discussed in the EIR, they were included for informational purposes and are not regarded as measures available to Sea World.


Arthur Smith

EF:lj1

**SEA WORLD MASTER PLAN
ENVIRONMENTAL IMPACT REPORT
EQD No. 84-0160
SCH #84030708**

Prepared for:

Sea World, Inc.
1720 South Shores Road
San Diego, California 92109

Prepared by:

WESTEC Services, Inc.
3211 Fifth Avenue
San Diego, California 92103
Project No. 35021001

Draft EIR - November 1984
Final EIR - February 1985

SEA WORLD MASTER PLAN
ENVIRONMENTAL IMPACT REPORT
BID No. 84-0180
SCH #84030702

Prepared for:

Sea World, Inc.
1730 South Sports Road
San Diego, California 92108

Prepared by:

W. S. T. E. C. Services, Inc.
3211 Fifth Avenue
San Diego, California 92103
Project No. 84021001

Draft EIR - November 1984
Final EIR - February 1985

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APPENDIX

<u>Page</u>	<u>Title</u>	<u>Letter</u>
A-1	Traffic	A

I. INTRODUCTION

Sea World, Inc. is proposing a Master Development Plan for approval by the City Council of San Diego. There are four main components of the project: expansion of the exhibit, marina and parking areas and construction of a hotel with approximately 300 rooms. City Council approval, the discretionary action necessary for project adoption, is required as a condition of a 32-acre, 50-year ground and water lease negotiated by Sea World and the City Manager. Also necessary for project implementation is a Coastal Development Permit, issued by the California Coastal Commission, and an Army Corps of Engineers Section 10 Permit.

A hotel once proposed to be located on the current hotel site, the Red Lion Inn, has been the subject of previous environmental review (EQD No. 81-01-08). A Draft Conditional Negative Declaration was prepared (April 30, 1981) based on incorporating mitigation measures for traffic, air quality and coastal access, however, Sea World withdrew the project application prior to finalizing the Conditional Negative Declaration. The currently proposed hotel would be a resubmittal of the original concept with minor upgrading; this environmental analysis is independent of any previous environmental review of the Red Lion Inn.

This Environmental Impact Report has been prepared for the City Council action on the Master Plan, in accordance with the guidelines adopted by the City of San Diego Environmental Quality Division (EQD) and complies with all criteria, standards and procedures of the California Environmental Quality Act (PRC 21000 et seq.) and the State CEQA Guidelines (Administrative Code 15000 et seq.). This EIR is focused on issues which were determined by the City to be potentially significant based on an Initial Study. All other impacts were found not to be significant, and no further assessment of those impacts is required. A Notice of Preparation was circulated for this project (February 28, 1984), and nine responses were received. Issues raised in these letters have been addressed in the EIR. The Initial Study, technical data and other supporting materials discussed in this report are on file in the Environmental Quality Division (EQD No. 84-0160).

See World, Inc. is processing a Master Development Plan for approval by the City Council of San Diego. There are four main components of the project: expansion of the exhibit, marina and parking areas and construction of a hotel with approximately 300 rooms. City Council approval, the preliminary action necessary for project adoption, is required as a condition of a 22-acre, 50-year ground and water lease negotiated by See World and the City Manager. Also necessary for project implementation is a Coastal Development Permit, issued by the California Coastal Commission, and an Army Corps of Engineers Section 10 Permit.

A hotel once proposed to be located on the current hotel site, the Red Lion Inn, has been the subject of previous environmental review (EIR No. 81-01-08). A Draft Conditional Negative Declaration was prepared (April 28, 1981) based on incorporating mitigation measures for traffic, air quality and coastal access, however, See World withdrew the project application prior to finalizing the Conditional Negative Declaration. The currently proposed hotel would be a revision of the original concept with minor updating. This environmental analysis is independent of any previous environmental review of the Red Lion Inn.

This Environmental Impact Report has been prepared for the City Council action on the Master Plan, in accordance with the guidelines adopted by the City of San Diego Environmental Quality Division (EQD) and complies with all criteria, standards and procedures of the California Environmental Quality Act (CEQA 21000 et seq.) and the State CEQA Guidelines (Administrative Code 15000 et seq.). The EIR is focused on issues which were determined by the City to be potentially significant based on an initial study. All other impacts were found not to be significant, and no further assessment of those impacts is required. A Notice of Preparation was circulated for this project (February 28, 1984), and nine responses were received. Issues raised in these letters have been addressed in the EIR. The initial study, technical data and other supporting materials discussed in this report are on file in the Environmental Quality Division (EQD).

No. 84-0160X

II. PROJECT DESCRIPTION

A. LOCATION

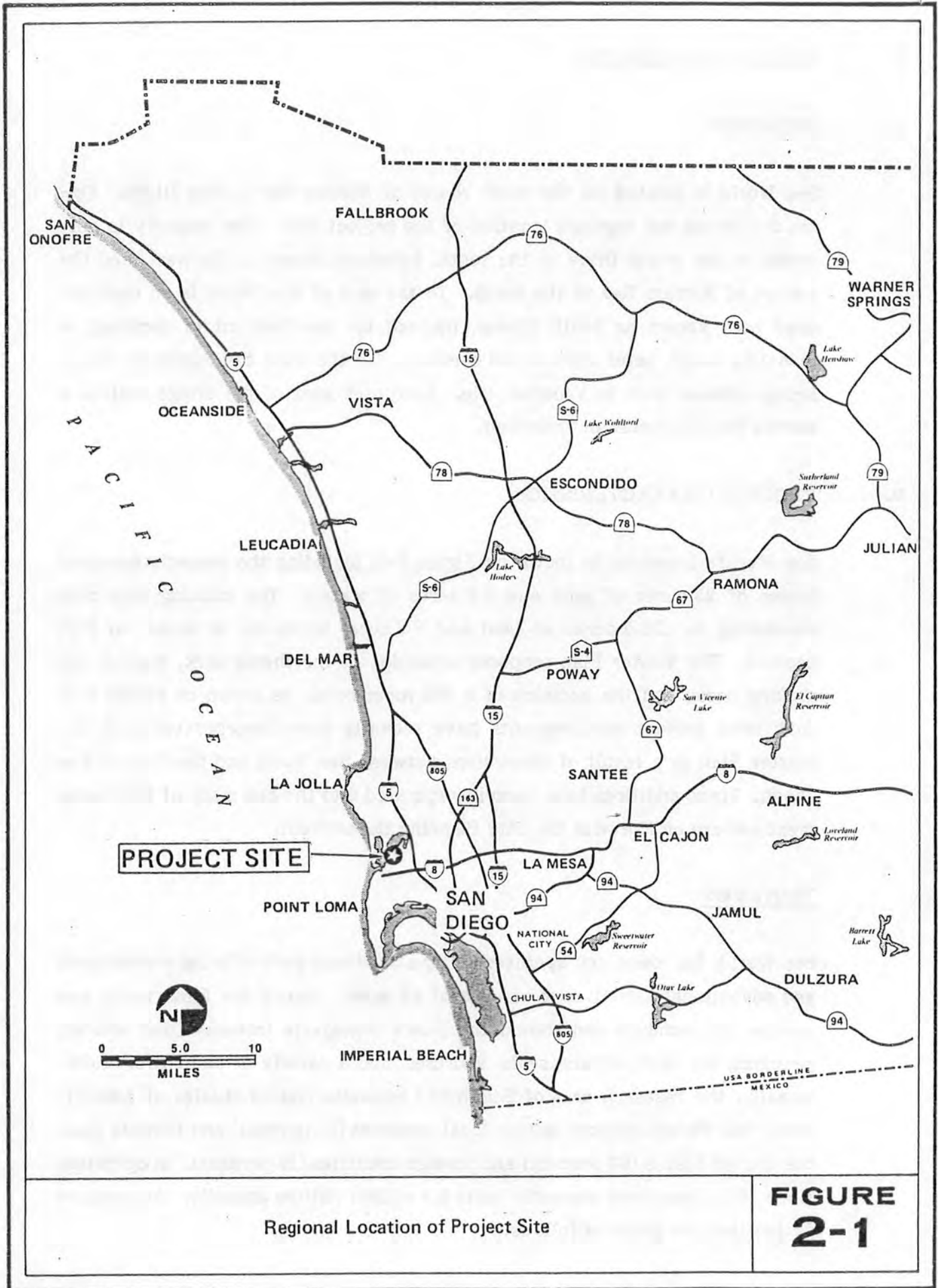
Sea World is located on the south shores of Mission Bay in San Diego. Figure 2-1 shows the regional location of the project site. The property is bordered by Sea World Drive to the south, Ingraham Street to the west, and the waters of Mission Bay to the north. To the east of Sea World is an undeveloped area known as South Shores, planned for development of parkland, a launching basin, hotel and related services. To the west the Ingraham Street Bridge crosses over to Vacation Isle. Land uses west of the bridge include a marina facility, hotel and parkland.

B. PROJECT CHARACTERISTICS

Sea World's leasehold is shown on Figure 2-2, including the recently acquired leases of 25 acres of land and 7.2 acres of water. The existing site plan amounting to 123.5 acres of land and 9.8 acres of water, is shown on Figure 2-3. The Master Plan proposes expansion of the theme park, marina and parking areas and the addition of a 300 room hotel, as shown on Figure 2-4. Additional project developments have recently been incorporated into the Master Plan as a result of discussions between Sea World and the City of San Diego. These additions have been incorporated into the Summary of this document and are on file with the City Planning Department.

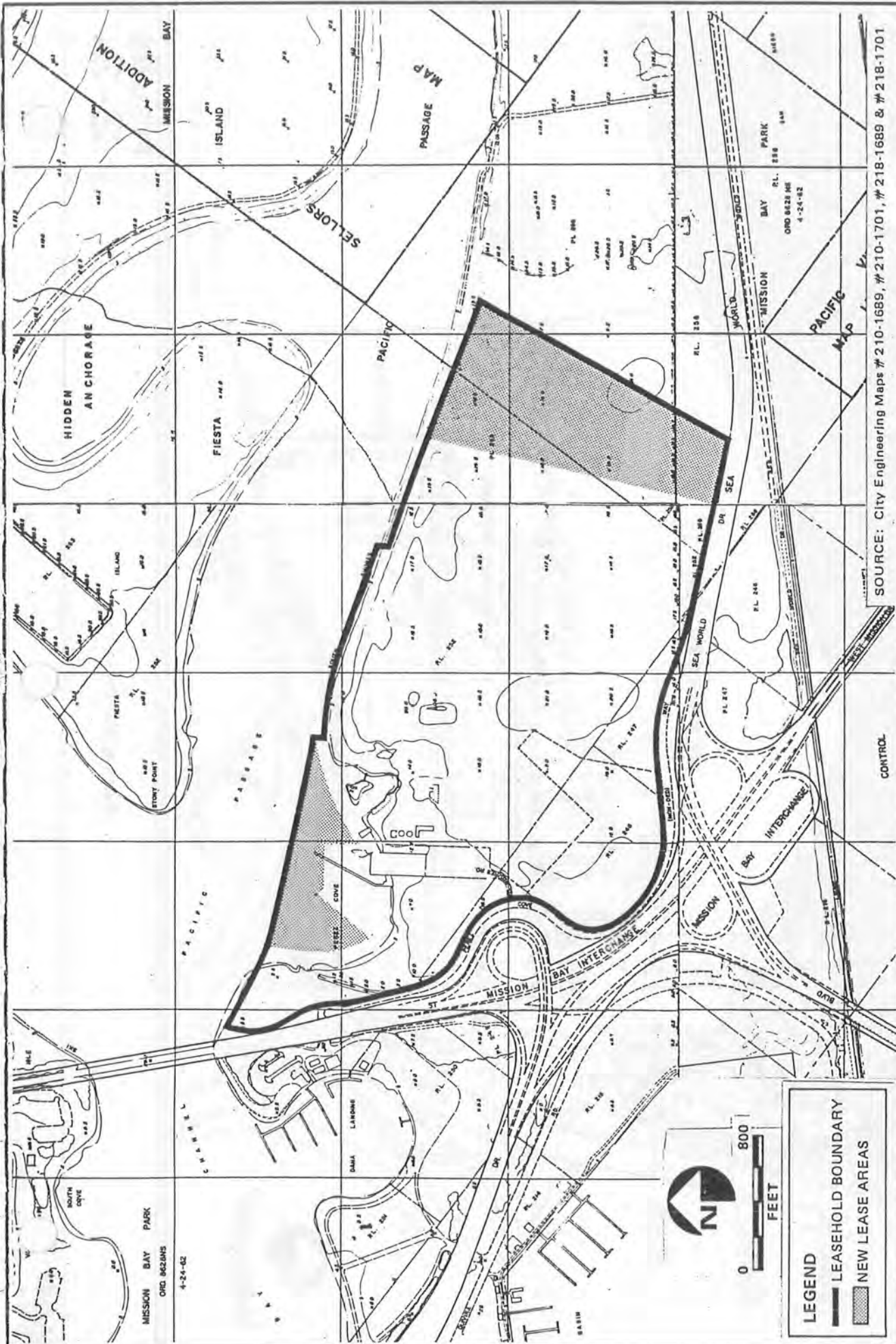
Theme Park

Sea World, Inc. owns and operates an aquatic theme park offering recreational and educational activities to visitors of all ages. Among the fresh water and marine life exhibits and shows, the park's menagerie includes Orca whales, penguins, sea birds, otters, seals, walruses, and a variety of plant life. Additionally, the research arm of Sea World conducts marine studies of aquaculture. Sea World's visitors include local residents (25 percent) and tourists from the United States (60 percent) and foreign countries (15 percent). In operation since 1963, Sea World presently hosts 2.9 million visitors annually. Attendance projections are listed as follows:



Regional Location of Project Site

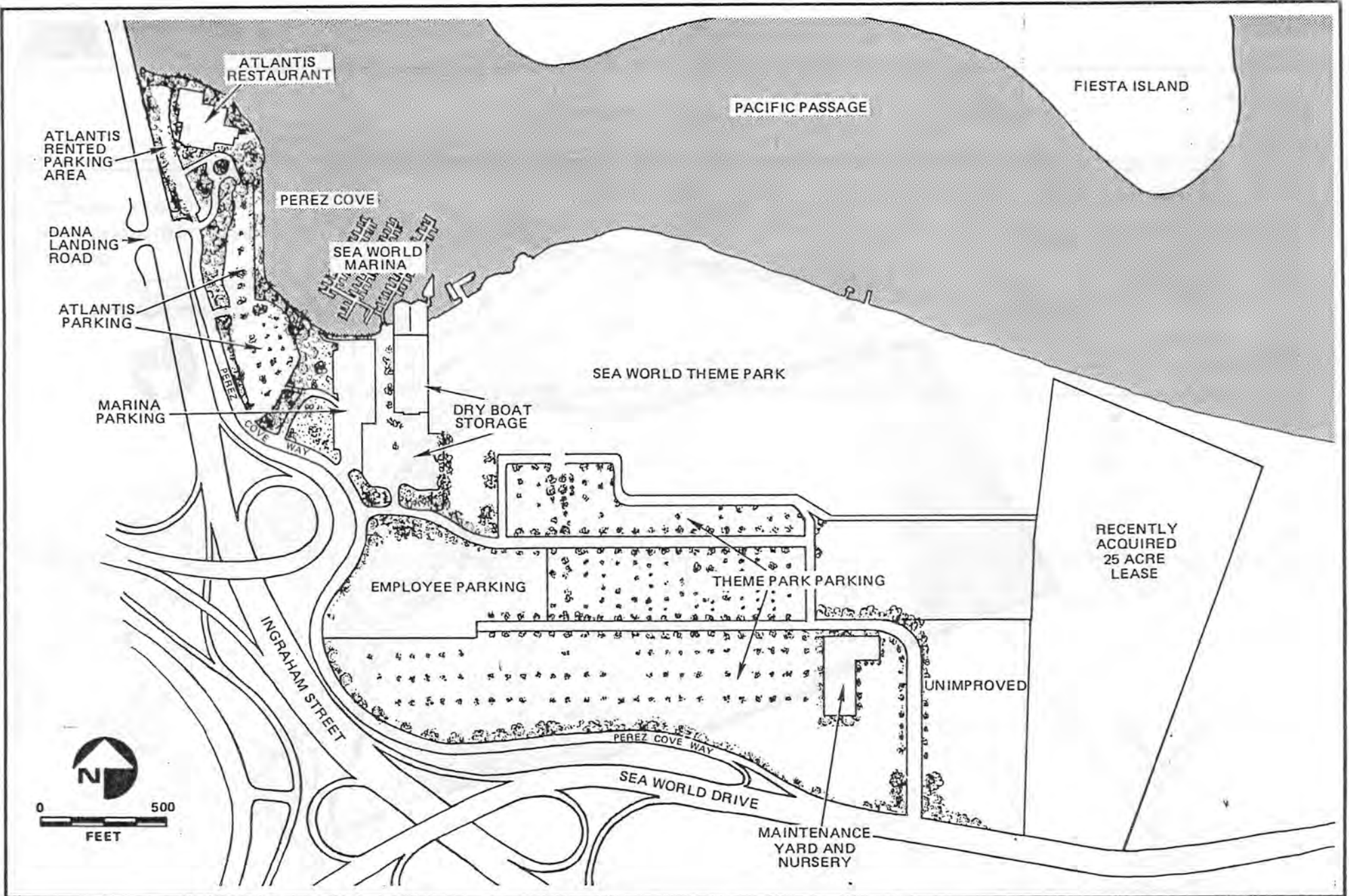
**FIGURE
2-1**



SOURCE: City Engineering Maps # 210-1689, # 210-1701, # 218-1689 & # 218-1701

FIGURE 2-2

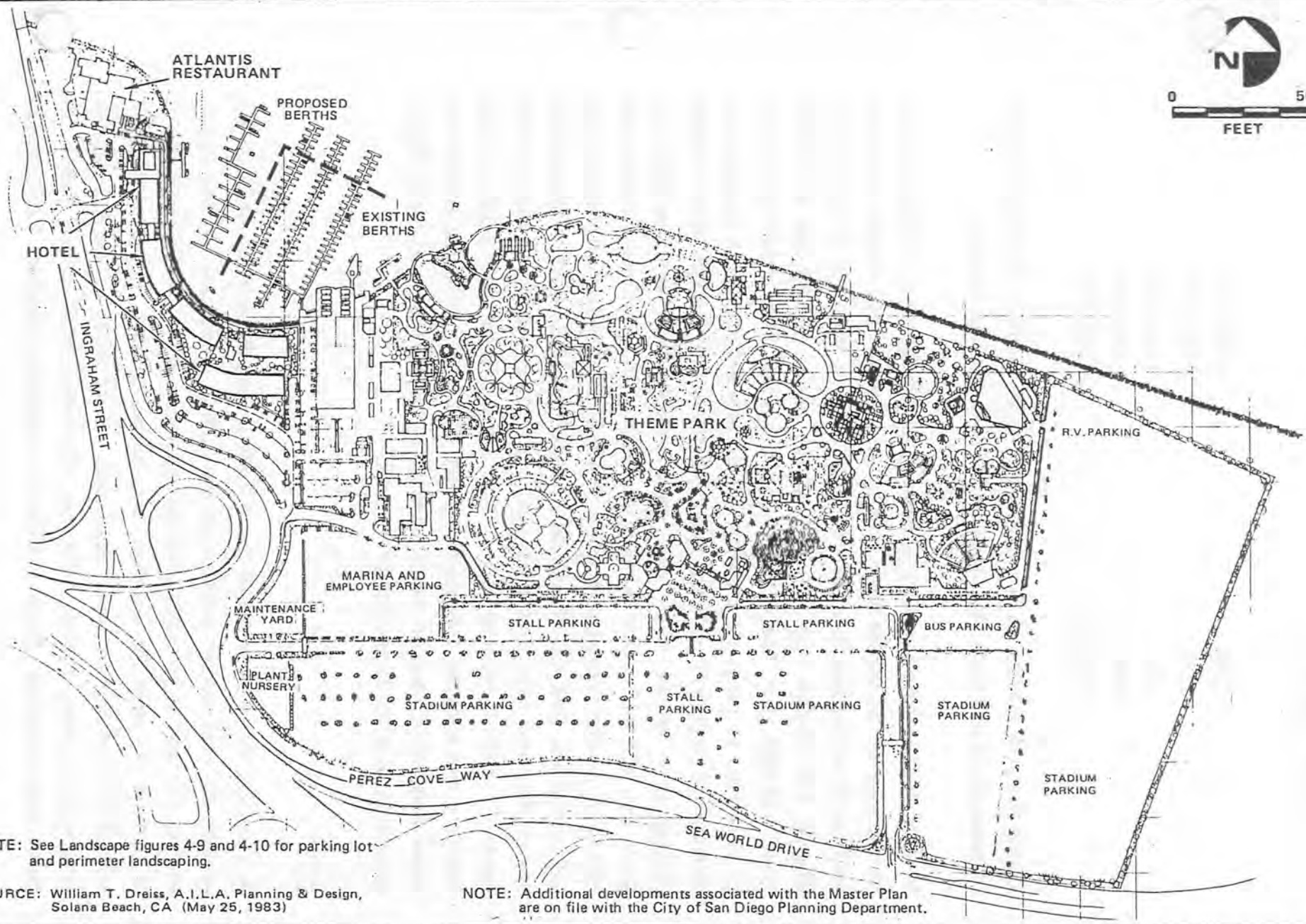
Project Site Location



2-4

Existing Site Plan

FIGURE 2-3



2-5

NOTE: See Landscape figures 4-9 and 4-10 for parking lot and perimeter landscaping.

SOURCE: William T. Dreiss, A.I.L.A. Planning & Design, Solana Beach, CA (May 25, 1983)

NOTE: Additional developments associated with the Master Plan are on file with the City of San Diego Planning Department.

Proposed Master Plan

FIGURE 2-4

1984	3,000,000
1987	3,333,000
1990	3,467,000
1995	3,605,000
Ultimate	4,000,000

During the peak months of June, July and August, monthly attendance figures increase 10 percent from off season months over a yearly average.

With its new facilities Sea World expects to ultimately serve 4 million visitors, an increase of 1.1 million over present attendance. Sea World's goal is to continue to strengthen its appeal to area residents, including those from Los Angeles and Orange Counties, by providing repeat visitors new and varied exhibits at each visit. Sea World's exhibit area would be increased by 22 acres, or 51 percent of the present exhibit area. Table 2-1 provides a breakdown of existing and proposed land uses. The expansion would be added to the existing parking area to the south and would include those facilities listed on Table 2-2. The main entrance would be relocated from the western side to the center of the south-facing park front. A new Shamu Stadium with capacity for 5000 seats and five million gallons of water would be built. The existing Shamu Stadium, with 3000 seats and 1.25 million gallons of water, would become a Multi-Species Stadium. Some of the larger new exhibits would include a new Nautilus Showplace, a water fowl Aviary, a Walrus Stadium and Water Playground. Support facilities would be expanded to meet the increased requirements of the larger size of the park.

Hotel

A 300-room hotel is proposed to be built around Perez Cove between the existing dry boat storage building and the Atlantis Restaurant. About 50 percent of the land is presently used for restaurant parking, while about 25 and 10 percent are used for overflow and marina parking, respectively. The remaining 15 percent is vacant lawn area. Additionally, 4.7 acres of marina land would be converted to hotel use. The hotel would closely follow the Perez Cove shoreline. Figure 2-4 shows a conceptual drawing. Hotel parking

Table 2-1

SEA WORLD LAND USE BREAKDOWNS BY ACREAGE

I. THEME PARK	<u>Existing</u>	<u>Proposed</u>	<u>Change</u>
1. <u>Developed Theme Park</u>	43.1	65.1	+22
Landscaping and Open Space	26.1	37.1	+11
Building Coverage	9	14	+5
Pathways	8	14	+6
2. <u>Parking</u> (Includes setbacks and roads)	61	62.5	+1.5
Visitor Parking	50	54.5	+4.5
Employee Parking	4	5	+1
Flexible Use Parking	7	3	-4
Number of Vehicle Parking Spaces	6,500	8,000	+1,500
3. <u>Parking Lot Landscaping</u>	3	4	+1
4. <u>Storage Yard/Nursery</u>	1	1.5	+0.5
5. <u>Water</u>	2.3	2.3	0
TOTAL LAND	108.1	133.1	+25
TOTAL WATER	2.3	2.3	0
II. MARINA			
1. <u>Water</u>	4.9	12.1	+7.2
Number of Boat Slips	200	400	+200
2. <u>Land</u>	8.7	4.0	-4.7
Landscaping and Open Space	2.75	.25	-2.5
Sea World Support and Co-Generation	2.5	2.3	-0.2
Parking	2	1	-1
Dry Boat Storage	1	0	-1
Hubbs/Sea World Research Institute	0.3	0.3	0
Marina Support Area	0.15	0.15	0
TOTAL LAND	8.7	4	-4.7
TOTAL WATER	4.9	12.1	+7.2

Table 2-1

SEA WORLD LAND USE BREAKDOWNS BY ACREAGE (Continued)

III.	HOTEL AND ATLANTIS RESTAURANT	<u>Existing</u>	<u>Proposed</u>	<u>Change</u>
1.	<u>Hotel</u>	0	2.1	+2.1
2.	<u>Atlantis Restaurant</u>	0.6	0.6	0
3.	<u>Parking</u>	N/A	6	N/A
	Hotel			
	Number of Vehicle Parking Spaces	0	300	+300
	Atlantis Restaurant			
	Number of Vehicle Parking Spaces	524	233	-291
	Atlantis	262	N/A	N/A
	Bayside between Atlantis and			
	Marina	147	N/A	N/A
	Rental Valet Parking Area	115	115	0
4.	<u>Landscaping for Hotel and Atlantis Restaurant</u>	N/A	2.7	N/A
5.	<u>Water</u>	2.6	2.6	0
	TOTAL LAND	6.7	11.4	+4.7
	TOTAL WATER	2.6	2.6	0
IV.	TOTAL LAND	123.5	148.5	+25
	TOTAL WATER	9.8	17	+7.2

N/A = Not Available.

Table 2-2

PROPOSED FACILITIES AND PHASING PLANS
SEA WORLD MARINE PARK

Phase 1

Main Entrance
Preview Center
Support Facility Structures
Gift Shops
Specialty Foods Restaurant
Exit Plaza
Guest Services Structure
Restaurant/Lounge

Phase 2

Shamu Stadium
Support Facility Structures
Snack Kiosks
Restrooms
Landscape Nursery
Filter Plant

Phase 3

New Nautilus Showpiece
Aviary
Support Facility Structures
Gift Shops
Snack Kiosks
Small Animal Nursery
Marine Aquarium
Water Playground
Education Theater
Secondary Entrance
Restaurant and Catering Facility
Marine Exhibit
Walrus Stadium
Polar Exhibit

would be located between the hotel and Perez Cove Way, in addition to some tentatively planned underground parking, which has been included in the parking ratio calculations. Preliminary designs indicate 6 clustered buildings of up to 30 feet in height accompanied by a swimming pool and small coffee shop serving breakfasts. The Atlantis, owned and operated by Sea World, Inc., with seating capacity for 1150 people in restaurant and banquet facilities, would serve lunches and dinners for hotel guests. The hotel and restaurant would operate under the same management.

Sea World Marina

The marina at Perez Cove, owned and operated by Sea World, Inc., is open year-round, from 7 a.m. to 7 p.m. in the summer and from 8 a.m. to 5 p.m. in the winter. The busiest hours are 8 to 11 a.m. and 4 to 6 p.m. with the highest use during the summer season, from Memorial Day to Labor Day. Holidays such as Christmas, Easter, New Years and Thanksgiving are also very busy. On summer weekends approximately 40 of the boats berthed in wet slips are in use. "Use" refers to a person temporarily occupying the vessel, either in the slip or out on the Bay. The number of boats in use drops to 10 to 15 during the week. Although customers reside mainly in the San Diego area, approximately 25 to 30 percent of the boats stored at the marina are owned by residents of the Los Angeles area, northern California and Arizona. Most of these boats are power boats, since the low clearance of about 22 feet on the Ingraham Street Bridge limits the sailing area of taller-masted boats. The configuration of the berths consists of three long docks extending northeast toward the mouth of Perez Cove. They are adjoined at the southwest end by a shorter dock extending halfway to the west shore of the Cove. The two channels between the docks are designed to be approximately two times the length of the longest boat to allow room for maneuvering the boats. A fuel dock with seven pumps is located to the east of the docks.

The marina has wet slip capacity for 200 boats, with slip sizes of 24, 26, and 36 feet. Approximately 75 percent of the boats secured in the slips are under 30 feet in length. The marina can and does hold boats longer than 36 feet by berthing them at the ends of docks. Additionally, boats are allowed to extend

2 to 3 feet beyond the end of the slips except on the westerly-most dock, where there is no restriction. Winter occupancy at these slips ranges from 90 to 95 percent, while in the summer 100 percent occupancy results in a waiting list for slips. No commercial boats or live-aboard status are allowed.

Dry boat storage facilities are located on the southeast shore of Perez Cove inside of a warehouse-type building and on an uncovered parking lot. These facilities hold up to 130 boats and experience a minimum 90 percent occupancy rate. Between the dry storage and water a one and three-quarter ton crane launches boats and is open to the general public.

Marina facilities would be expanded under the proposed Master Plan. Water berths would be increased by 200 for a total of 400 berths. Each of the three docks would be lengthened by approximately 35 percent of its existing length. A fourth dock would be added to the west. The exact configuration of the slips has not yet been determined, but will approximate that shown on Figure 2-4. The channel between the proposed dock and the existing western-most dock would be two times the length of the largest boat moored in any of those slips. Overall the slips would accommodate larger boats than the existing marina slips. The size of the slips and their approximate distribution would be as follows:

<u>Length of Slip</u>	<u>Number of Slips</u>
30 feet	60
36 feet	60
42 feet	60
48 feet	20

The docks would be composed of concrete pilings with wood decking underlain by fiberglass floats. No dredging is needed for the additional berths. An additional separate dock is proposed to be located outside of the hotel lobby near the Atlantis Restaurant and would mainly serve restaurant guests. As with current operations, transient visitors could rent mooring space at the marina. With the extended docks, a larger "No Wake" zone would be needed at the mouth of the cove to prevent damage to marina boats. Sea World is thus

expected to request the Harbor Patrol to extend the 5 mph zone to accommodate these expanded facilities.

Covered dry boat storage space would be converted to offices and support facilities. Uncovered dry boat storage area would be converted to parking lots. This would involve the removal of 115 boats currently stored there (storage capacity totals 130 spaces, 15 spaces are currently vacant). Within the existing dry boat storage building, toilet, shower, locker and lounge facilities serving marina guests would be expanded to meet the increased number of marina customers. The launching crane would also be removed, due to its limited capacity for launching boats, and decreasing demand. No changes are proposed for the fuel dock.

Parking

Parking presently exists for the aquatic park, marina and restaurant. The areas allocated for each facility are indicated on Table 2-1, and the location of all parking is shown on Figure 2-4. East of the park, adjacent to the exhibit area, 25 acres of vacant undeveloped land extend from Sea World Drive almost to the bay. Under the proposed Master Plan, this 25-acre parcel would be covered with decomposed granite and utilized entirely for parking. The lot would be designated for stadium parking, a type of parking lot with no marked stalls usually managed by parking attendants. A total of 4040 cars and 60 large recreational vehicles could be parked here. To the south of the exhibits lies the bulk of the existing parking area, which would be reduced with the expansion of the theme park. The addition of 25 acres is offset by the loss of 23.5 acres of parking to the exhibit area, parking lot landscaping and the storage yard and nursery, resulting in an overall net gain of 1.5 acres of theme park parking. More parking spaces per acre are expected as a result of the redesign of parking stalls. A combination of stall and stadium parking would serve 860 and 3350 vehicles, respectively. Stall parking would be located closest to the main entrance. Bus parking would be provided for a total of 39 buses. The majority of the area would be paved with asphalt while approximately 30 percent would be covered with decomposed granite.

Parking for the remaining facilities would be shared. A total of 800 spaces would be divided between the marina (267 spaces), hotel (300 spaces) and Atlantis Restaurant (233 spaces). Due to space limitations, some of the parking area could be within the aquatic park's parking area and would receive valet service.

Phasing

Project construction is scheduled for three major phases. In Phase One the new main entrance and hotel would be built. Dry boat storage would be converted to office space and parking area. Two parking areas to the southeast of the exhibit area would also be constructed. The exhibit area would be expanded as outlined on Table 2-2. Phase One would begin immediately upon Master Plan approval. Phase Two would begin upon completion of the first phase; within approximately 5 years, and would include construction of the new Shamu Stadium, a larger filtration plant, and various exhibit area additions. The marina addition is also projected to be constructed in this phase. Phase Three extends from the completion of Phase Two until the end of the 50-year lease period and includes the remaining improvements.

Parking for the remaining facilities would be shared. A total of 800 spaces would be divided between the marina (287 spaces), hotel (300 spaces) and Atlantis Restaurant (213 spaces). Due to space limitations, some of the parking area could be within the aquatic park's parking area and would receive valet services.

Phasing

Project construction is scheduled for three major phases. In Phase One the new main entrance and hotel would be built. Dry boat storage would be converted to office space and parking area. Two parking areas to the southeast of the exhibit area would also be constructed. The exhibit area would be expanded as outlined on Table 2-2. Phase One would begin immediately upon Master Plan approval. Phase Two would begin upon completion of the first phase; within approximately 5 years, and would include construction of the new Steam Station, a larger filtration plant, and various exhibit area additions. The marina addition is also projected to be constructed in this phase. Phase Three extends from the completion of Phase Two until the end of the 50-year lease period and includes the remaining improvements.

III. ENVIRONMENTAL SETTING

Sea World is located on the south shores of Mission Bay in the western aspect of San Diego. The regional location of the project site is shown on Figure 2-1. The waters of Mission Bay border the northern side of Sea World. The northwestern waters adjacent to Sea World are known as Perez Cove, while directly to the north the Pacific Passage Channel separates the South Shores from Fiesta Island. Sea World Drive forms the southern boundary and Ingraham Street the western boundary of the site. To the northwest the Ingraham Street bridge crosses over to Vacation Isle. East of the project site is an undeveloped area known as South Shores where future parkland development will occur.

Mission Bay, owned by the City of San Diego, serves as a major recreational park and tourist attraction, serving more than 12 million visitors annually. An intricate system of islands, coves, channels and peninsulas comprises Mission Bay, encompassing approximately 1867 acres of land, 2228 acres of water and 130 acres of marsh. Developed parkland, beaches, water and commercial lease acres serve the majority of visitors to the bay, with the latter constituting approximately 20 percent of present land use. The Local Coastal Program Addendum of the Mission Bay Park Master Plan for Land and Water Use, not yet adopted by the California Coastal Commission, cites a maximum of 25 percent of land area which may be leased for private commercial/recreational activities (City Council Policy #700-8). Sea World's lease of 25 acres of land east of the theme park have already been incorporated into both the Mission Bay Master Plan and the draft South Shores Master Plan as a consistent use of Mission Bay Park land. The Master Plan states the following:

The plan recommends that new leases be concentrated in already developed areas whenever possible. The specific land use recommendation related to private leases is:

- Locate new leases only in those areas so designated by this Master Plan. Locate new leases in South Shores according to the South Shores Area Use Plan" (page 83). [page 32 Mission Bay Park Master Plan, L.C.P. Addendum]

The South Shores Area east of Sea World comprises 208 acres and, at this date, is planned for development of an 11-acre, 6-lane boat launching ramp; 86 acres of landscaping and parkland; the recently approved Ramada Hotel site (35 acres); expansion of the Sea World lease; aquatic-related commercially designated land; 1119 parking spaces; restroom; a California Least Tern nesting site and associated facilities. The primary goals of the South Shores Area Use Plan are to develop the area as a key access point for Mission Bay visitors and to promote public utilization of the area to help satisfy recreational demand (page 35, Mission Bay Park Master Plan, L.C.P. Addendum). The San Diego Mission Bay Boat and Ski Club may relocate to the South Shores Launching Basin at some future date.

The Ingraham Street Bridge, bordering the northwest corner of the site and adjacent to the Atlantis Restaurant, is scheduled for replacement in FY 1985. While a preliminary design has been adopted, some issues remain unsettled. One of these is the decision of land uses under the south side of the new bridge, since land will become accessible here. The outcome of this decision, expected in late 1984 or early 1985, will affect land uses in the site's northwest corner where Sea World is presently renting vehicle parking area on a monthly basis. For a full description of this issue please see the Traffic Analysis, Part A of Section IV.

IV. ENVIRONMENTAL ANALYSIS

A. TRAFFIC

Recent revisions associated with this issue have been incorporated into the Summary.

Existing Conditions

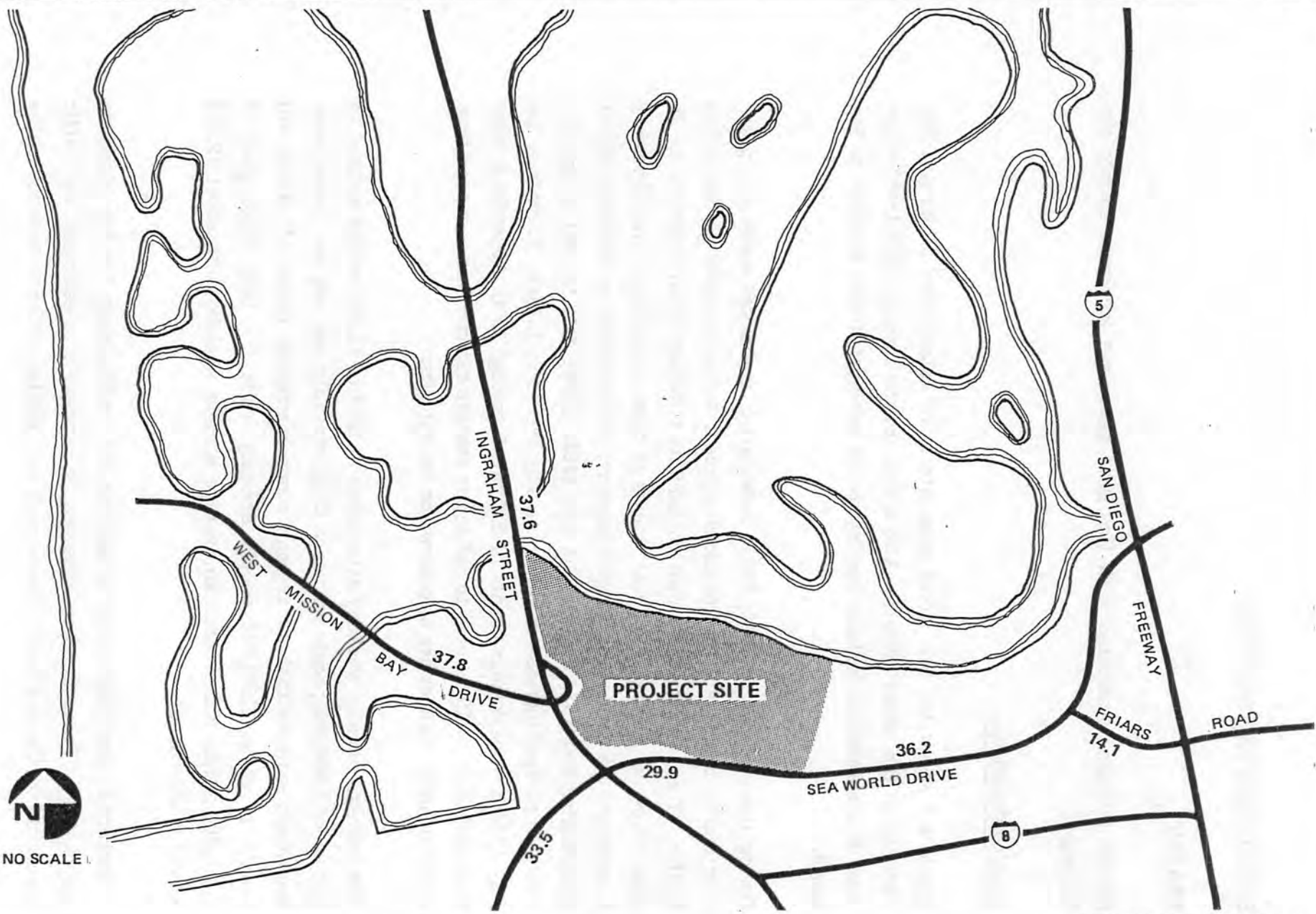
Figure 4-1 shows the Sea World park site in its relationship to Mission Bay Park and to the street system. Also shown are the summer 1983 traffic volumes in thousands of vehicles per day on the principal streets adjacent to Sea World.

During the week of April 30, 1984, Federhart & Associates made p.m. peak-hour traffic counts at nine locations adjacent to and relating to Sea World traffic. These counts are shown on Exhibits 2 through 10 in Appendix A. In order to derive summer p.m. peak counts at these locations, it was necessary to compare the City of San Diego's quarterly traffic counts on Ingraham Street made during May 1983 and again in July 1983. These data showed an approximate 10 percent increase in volume in July over those in May. Therefore, the May 1984 p.m. peak-hour counts of Exhibits 2 through 10 in Appendix A have been increased by 10 percent to reflect an average summer weekday condition. Those summer volumes are also shown on the exhibits.

The average summer weekday attendance in 1983 of 14,844 people equated to just under 3,000,000 people per year. Using these figures, and past experience, Sea World expects that an average summer weekday figure of 15,000 will equate to about 3,000,000 people annually while the long range goal of 4,000,000 people will produce an average summer weekday with about 19,790 people in attendance.

Federhart & Associates made a parking and traffic study for Sea World on July 4, 1980. From the data collected, it is possible to estimate the traffic generated by the Sea World theme park as it relates to the attendance at the

4-2



SOURCE: Federhart & Associates

Summer Weekday Traffic Volumes in Thousands – XX.X

FIGURE 4-1

park, as well as to determine the direction by which vehicles arrive and depart the park. Park attendance is recorded daily throughout the year. Using these data along with the average summer weekday attendance in 1983 (14,844 people per day), it is estimated that the average summer weekday traffic generated by the theme park is 11,250 vehicles per day (22,500 ADT) and the distribution is as shown in Figure 4-2.

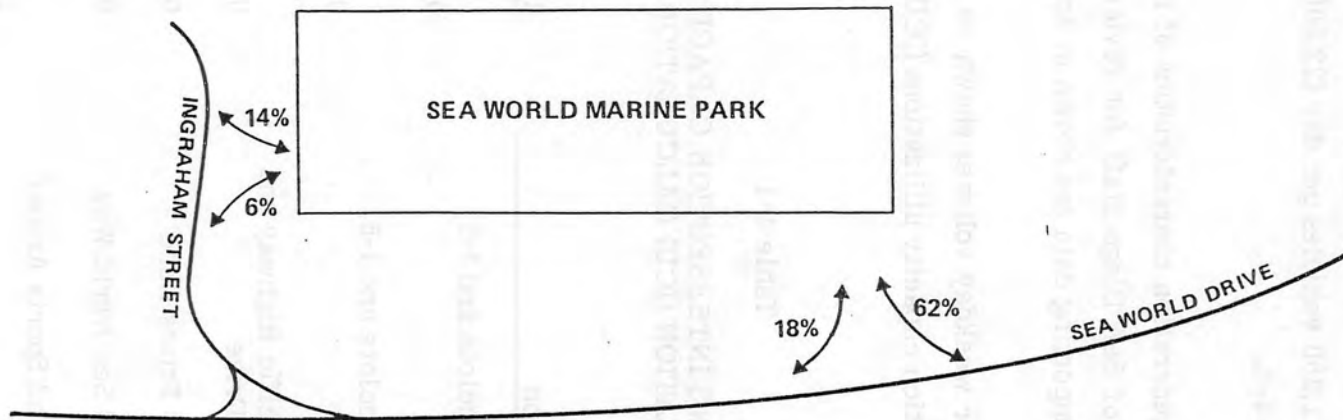
An analysis of the traffic generation characteristics of hotels and restaurants was presented to the City of San Diego staff for review and approval. The approved generation with supporting data are shown in Appendix A.

Using the estimated summer weekday volumes shown on Exhibits 2 through 10 in Appendix A, the intersection capacity utilizations (ICU) were calculated and are shown in Table 4-1.

Table 4-1
EXISTING INTERSECTION CAPACITY
UTILIZATION (ICU) CALCULATIONS

Intersection	ICU	Level of Service*
1. Sea World Drive/Tecolote and I-5 (east side)	0.74	C
2. Sea World Drive/Tecolote and I-5 (west side)	0.63	B
3. Sea World Drive/Pacific Highway and East Mission Bay Drive	0.66	B
4. Sea World Drive and Friars Road	0.69	B
5. Sea World Drive and Sea World Way	0.84	D
6. I-8 west off-ramp and Sports Arena/ Ingraham	1.11	F
7. Ingraham and Perez Cove Way/Dana Landing	0.94	E

*See Appendix A for description of Level of Service.



NO SCALE

SOURCE: Federhart & Associates

Distribution of Existing Sea World Traffic

**FIGURE
4-2**

Existing and Future Transit Service: The Sea World/Mission Bay area at the present time is served by three routes of San Diego Transit. Route 9 passes by the theme park on Ingraham and goes into Pacific Beach. Route 88 goes through Pacific Beach via Mission Boulevard, West Mission Bay Drive, Sea World Drive, and Friars Road to the east. Route 34 uses Midway Drive, Ingraham, and West Mission Bay Drive/Mission Boulevard.

San Diego Transit has no plans to add routes but obviously, as demand and financial resources dictate, more service can be added in the future by adding larger or more transit vehicles to the existing routes. Additionally, there have been requests of San Diego Transit to improve handicapped accessibility to Sea World by providing "barrier-free" design at the Sea World bus stop along Ingraham for Route 9. This barrier-free design includes a 4-foot-wide by 10-foot-deep bus wheelchair-lift platform area that connects to a paved wheelchair/pedestrian way to the Sea World entrance. San Diego Transit staff will work with Sea World in developing this improved accessibility.

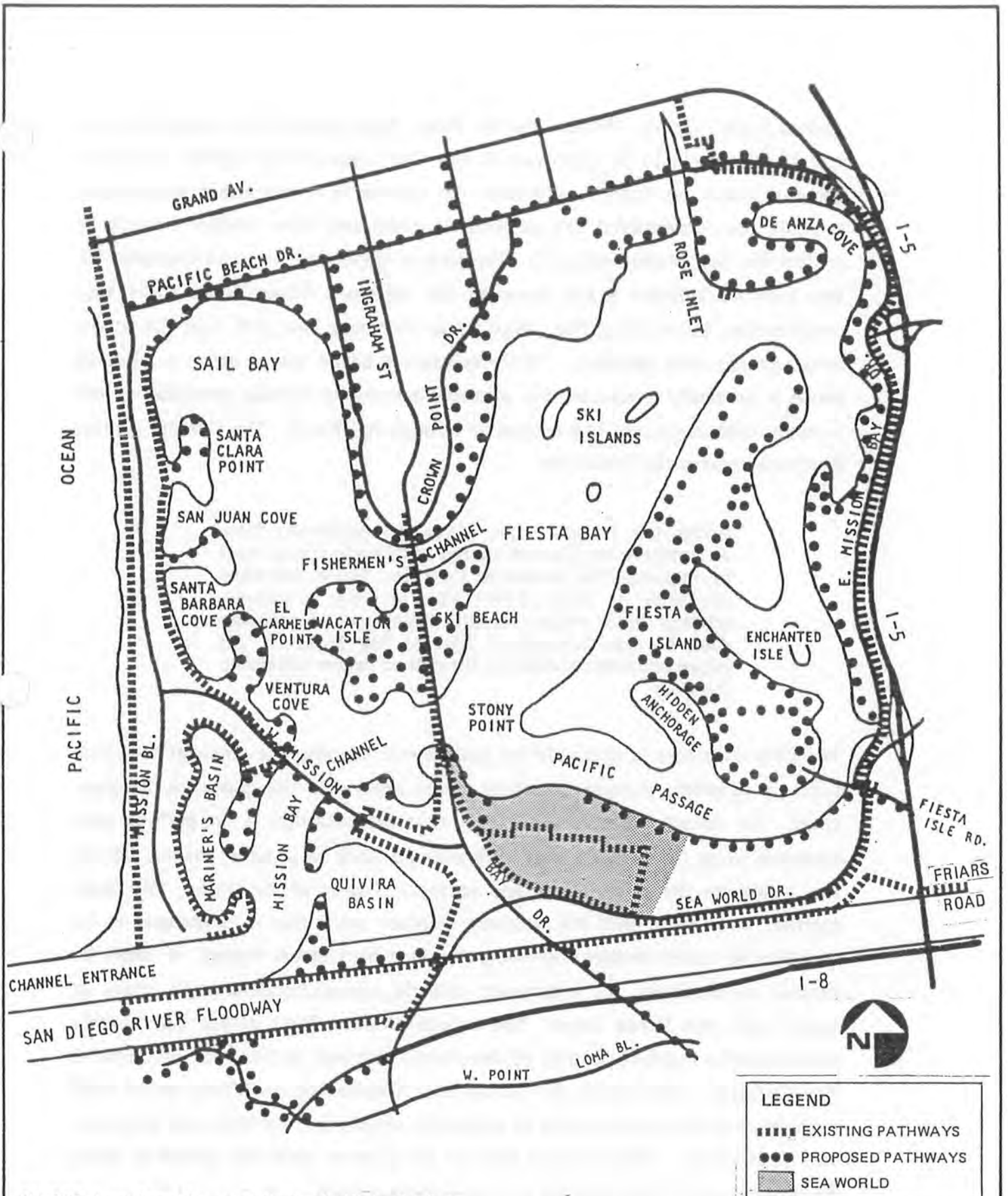
Over the long-term, the Metropolitan Transit Development Board (MTDB) has plans for expansion of their existing trolley route that will also improve transit service to Mission Bay and Sea World. Though, at the present time, there are no routes planned that would penetrate Mission Bay, there are at least two in the planning stage that would skirt the edges and thus make it possible for San Diego Transit to use it as a southern terminus to routes that do go through Mission Bay. This is also true of any tramway or shuttle bus system that develops in the future to serve Mission Bay and/or the beaches.

The two MTDB routes that offer some future possibilities of service to Sea World are the Old Town/Mission Valley route (or possibly the Midway/Mission Valley route if that becomes the plan) and the Old Town/University Towne Centre route, which someday may follow the I-5/railroad corridor along the east edge of Mission Bay Park. Obviously, depending on where the ultimate stations for either or both of these routes are located, both San Diego Transit routes and a Mission Bay/beach tramway system could logically interface at these transit centers.

At the present time, there is a parking area located near the I-5/Sea World Drive interchange in Mission Bay Park that has a sign reading "Parking for Beach Shuttle." This parking area and the shuttle itself could be the forerunner of a future Mission Bay Park and beach shuttle tramway. As such, it could help primarily in the future traffic and parking problems of Mission Beach and Mission Bay. The Sea World management has agreed to cooperate with staff and support the future implementation of a shuttle/tramway system, thus assuring that some of their future patrons could also be users. Any diversion of their patrons to this system would obviously decrease traffic in and out of their parking areas and lessen the use of their parking lots.

Bicycle/Pedestrian Pathways: A discontinuous system of bicycle/pedestrian pathways presently exists in and adjacent to Mission Bay Park. Figure 4-3, copied from the Local Coastal Program Addendum of the Mission Bay Park Master Plan for Land and Water Use, shows both existing and proposed pathways in the park. The existing pathway through the Sea World site provides pedestrian access on a combination of sidewalks and paved parking lots. The route enters the Sea World Main Entrance from Sea World Drive, proceeds north through the parking lot, turns west-northwest between the theme park and parking lot, turns north onto Perez Cove Way and exits at the intersection of Perez Cove Way and Ingraham Street. The pathway adjacent to Sea World along Perez Cove Way is designated a Class III bike route providing one-way bicycle access northwest around Sea World. The route provides a right-of-way identified by signs and is shared with pedestrians or motorists. The bike route follows Perez Cove Way along the outside perimeter of Sea World's parking lot, joining Sea World Drive to the east and Ingraham Street to the west. The route is designated on the northwest lane, allowing one-way only bicycle travel. At the Ingraham Street intersection, the bicyclist or pedestrian has two options: continue north over the Ingraham Street Bridge to Vacation Isle or head west onto Dana Landing Road.

There is some discrepancy in the literature regarding the location of the existing routes, the proposed routes and the designation of the bike pathways in the Sea World area. However, the Local Coastal Program Addendum of the Mission Bay Park Master Plan for Land and Water Use, the Mission Bay Coastal



Mission Bay Park Pedestrian/Bicycle Pathways

FIGURE 4-3

Access Study, and the Mission-Pacific Beach Bicycle Facilities Study (this latter study has yet to be approved by the City Council) all express the same general intent for future facilities: to provide a continuous bike pathway suitable for recreational use as well as commuter bike traffic through or around the Sea World leasehold. The several different pathways proposed for this area all indicate a link between the Ingraham Street/Perez Cove Way intersection, the existing San Diego River Floodway bike path, and the future South Shores bike pathway. While northwest bound travel along a Class III route is presently available, the planning documents propose provision of the missing southeast bound link around or through Sea World. The Coastal Access Study also states the following:

Along the water's edge, bikepaths separated from automotive traffic but shared with pedestrians shall be implemented whenever feasible. These pathways should be at least 12 feet wide in order to accommodate both modes safely. This type of pathway shall be used throughout Mission Bay Park... All other bikeways should be Class II or better whenever feasible.

The City considers it desirable for pathways to tie into the adjacent city bike pathway network, thereby providing viable area-wide transportation alternatives. The documents also recommend that the pathways in the park be constructed along the water's edge wherever possible to provide coastal access and maximize the recreational and aesthetic aspect of the trails. The plans further recommend that the pathways replace roads currently planned to be constructed under bridges, including the Ingraham Street Bridge, in order to provide recreational and emergency vehicle access between such areas as Dana Basin and Perez Cove. The Coastal Access Study states that bicycle racks shall be required as part of the permit approval process for commercial developments. The Study also states that bicycle and pedestrian paths shall connect to public transit stops to maximize access to recreation and commercial destinations. Bicycle paths shall be designed to maximize access to these destinations from bus stops for bicycle equipped buses.

"Bikeway" means all facilities that provide primarily for bicycle travel. The following categories of bikeways are defined in Section 2373 of the Streets and Highways Code.

(a) Class I Bikeway (Bike Path or Bike Trail)

Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.

(b) Class II Bikeway (Bike Lane)

Provides a restricted right-of-way designated for the exclusive or semiexclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with crossflows by pedestrians and motorists permitted. Parking is allowed adjacent to but not within the bike lane.

(c) Class III Bikeway (Bike Route)

Provides a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists.

The Ingraham Street Bridge northwest of the project site is scheduled for replacement beginning in FY 1985. Construction, lasting 15 to 18 months, will occur both east and west of the existing structure, but will be predominantly to the east. Preliminary designs indicate the bridge will consist of two individual parallel bridges. Each bridge will hold an 8-foot combination bikeway/shoulder to accommodate cyclists and emergency parking. The bikeway will be designed as a Class II bike lane, providing a restricted right of way designated for the semi-exclusive use of bicycles. Class II bike lanes prohibit through travel by motor vehicles or pedestrians and permit crossflow by motorists and pedestrians. Vehicle parking is allowed adjacent to the curb and bike lane, although only emergency parking will be allowed on the bridge. Each bridge will also include two 12 foot one-way traffic lanes and a 6-foot sidewalk. The traffic and bike lanes will be separated by a solid white line while the bike lane and sidewalk will be separated by a 6-inch curb.

Retaining walls may be required at the southern juncture of bridge and land to minimize the need for approach fills on park land. Although how many and where they will be located has not been decided, a preferred alternative is placing one retaining wall on the southeast corner adjoining the Atlantis Restaurant parking lot. This parking lot property is presently being rented by Sea World for overflow and valet parking. A number of land use alternatives are available for the strip of land underneath the bridge that is expected to be enlarged and changed with the new bridge and retaining wall. Some of these options include a pedestrian walkway, a bikeway, additional parking area, a maintenance and emergency vehicle access road, a fishing locale or landscaping. At the minimum, pedestrian access will be provided. The decision regarding land uses in this area, which is not expected for at least 6 months, will affect the land uses in the Atlantis Restaurant's rented parking area. Bicycle/pedestrian pathways will, therefore, need to be flexible until land use issues become firm for the area underneath and adjacent to the Ingraham Street Bridge.

Issue

Would traffic generated by implementation of the proposed master plan affect existing or future traffic circulation?

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

In order to estimate the future traffic created by the Sea World expansion, it is necessary to add to the average summer weekday traffic volumes, the volume of traffic generated by the 300-room hotel, the additional 200 marina berths, and a possible 33 percent increase in Sea World attendance.

It is estimated that the number of trips generated by the hotel will be eight trips per room or 2400 trips per day. It was further estimated that the peak hour (4:30-5:30 p.m.) would be 7 percent of the 24-hour volume, or 168 trips.

All trips to and from the hotel were assigned to the Perez Cove/Ingraham intersection. Thus, there would be 84 trips in and 84 trips out during the peak hour at the Ingraham/Perez Cove intersection.

The increase in marina berths should generate an additional 3.5 trips per berth per day, or 700 two-way trips per day. Studies made of marinas elsewhere reveal that the peak hour was 12.5 percent of the daily traffic, or, in this case, 88 trips during the peak period. It is estimated that 60 percent of this total would exit the area and 40 percent enter during the p.m. peak period. All traffic to and from the marina was assigned to the Ingraham/Perez Cove intersection.

The increase of the theme park attendance by 33 percent would increase average summer weekday attendance to approximately 19,787 people per day. This number would generate an additional 3750 vehicles per day. The split of traffic would be in the same ratio as presently exits (80 percent to and from Sea World Drive and 20 percent to and from Ingraham Street). The peak-hour volumes would also be at the same ratio as now at Sea World Drive and Sea World Way.

The proposed project would add 6850 Average Daily Trips (ADT) to existing Sea World-related traffic. The estimated future traffic demand created by the hotel/marina expansion and the theme park expansion is 269 vehicles entering and exiting Perez Cove Way at Ingraham Street (107 entering and 162 exiting), and 220 vehicles entering and exiting Sea World Way at Sea World Drive (33 entering and 187 exiting) during the p.m. peak hour. This increase in volume was added to the existing average summer weekday traffic during the peak hour as shown on Exhibits 2 through 10 in Appendix A. Exhibit 20 in the Appendix illustrates a summary of the additional p.m. peak-hour traffic generated by the ultimate Sea World Master Plan as assigned to the principal intersections.

Traffic exiting from Sea World at the intersection of Sea World Drive and Sea World Way currently splits into 62 percent to the east and 18 percent to the west. Further, by studying the geography of the origins from Sea World based

on the 1981 Mission Bay access study, it was assumed that of the Sea World Park traffic east on Sea World Drive, 10 percent would use Friars Road, 5 percent would go north on East Mission Bay Drive, 15 percent would go south on I-5, and the balance (32 percent) would go north on I-5.

The existing summer volumes of those four intersections were increased by those percentages of the added Sea World traffic sent that way. ICUs were recalculated for those four locations and the other three most directly affected by the Master Plan project. The intersections, ICUs, and Levels of Service are shown in Table 4-2.

Table 4-2

INTERSECTION CAPACITY UTILIZATION (ICU) CALCULATIONS
FULL BUILDOUT OF SEA WORLD PLUS EXISTING TRAFFIC

<u>Intersection</u>	<u>Existing ICU</u>	<u>With Project ICU</u>	<u>Existing Level of Service</u>	<u>With Project Level of Service</u>
1. Sea World Drive/ Telocote and I-5 (east side)	0.74	0.76	C	C
2. Sea World Drive/ Telecote and I-5 (west side)	0.63	0.64	B	B
3. Sea World Drive/ Pacific Highway and East Mission Bay Drive	0.66	0.66	B	B
4. Sea World Drive and Friars Road	0.69	0.72	B	C
5. Sea World Drive and Sea World Way	0.84	0.91	D	E
6. I-8 west off-ramp and Sports Arena/Ingraham	1.11	1.12	F	F
7. Ingraham and Perez Cove Way/Dana Landing	0.94	0.96	E	E

The changes in ICUs due to the project as shown in Table 4-2 are real and will stay the same even though other traffic increases on the facilities in the future. Except for the Sea World access intersection at Sea World Way, the increases due to the project at other intersections are very small; between 0.01 and 0.03.

The impact of the Sea World expansion up to this point has been measured only against existing traffic. Since other projects are being planned nearby, the expansion must be addressed with respect to the future traffic from all other known projects. A search of the literature reveals that almost all of the future Sea World expansion is already included in an EIR prepared for the City of San Diego's Mission Bay South Shores Master Plan, dated May 12, 1983. As a part of that EIR, a Traffic Circulation, Parking, and Impact Study for the project was prepared by Stephen George & Associates and is presented in Appendix A, as Exhibit 21.

The Stephen George Study based its existing conditions on the Pacific Beach, Mission Beach and Mission Bay Park 1995 Travel Forecast, which assumed a hotel at Sea World and a Ramada Inn at Friars Road and Sea World Drive. Both hotels remain planned future uses. One of two alternate trip generation assumptions for the "aquatic related commercial" use on the western portion of South Shores was an expansion of the Sea World leasehold. However, a worst case traffic generation rate that assumed a separate commercial development of this parcel was used in the South Shores analysis with a total of 7860 ADT. Since it has been shown that the Sea World marina expansion would add 700 ADT and the theme park expansion, 7500 ADT at 4,000,000 visitors in attendance, these two uses would add 8200 ADT total. Since the South Shores report already includes 7860 ADT for the Sea World expansion, the difference of 8200 and 7860, or 340 ADT, which would distribute itself in all directions, is the only Sea World expansion traffic not already included in the South Shores traffic forecast. This is such a minor volume that the South Shores forecast, conclusions, and recommendations can be used over the long range for the Sea World project where applicable.

Probably the most notable of the South Shores recommendations is to widen Sea World Drive to six lanes.

For any future expansion of Sea World Amusement Park, the widening of Sea World Drive opposite the Sea World frontage from four lanes to six lanes should be a requirement. The project traffic approaching the Sea World Way intersection may add up to 2000 ADT, or 100 westbound trips in the p.m. peak hour. This small incremental increase in project traffic will impact the intersection LOS by 2 percentage points; but still operate at Level of Service C after the widening of Sea World Drive. (page 9 of Exhibit 21.)

Though this requirement is not completely rejected by Sea World officials and the traffic consultant, there are other improvements that Sea World should make before widening Sea World Drive to six lanes. These are discussed in the mitigation section. On a cumulative basis, considering full buildout of the Sea World Master Plan, South Shores Master Plan and other Mission Bay developments, intersection LOS will be decreased at the I-5 freeway ramps to I-5 at Sea World Drive. The diamond-type freeway ramps are signalized with limited left-turn storage lanes on the Bridge for vehicles entering the freeway. The ramps are each two-lanes wide. The signal system is operated with dual left-turns occurring for traffic entering the ramps. The proposed project would add only 360 daily trips, in all directions, to the cumulative traffic volumes evaluated within the South Shores study. In the peak hour at the I-5 ramps the percentage of project-related trips will be extremely small and would have an insignificant effect on these ramps.

Significance of Impact

The proposed development will generate sufficient trips to adversely affect the two principal access points: Ingraham Street/Perez Cove Way and Sea World Drive/Sea World Way, unless mitigation measures are implemented. Current average summer weekday peak-hour volumes are such as to provide a Level of Service (LOS) of "E" at Ingraham Street/Perez Cove Way and "D" at Sea World Drive/Sea World Way. The additional traffic generated by the

hotel, marina expansion and a 33 percent expansion of the theme park will load both of these intersections to the "E" LOS. Traffic from future planned land uses in nearby park areas, especially South Shores, would contribute to additional LOS deterioration. Without mitigation, this decrease in Level of Service would create a significant impact at ultimate buildout. A third intersection, at Sea World Drive and Friars Road would drop the LOS from "B" to "C" under full buildout. The LOS is not expected to drop below the acceptable range (LOS C) when cumulative traffic is added to projected Sea World traffic. No significant impacts would be associated with this change, as the LOS would be within the acceptable range.

The I-8 west off-ramp and Sports Arena/Ingraham intersection is currently at LOS F (1.11). The addition of project-related traffic will slightly increase congestion at this intersection, with the LOS remaining at F (1.12). The very minor change in the congestion at this intersection is not considered to be significant itself, although the additional traffic will contribute incrementally to the existing congestion.

Mitigation

Refer to the Summary for final resolution of the issues.

Sea World, Inc. has agreed to perform the following intersection improvements as a condition of approval of the Master Plan. If these measures are implemented in the sequence indicated over the planned 50 year period for Master Plan buildout, the traffic associated with the growth will be adequately accommodated and would mitigate to insignificance the potential impacts at these intersections.

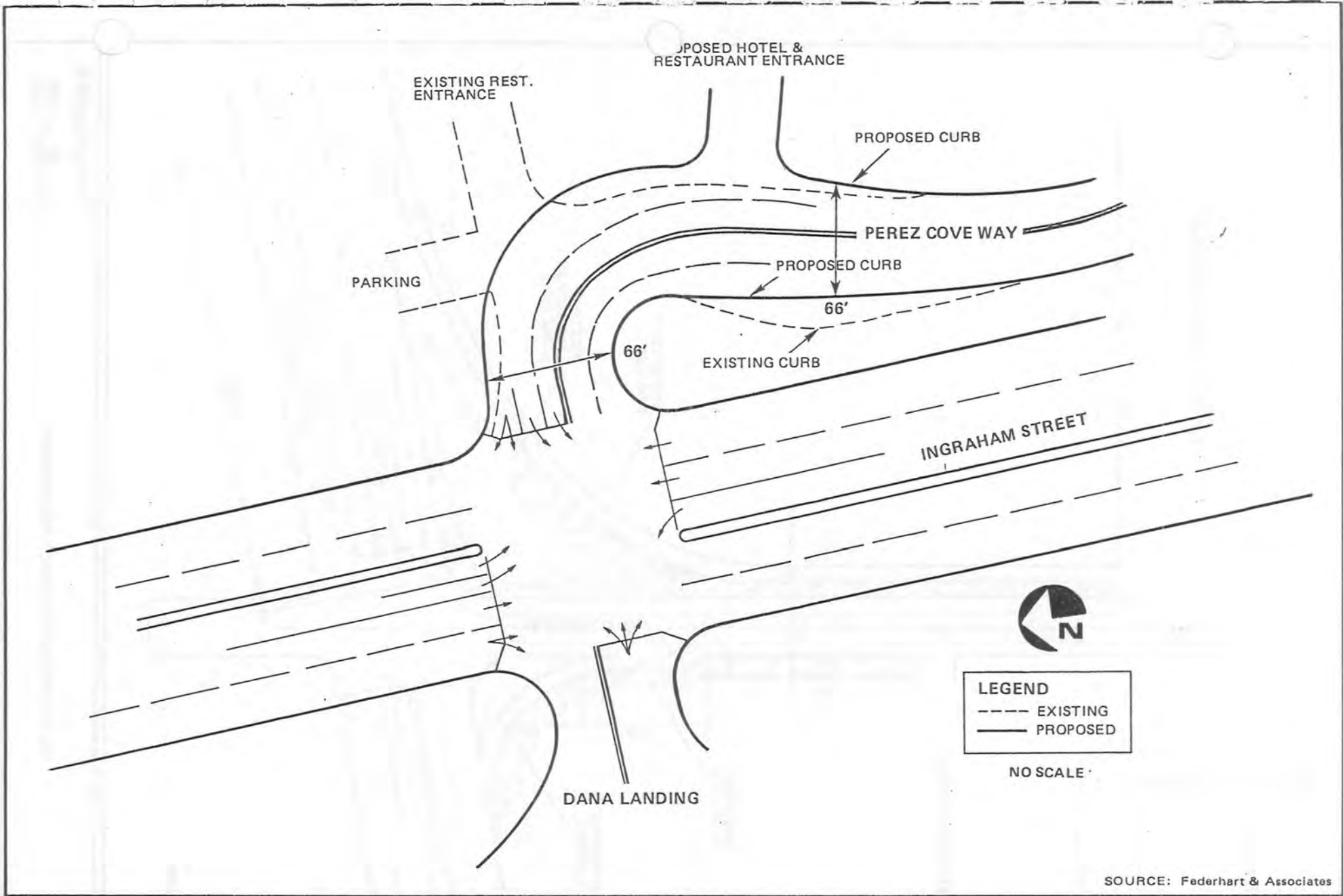
1. Sea World plans on constructing the hotel immediately upon approval, and is hoping that it will be ready for occupancy by the summer of 1986. This project is to be located near the Ingraham end of the lease, and traffic will enter and exit via the Perez Cove Way/Ingraham Street intersection. To mitigate the impact of the proposed project at this intersection, Sea World has agreed, as part of the first phase of

park improvement, to work with the City of San Diego in widening the Perez Cove approach to Ingraham so that dual lefts to Ingraham will be possible as well as dual lefts from Ingraham to Perez Cove. This will greatly increase the capacity of the signal and will minimize the time that Ingraham will be stopped for the side street. Further, some driveway rearranging will take place so that there will be less friction with traffic on Perez Cove Way. Figure 4-4 is a schematic drawing of this improved intersection as it will look before the hotel is occupied. This redesign will insure that the intersection will be in the low LOS "C" range after the project is occupied, thereby mitigating any impacts to this intersection to insignificance.

2. Since the bulk of the increased traffic generated by the project will impact the intersection of Sea World Drive and Sea World Way, a major modification of this key signalized access point will be required. Sea World will implement a two-phase improvement of their existing main entrance at Sea World Drive and Sea World Way. Figure 4-5 shows a new right-turn inbound lane planned to be constructed by 1985, or before the hotel is occupied in 1986. This inbound free right turn will solve any entering problems seen on Sea World's peak days, especially when coupled with some internal changes to which Sea World will commit, including eliminating the only possible internal cause of traffic queues, that being the handing out of pamphlets within the parking lot. In addition to the inbound free right turn shown on Figure 4-4, there also is shown an additional outbound right-turn lane. Though actual construction dates for this lane are not as definite as the other, Sea World is committed to constructing it by the time its theme park has an annual attendance of 3,500,000, or less, if the need is obvious.

All of the mitigating traffic measures to the main entrance are predicated on the fact that parking at the theme park will continue to be free and is thus a "worst case" situation. If there is a charge for parking, it may reduce traffic to some extent but then special care must be given to provide a sufficient reservoir for stopped vehicles on

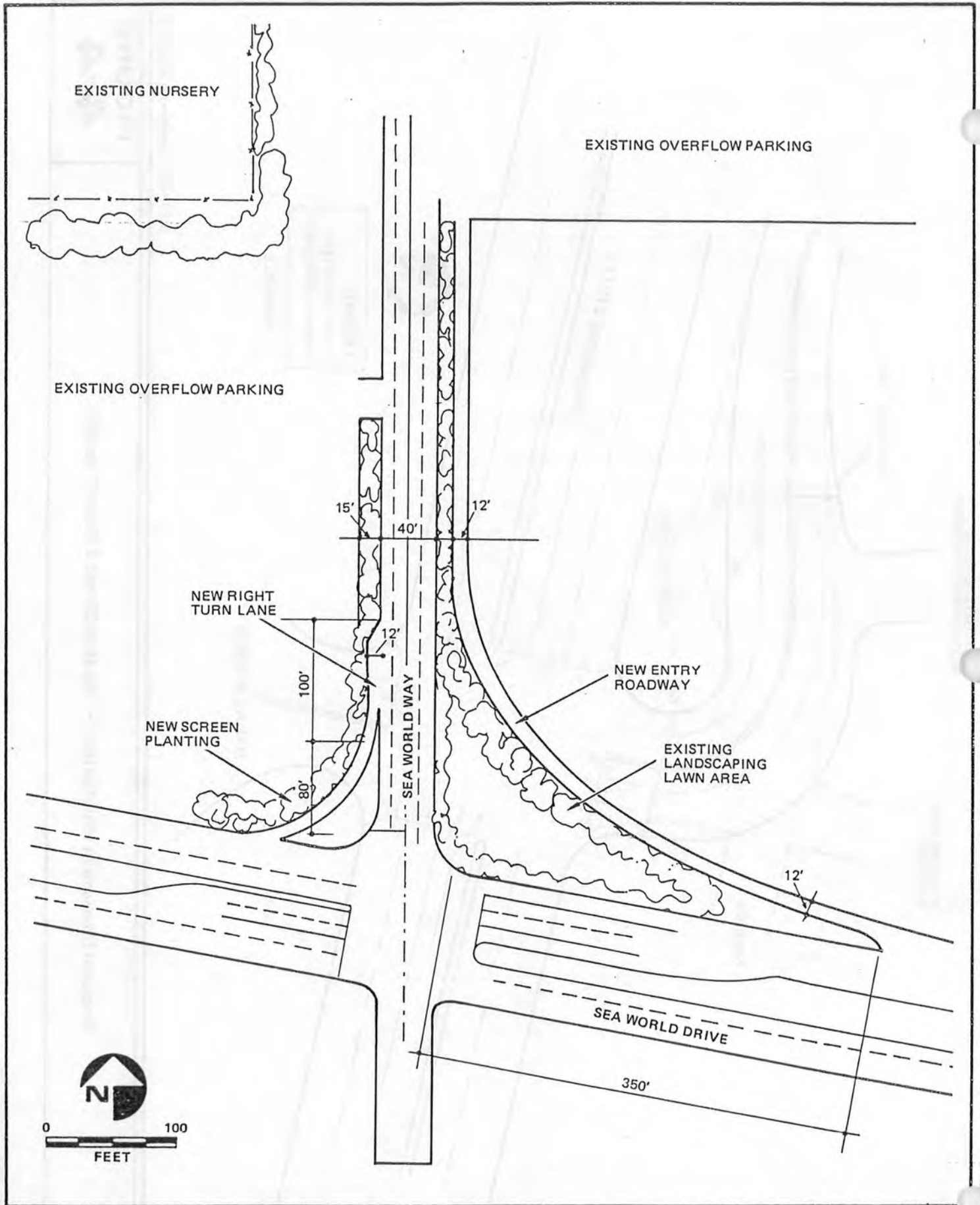
4-17



SOURCE: Federhart & Associates

Proposed Intersection Modification — Ingraham Street & Perez Cove Way

FIGURE
4-4



Sea World Main Entrance Improvement

**FIGURE
4-5**



the lease ground so as not to back out onto Sea World Drive. The collecting point for any parking charge will have to be well into the lots with a sufficient number of gates (lanes) provided. If Sea World should propose to implement paid parking in the future, the potential traffic impacts will be addressed in a study that is acceptable to the City Engineer. This study should address the effects of possible delays and the possible use of on-street or other available "free" parking spaces in the area.

3. The desirability of moving Sea World's main entrance easterly sometime in the future has been evaluated by the traffic consultant and the City Traffic Engineering staff. Unfortunately, there is a conflict with the South Shores Master Plan that has not been resolved at this time. Shortly, however, the City is embarking on a new study and corresponding modifications of the South Shores Master Plan that may firmly fix its future signalized intersections along Sea World Drive. If this is done the ultimate, permanent entrance to Sea World can be located. Landfill considerations would need to be taken into account in relocating the entrance to the east (refer to Section IV-E). It could very well be that the ultimate location remains the existing location. Sea World will commit itself to pay for a traffic study to determine this when its annual attendance reaches 4,000,000 visitors, or one-third more than at the present time. By that time, the South Shores Master Plan questions will be resolved and the improvements of Figures 4-4 and 4-5 will have been operating for some time. In this future traffic study, the ultimate Sea World main entrance can be resolved, as well as the need, extent, and timing for the widening of Sea World Drive from four to six lanes (including curb, gutter and sidewalk) along the Sea World leasehold frontage.

If it is found that the existing entrance location is still the best when considering the South Shores Master Plan changes, then there are some options available to offset the weaving problem experienced occasionally for vehicles leaving the northbound Ingraham ramp to Sea World Drive eastbound and then entering the left-turn pocket into Sea

World's main entrance. Two options to this problem, besides moving the intersection easterly, would be to signalize the ramp intersection so eastbound Sea World Drive traffic would stop, thus allowing the move into Sea World with no interference. Another possibility would be the construction of a "jug handle" intersection while still leaving the existing left-turn lanes into Sea World Way. The only vehicles that would be allowed to use the "jug handle" would right turn from the ramp, then right turn into the "jug handle," then loop around so they cross Sea World Drive as a straight through move, not a left-turn move. In effect, this creates a four-way intersection rather than a basic "T" intersection as it is at the present time. The best of these solutions can be selected at the time of the new traffic study when the 4,000,000 attendance figure is reached.

In summary, Sea World has committed itself to implement positive traffic improvements over the near term (1985-86 period) and mid-term (3,500,000 attendance) periods. Further, it is committed to improving its own internal circulation and operations so that traffic conflicts on and off the public streets will be avoided. Finally, over the longer period, while attendance grows to 4,000,000 annual visitors and the South Shores Master Plan access and land use questions are resolved, Sea World is committed to pay for another traffic study to determine its ultimate main entrance and its traffic configuration. With these commitments, all project-related traffic impacts identified in this study would be mitigated to insignificance.

Mitigation of cumulative traffic impacts for the I-5 freeway ramps would be required for ultimate buildout conditions in this portion of Mission Bay. Caltrans has under consideration a ramp metering program for I-5, between Downtown San Diego and Balboa Avenue interchange on the north, similar to the ramp metering program currently operating on I-8 and I-94. As a restrictive traffic control measure, ramp metering does not increase the LOS, but rather, maintains a stable traffic flow pattern, free from congestion resulting from traffic demand exceeding the practical freeway capacity. To maintain a stable freeway traffic flow pattern, LOS at freeway on-ramps, in particular, will likely be lower than present. This future condition will also result in

diverting some of the freeway bound traffic to parallel arterials, if available, when backup delays at on-ramps exceed a "perceived acceptable level" by the motorist.

To improve the intersection LOS, several roadway improvements on the approach legs of the intersection can be considered, such as:

1. Expanding Sea World Drive from four lanes to six lanes, with a free right-turning lane from the southbound off-ramp, expediting traffic from the freeway directly to the third westbound lane.
2. Expanding the two-lane off-ramps to three on the approach to the signalized intersection, allowing the center lane to function as an optional right and left-turning lane.

The above two improvements will allow reducing the required green time for the off-ramps and increasing the available green time for the east-west traffic on the bridge. With the above improvements, the LOS for the southbound ramps could be improved to LOS D, while the northbound ramp would still operate at LOS E or F. The opportunity to improve the northbound ramp intersection is limited due to the level of current and expanding traffic volumes on the I-5 freeway. Parallel arterials will need to accommodate the additional traffic loads.

Because the "aquatic-related" commercial lease designated on the South Shores plan next to Sea World will be utilized for the expansion of Sea World, the project traffic impacts at the I-5 interchange would be essentially equivalent to the maximum condition assumed in the South Shores traffic study. No mitigation measures for the I-5 ramps are considered necessary to implement as a direct result of the Sea World Master Plan.

Issue

Would parking be adequate to accommodate average and peak demands for each major land use?

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

Under the City's CR Zone, 577 spaces would be needed for the 300-room hotel (300 spaces) and the Atlantis Restaurant, with 16,611 square feet of gross floor area devoted to dining, drinking and dancing (277 spaces). Two hundred forty spaces would be required for the 400-berth marina. Thus, 817 spaces will be necessary for the hotel-marina area. Sea World's Master Plan shows 805 spaces for hotel, restaurant, and marina parking in the northwestern area that is not designated as employee parking or theme park parking. Therefore, the parking planned would be almost sufficient to accommodate the expansion, with a shortage of only 12 spaces. The Master Plan does not include the 115 spaces that now exist on the west side of the Atlantis Restaurant. In checking the recently adopted plan for the south Ingraham Street bridge, only 18 Atlantis parking spaces will be lost in this area. It is expected that the rental area used for Atlantis parking will continue to be used for Sea World parking, allowing at least 97 spaces to be retained. The total available spaces in this portion of the site serving the Atlantis, hotel and marina, would be 902 spaces, therefore parking in this area of the site would exceed the requirements under the zone. There is also a potential for providing additional parking area under the new Ingraham Street bridge, where 180 feet of bridge length will be over land. The use of this additional area has not yet been established, but there would be adequate space to provide for roads, bicycle/pedestrian paths and/or additional parking. The possible removal of Perez Cove Way parallel street parking to accommodate a bicycle lane is not expected to impact parking requirements.

The theme park now can accommodate approximately 5000 vehicles. Although not all the area is marked as separate stalls, the Sea World officials indicate that through the use of "stadium-type" parking (the parking attendants direct motorists to line up on a designated line), that number is obtained. The Master Plan shows 7460 parking spaces (860 stalls, 6600 stadium-type). This total is in excess of the projected demand of 7085 spaces required by the increased

attendance associated with the theme park expansion. It is noted that during the comprehensive parking study conducted by Federhart & Associates on July 4, 1980, there were 4723 vehicles observed on the lot during the peak period of the day. These vehicles also included employee parking.

Significance of Impact

The theme park's proposed parking will be more than adequate to accommodate peak period demands, and no significant impacts would result. Based on standard requirements, the Master Plan indicates a net excess of 85 parking spaces in the immediate vicinity of the hotel, restaurant and marina, including the rental parking area. There has been no inclusion of the potential for shared spaces between the restaurant, hotel and marina which would further reduce parking demand. Due to the varied times of peak demand at each of these uses, some joint-use of spaces is likely to occur. The theme park will have approximately 375 excess spaces beyond demand during peak periods at ultimate buildout, and could easily accommodate any overflow from the restaurant/hotel/marina area. The Atlantis presently provides valet parking service, which is planned to continue. If additional spaces in the theme park lot should ever be needed to accommodate demand, the valet service would eliminate any potential impacts associated with the further distance to the parking spaces.

Mitigation

For final resolution of the issues, refer to the Summary.

There would be an excess of 85 spaces in the immediate vicinity of the hotel, restaurant and marina area, as currently indicated on the Master Plan. There is sufficient parking provided in the Master Plan for a 50 percent expansion of the theme park, although only 33 percent is anticipated. However, since the bulk of the theme park parking is of the "stadium type," Sea World, Inc. must provide sufficient parking attendants during peak days to satisfy the parking demand. Because no significant parking impacts are anticipated, no mitigation measures are considered necessary.

Issue

Would the planned replacement of the Ingraham Street bridges adversely affect traffic circulation, or parking associated with the restaurant/hotel/marina complex?

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

The south bridge, located just off site, is scheduled for replacement starting in FY 1985. Construction would take 15 to 18 months. The recently adopted plan for this bridge (two side-by-side structures) has a clear span over land of about 180 feet on its south end adjacent to the Atlantis Restaurant. This clear span obviously would allow a roadway and bike/pedestrian paths to cross under Ingraham Street wherever desired, as well as allowing a large number of parking spaces to replace any removed from the Atlantis Restaurant area by the construction of the approaches to this bridge span. These plans reveal that only 18 spaces of Atlantis parking will be removed by the new bridge plans and many more than this could be replaced under the bridge.

The ICU analysis of the Ingraham/Perez Cove Way-Dana Landing intersection reveals that with the planned dual left-turn lanes from Ingraham, the left turns from Ingraham will not be a large user of intersection capacity. By far, the through moves on Ingraham and the moves from the side streets are what require the available capacity. The planned mitigation for this intersection (Figure 4-3) provides for the needed side street capacity to be reduced enough so that LOS "C" will be available on an average summer weekday after all the ultimate Sea World expansion. With the implementation of improvements (illustrated on Figure 4-3), and the construction of the south Ingraham bridge (and the modernizing of the traffic signal shown on Figure 4-3), it is doubtful whether a vehicular roadway will be needed under the south approach to the bridge for a very long time; however, the room to do it is there whenever it may be needed.

The north bridge is scheduled for replacement starting in FY 1987. There should be no direct effects to Sea World.

Significance of Impact

During the approximately 3 years of construction required for both bridges, traffic flow on Ingraham Street may be constrained. The bridge designer and the City traffic engineering staff are working together, however, on the traffic handling plans for construction of both bridges so that existing traffic can still use the Ingraham corridor with the least possible disruption during the construction period. No significant impacts would be associated with the replacement of the Ingraham Street bridges as related to the proposed Sea World Master Plan.

Mitigation

For final resolution of these issues, refer to the Summary. No mitigation measures are required.

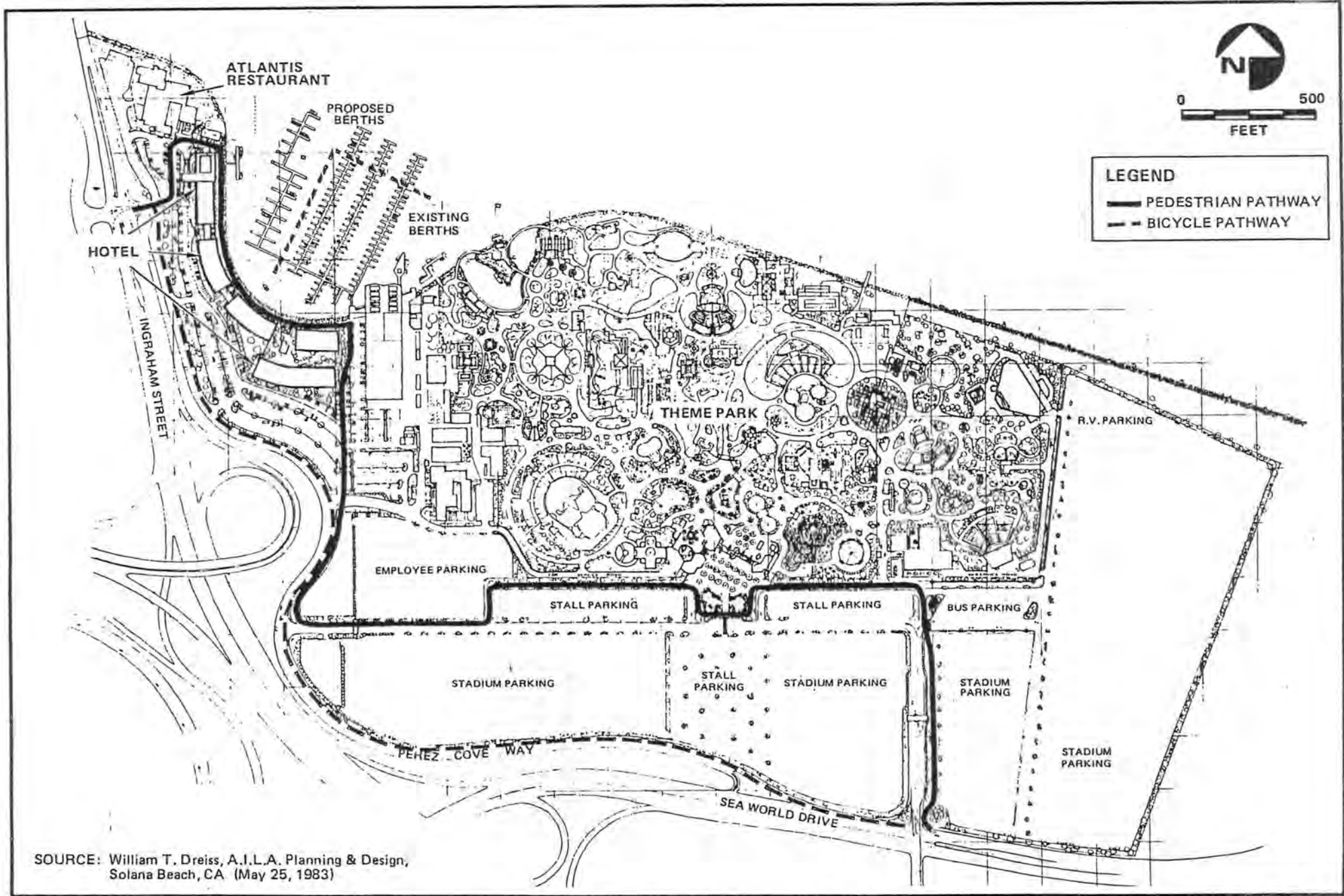
Issue

What provisions will be made for completing the Mission Bay bikeway through or around the leasehold? What public pedestrian and bicycle access to the Mission Bay shoreline will be provided?

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

The Master Plan would affect the existing pedestrian pathway through Sea World's leasehold. See Figure 4-6. The first segment of the route, along Sea World Way beginning at Sea World Drive, would remain unchanged, thereby maintaining pedestrian access to and from the transit stop on Sea World Drive. The second segment, along the front of the theme park, would be replaced



Sea World Master Plan
Bicycle and Pedestrian Pathways

FIGURE
4-6



with a walkway along the new front of the theme park. This walkway would continue north onto Perez Cove Way until intersecting the east entrance to the hotel parking lot. Based on the proposed Master Plan, the sidewalk portion of the pathway would be interrupted here for approximately 500 feet through the hotel parking lot, until reaching the landscaped eastern boundary of the hotel site. However, when specific plans are drawn up for the hotel parking lot, pedestrian access along this link will be assured by the project applicant. A sidewalk follows the Perez Cove shoreline up to the Atlantis Restaurant where the sidewalk ends and the pedestrian would walk adjacent to the parking lot for approximately 300 feet to the intersection of Perez Cove Way and Ingraham Street. The pathway would not be shared with vehicular traffic. This pedestrian route upgrades the existing pathway and fulfills a goal of the Master Plan to provide shoreline access in the configuration proposed by the Master Plan (see Figure 4-3). Sea World plans on maintaining this pedestrian pathway, which would be implemented in Phase One.

No pedestrian pathway is shown on the Master Plan linking the South Shores Park to the Sea World Way/Sea World Drive intersection, where the proposed pedestrian pathway begins. This is due to the fact that the South Shores Master Plan has not been finalized. The eastern Sea World lease boundary bordering South Shores is not firmly established. However, Sea World is committed to coordination with the City regarding the location and installation of this pedestrian link. There are several options for the location of this pathway. One possibility would be to locate the pathway along the shoreline up to the exhibit area, where it would turn southward and then eastward to connect with the proposed pathway along the front of the theme park. A second alternative would be to bring the pathway in at the southeast portion of the lease, where it would follow Sea World Drive to the theme park's main entrance. Variations on these designs also present feasible alternatives. The final design should be determined subsequent to South Shores Master Plan approval. The City and Sea World should each be responsible for continuous pedestrian access across their respective properties. Sea World has committed to cooperate in this manner to ensure adequate mitigation of the potential impact arising from a discontinuous pedestrian pathway.

The proposed Master Plan would not alter the existing Class III bicycle route. The route, designated with signs along Perez Cove Way and Sea World Drive, would remain entirely outside the lease area. Development within the leasehold would affect bicycle travel to a minor extent. Redesign of the traffic lanes at the intersection of Sea World Drive and Sea World Way would include right turn only lanes to and from Sea World Way from and to Sea World Drive. Project level plans have not yet been finalized but would include appropriate controls to allow for safe bicycle travel through this intersection and through the intersection of Ingraham Street and Perez Cove Way. The second entrance at the southwestern corner of the theme park parking lot would also preserve the through-travel capability afforded by the bike route by providing traffic control for those entering or exiting the second entrance. The large Atlantis parking lot between the restaurant and dry boat storage building would be replaced with a 300-room hotel and parking lot. The lot would serve both the hotel and restaurant. Increased traffic volumes would be generated by the hotel, but this traffic into and out of the hotel would still need to yield to the through-traveling bicyclist who has the right of way. The number of driveways accessing the hotel site would remain at the present four, so no new cross-traffic junctions would be created. To provide shoreline access to bicyclists, bike racks would be placed on the hotel grounds, allowing bicyclists the opportunity to safely park their bikes and use the pedestrian walkway along the Perez Cove shoreline. There is not enough area here to extend the bicycle pathway onto the shoreline.

Bicycle travel from Perez Cove Way to eastbound Sea World Drive is precluded by the configuration of these two streets. Not only is Perez Cove Way not signed or designated for southeast bound bicycle travel, but at its southeast terminus eastbound travelers are forced onto a right-turn-only lane which enters Sea World Drive westbound. Within a quarter of a mile the traveler has two choices: turn northbound onto Ingraham Street which would head the traveler back in the direction from which they originally came, or turn southbound onto Sunset Cliffs Boulevard, across the San Diego River Floodway. Eastbound travel from the Ingraham Street/Perez Cove Way intersection onto Sea World Drive or the Floodway bike path must therefore follow a less direct route than along Perez Cove Way. The existing bicycle/pedestrian pathway,

shown on Figure 4-3, follows Dana Landing Road around to Quivira Road, where the route follows Quivira Road south to the bicycle path on the flood control channel embankment. The bicyclist would then travel east until paralleling Sea World Drive, where cross access to Sea World Drive is relatively easy. This route is ineffective for many bicyclists, since less direct, although designated, bicycle routes are often bypassed for faster, more direct routes, which usually present more hazards to the bicyclists. For this reason a south-east bound link along Perez Cove Way represents a desirable addition to the Mission Bay Park bicycle network.

Implementation of the Master Plan would not affect the existing route, as no alterations to the route are proposed. The additional traffic created by the Master Plan expansion would impact existing facilities as they would not be adequate to provide safe bicycle transit with the added vehicular traffic. Further, as described earlier in the existing conditions section, the City of San Diego intends to complete and upgrade the Mission Bay Park bicycle network. Because Sea World is located in Mission Bay Park and has included no provisions for satisfying this goal, an impact to bicycle pathways would be incurred with Master Plan adoption. The planning documents addressing the bicycle network goals and deficiencies state that pathways should be continuous, shared with pedestrians, and be at least 12 feet wide. All other bikeways should be Class II or better wherever feasible. Since the pedestrian walkway is provided in a separate location more accessible to the shoreline and more separated from motor vehicle traffic than the route along Perez Cove Way, the pathway along Perez Cove Way need only accommodate bicyclists. The Perez Cove Way bike route only allows for northwest bound bike travel and is a Class III, thus meeting neither of these two goals.

Significance of Impacts

The intent of the Mission Bay Park Master Plan, Mission Bay Coastal Access Study, and Mission-Pacific Beach Bicycle Facilities Study regarding the Mission Bay Park bicycle network is to provide a system of safe pathways accessible to coastal recreational resources and trails to surrounding communities. The network should be continuous around the Bay to serve both recreational

and transportation bicycling and should be upgraded to Class II pathways, or better, wherever feasible. The Coastal Access Study states that missing links in the planned pathway system shall be implemented as funding allows, one of the most important of these being "a pathway through the Sea World lease site from the shoreline at South Shores to Ingraham Street at Perez Cove Way." (page 53). The current Class III bike route along Perez Cove Way allows only northwest bound travel, and thus provides an incomplete bike route. Without access through or around Sea World, bicycle travel is greatly hampered and represents a significant impact to the completion of the Mission Bay bicycle network.

As Sea World leases land within the Park, the Sea World Master Plan is subject to the provisions of these planning documents and their stated policies. No improvements or alterations to the bike pathways on or near the Sea World leasehold have been incorporated into the proposed Sea World Master Plan, and thus the bike route would remain incomplete around Sea World. A significant impact to the future development of bicycle pathways would thus be incurred.

Mitigation

For final resolution of the issues, refer to the Summary.

To assure a continuous pedestrian walkway through the project site, the applicant will provide detailed designs for the walkway with each specific development project. Pending South Shores Master Plan approval, Sea World will cooperate in designing the pedestrian link between South Shores and the Sea World pedestrian pathway. Sea World will be responsible for implementing the portion of the pathway on their property. These designs insure no impact to pedestrian access.

The significant impact to future bike pathway development on and adjacent to the Sea World leasehold could be fully mitigated by meeting the intent of the planning documents. Provisions for the future development of a bicycle pathway should be incorporated into the Master Plan. These provisions would include locating and designating an appropriate site for the pathway and

providing the City of San Diego the necessary support as a leaseholder in order that the City may implement the pathway. Sea World has not committed to any plans for the offsite improvement of the bike pathways and any requirements for land for onsite improvements on the leasehold would be subject to lease agreement modifications with the City of San Diego. Options for locations and classes of bike pathways are examined below.

The Coastal Access Study recommends a Class II pathway or better wherever feasible. A Class I facility provides a completely separated right-of-way designated exclusively for the use of two-way bicycle and pedestrian travel with crossflows by motorists minimized. The bike path must be 8 feet wide with 2 additional feet on each side. A bikeway located through the center or northern portion of the lease is not examined as it would create conflicts with pedestrians and motorists. A Class I could be located within Perez Cove Way where existing onstreet parallel parking is designated. Removal of this parking area would not impact adjacent onsite parking. The Class I could also be located within the existing landscaping between Perez Cove Way and the parking lot. This option would not eliminate onstreet parking but would require the removal of screen planting. Locating the Class I within the parking lot would retain onstreet parking and the landscaping but would decrease the theme park's parking area. All three options would permit two way traffic around the leasehold and would upgrade the existing route. The latter two options are not acceptable to Sea World. The first of these three options appears to be the most feasible. However, all three designs have serious drawbacks. Since the path is closer than 5 feet from the roadway, a physical divider such as a fence or dense shrubs are necessary between the path and road to prevent cross access. At driveways, entrances, and intersections stop signs for bicyclists would be needed, since automotive traffic would be entering and exiting the leasehold. A northwest bound bicyclist arriving from the South Shores pathway would need to cross the right-turn-only lane into Sea World's main entrance, the intersection of Sea World Way and Sea World Drive, and the right-turn-only lane exiting Sea World's main entrance. The second entrance would then need to be crossed, then the service road and the four driveways into the hotel and Atlantis parking lots. Thus a total of nine stops would be required of the bicyclist. Under these circumstances bicyclists tend to use the roadway rather than the bike path for convenience and/or safety.

Caltran's "Planning and Design Criteria for Bikeways in California" describes problems after encountered with localing Class I bikepaths adjacent to road ways. In this report, the constraints associated with locating a Class I path adjacent to a roadway result in a recommendation by Caltrans for a Class II bike lane, rather than a Class I.

The option of locating a Class II bike lane along Perez Cove Way instead of a Class I bike path overcomes many of the drawbacks associated with a Class I. A Class II would only be feasible between the Ingraham Street/Perez Cove Way intersection and the right-turn-only lane from Perez Cove Way eastbound to Sea World Drive westbound. At this eastern point, the Class II would be forced to turn westbound, since the only eastbound lane on Perez Cove Way turns west onto Sea World Drive. This turn would take the bicyclist in the opposite direction and onto a street not designated or planned for bicycle pathways. Thus the bike pathway must cross over to the north side of the street, thereby necessitating a Class I bike path east to the intersection of Sea World Way and Sea World Drive. To engineer this bicycle crossing over Perez Cove Way, a stop sign, stop light or even a ramp may be needed. The crossing and Class I path would need to be designed concurrently with the designs for the new intersection at Sea World Drive and Sea World Way. While the "Planning and Design Criteria for Bikeways in California" does not recommend alternating segments of bike pathways in this manner (p. 6), overcoming the obstacles previously mentioned should outweigh this inconsistency. The bike path would not require stop signs at the crossing driveways, as the bicyclist would have the right of way. The width of the street without onstreet parking allows adequate room for a bike path, which at a minimum must be 4 feet wide. Parking could be adequately handled by onsite parking areas.

In summary, a combination Class I/Class II facility would mitigate to insignificance impacts to future bicycle pathway development and is the most desirable option. However, the crossing design from the Class II eastbound bike lane to the Class I path may be problematic. Only a detailed traffic engineering study would prove its feasibility. Sea World will allow construction of a Class I facility on their leasehold but will not assume construction costs and has given no assurance of support for implementation. Because the future

development of an upgraded bicycle pathway adjacent to the lease is not assumed, the significant impact to bikeway development remains unmitigated.

B. AQUATIC BIOLOGY/WATER QUALITY

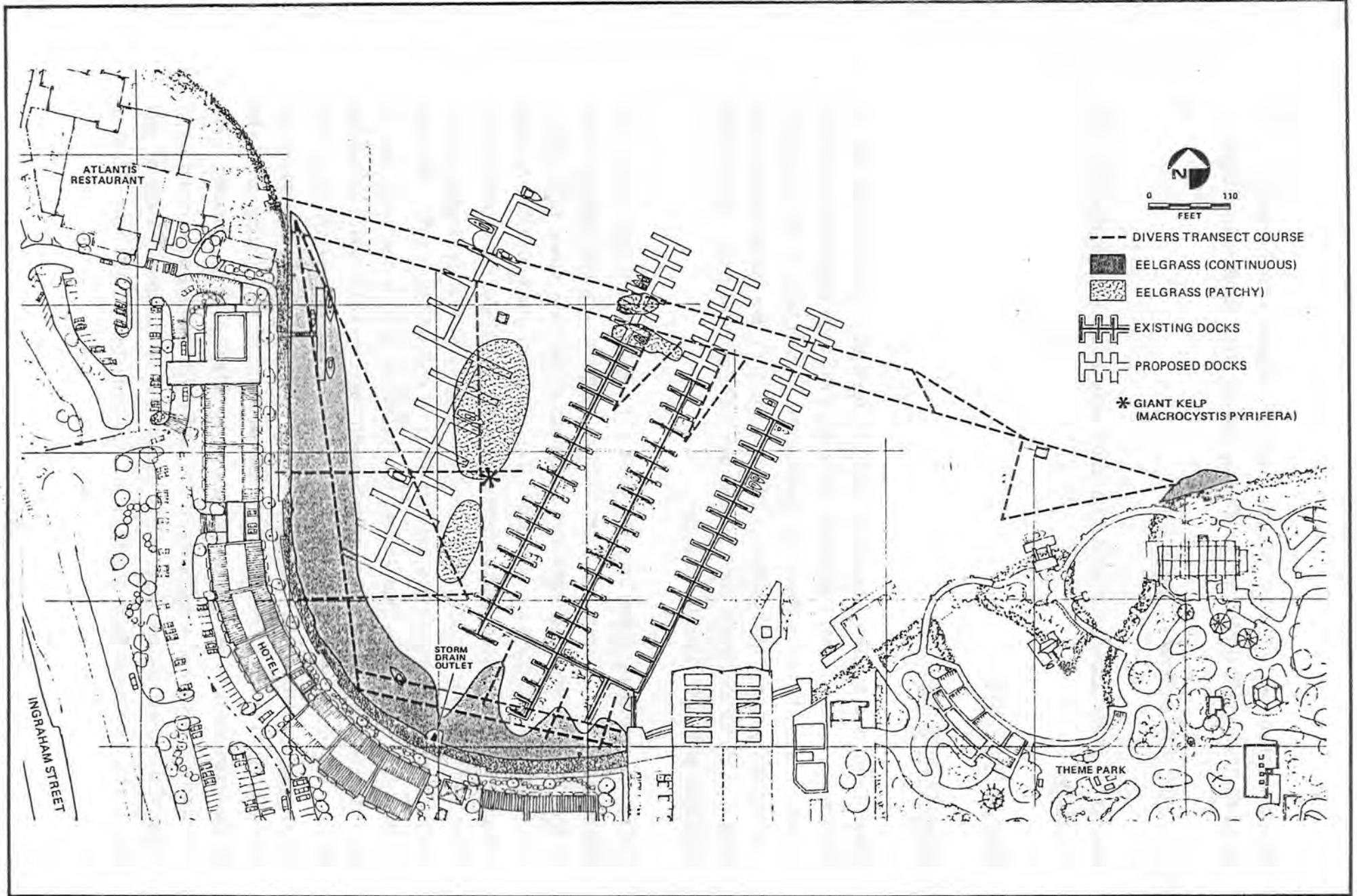
Recent revisions associated with this issue have been incorporated into the Summary.

Existing Conditions

Perez Cove Biology

Perez Cove is a shallow (maximum depth 13 feet) inlet on the south end of Mission Bay in San Diego, California. Occupying the cove at present is the Sea World Marina which has room for approximately 200 boats on three parallel floating docks spaced approximately 100 feet apart. These docks extend north from a ramp at the south shore of the bay for about 400 feet. The present facility is generally filled to capacity.

Biological conditions present in the cove are fairly representative of other similar coves in the area. A thick band of eelgrass, Zostera marina, 50 to 75 feet in width lines the south and west sides of the cove where light, water and substrate conditions are favorable. The density of plants in this area was estimated to be one plant per 0.3 meters, and 75 leaf blades per square meter. Fingers of this bed, 10 to 20 feet in width and up to 30 feet in length, extend north from shore between the existing floating docks (Figure 4-7). The bed narrows in width to less than 30 feet off the storm drain in the south end of the cove and the continuous bed ends beneath the ramp at the south end of the docks. Scattered patches of eelgrass surrounded by open muddy areas are distributed throughout the open part of the cove west of the existing docks. In addition, small patches are present off the north end of the existing docks and at the extreme northeast corner of the cove. These patches probably cover less than 10 percent of the bottom of the cove. The total area of eelgrass in Perez Cove is estimated to be 84,700 square feet or 1.9 acres. Much of this area is the continuous band of eelgrass. Approximately 65,000 square feet is



4-34

Onsite Eelgrass Locations

FIGURE
4-7

in the main bed, and another 20,000 square feet is in isolated patches in the central area of the cove.

Much of the cove has the required environmental conditions (light, substrate, depth) for the establishment of eelgrass beds. However, the effects of shading from the existing docks is easily observed, especially along the southern shoreline, where fingers of eelgrass grow between docks.

A diving survey of the cove was conducted between 1100 hours and 1500 hours on April 17, 1984, by WESTEC biologists. Fish observed in the eelgrass bed including several species of larval fish, (approximately 30/m³ in the south end of the cove), several round stingray (Urolophus halleri), one pile perch (Rhacochilus vacca), two barred sandbass, one unidentified species of sandbass and one Opaleye (Girella nigricans). A large California halibut (Paralichthys californicus) was observed in the cove, but not in the eelgrass bed.

Invertebrates observed in the eelgrass bed included the starfish (Astropecten), several giant seaslugs (Chelidonura inermis), a large seapen (Stylatula), tunicates, a single small seacucumber and several bay oysters (Ostrea edulis).

Algae present included Rhodymenia sp., Sargassum sp., Pachydietyon sp., and Ulva sp. Giant kelp (Macrocystis pyrifera) was observed attached to a small rock (Figure 4-7). Egregia menziesii was observed both attached and drifting in the cove. Phyllospadix, a marine grass, was also noted in the cove.

Water Quality

Water quality in Mission Bay has long been of concern to the City of San Diego. There are a number of factors which can and have influenced water quality in the bay including: sewer overflows, urban runoff during storms, and regulated wastewater discharges which require an NPDES permit issued by the Regional Water Quality Control Board.

Sea World Marina currently houses approximately 330 power boats at berths and in dry storage units. The primary effects on water quality in a marina

setting are from the fuels, greases and oils used by the boats, and spillage of holding tanks. Discussions were held with the marina supervisor (Dan Larson, May 1, 1984) regarding fuel spills and pumpout facilities. The fuel dock at Sea World Marina is considered one of the most extensively used in Mission Bay and the majority of the boats using the fuel dock are not marina residents. The convenience of the marina to the entrance of the Bay is probably responsible for this high level of activity.

In fueling powerboats, there is occasional spillage into the waters of the bay, with amounts ranging from drops to several ounces. Rarely is there a spillage in excess of 0.5 gallon. The majority of the fuel is regular or premium gasoline (70 percent) which is rapidly volatilized; diesel fuel (20 percent) and gas/oil premix (10 percent). The diesel fuel and premix would have the tendency to create longer term visible slicks and would also have more potential for impacts.

Two cycle engines, requiring oil/gas premixed fuel, exhaust oil onto the water surface. Small to medium sized outboard motors are the type most responsible for this type of water quality problem. Based upon the percent of fuels supplied, outboards do not constitute a significant portion of the water traffic at the fuel docks.

Sea World marina has a wastewater pumpout facility for holding tanks which is easily accessible to residents and transient boats alike. There are minimal problems with deliberate or accidental disposal of wastewaters into the cove.

The orientation of Perez Cove, facing northward, contributes in some degree to water quality problems. Winds are generally from the northwest and material on the surface including trash, oil, fuel or other surface material will be driven into the cove and compressed against the shoreline.

In summary, the water quality in the cove is variable, dependent upon a wide variety of input factors. However, the location of the facility in an area of good tidal circulation will tend to provide a higher water quality than other less exposed areas of the bay.

Issue

Will existing eelgrass resources in Perez Cove be affected by the proposed marina expansion?

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

The Sea World Master Plan calls for a doubling in the number of slips available to the public. This is to be accomplished by extending the length of the three existing docks by 150 feet to the north and adding a fourth floating dock with slips for larger boats approximately 150 feet to the west of the westernmost dock. A 125 foot-long floating transient dock with a 50 foot-long ramp is planned for the west side of the cove about 200 feet south of the point (refer to Figure 4-7).

The construction of the new docks and the extension of the existing docks will result in the loss of less than 6250 square feet of existing eelgrass beds out of a total estimated area of 84,700 square feet (1.9 acres). On an individual basis, the construction of the T-dock near the Atlantis Restuarant will shade, and thereby eliminate approximately 1870 square feet of the continuous band of patchy eelgrass in Perez Cove. The new marina dock will shade and eliminate approximately 2800 square feet of existing patchy eelgrass and the extension of the existing docks will shade approximately 1565 square feet of existing patches.

The construction of the new docks and the extension of the existing docks will create a permanent shade environment and reduce the potential for expansion of existing eelgrass beds within Perez Cove. If the full buildout of the marina is completed, approximately 28,500 square feet of bottom area will be shaded, resulting in the loss of less than 6250 square feet of existing eelgrass area. The majority of this loss will be in the area of the isolated patches and not the area of the main continuous bed. The resultant loss will be less than 7 percent of the existing eelgrass area.

Minimal boat speeds around the marina within Perez Cove, will protect the deeper beds from significant prop damage, and the boats will not enter the shallower areas where the contiguous eelgrass stand is present. No impacts would be associated with boat operations at the marina.

Significance of Impacts

The loss of eelgrass which will result from development of the proposed marina expansion and T-dock is considered a significant adverse impact based on the limited distribution of eelgrass within the Southern California region. The majority (93 percent) of the eelgrass within Perez Cove will, however, remain undisturbed. Much of the historic eelgrass beds found along the Southern California coastline have disappeared, due primarily to dredging and construction activities in the shallow bay environments. The last major eelgrass areas in Southern California are found in Mission Bay and San Diego Bay, thus the resource agencies (U.S. Fish and Wildlife Service, California Department of Fish and Game, National Marine Fisheries Service) consider eelgrass to be of significant regional concern. The loss of habitat area associated with construction of the T-dock represents approximately 1870 square feet (2 percent of the existing Perez Cove eelgrass). This is considered the most significant portion of the potential loss area due to the effect on the contiguous bed and could result in the loss of the northern portion of the contiguous bed. The remaining habitat area which would be shaded (approximately 4380 square feet, 5 percent) occurs in patchy areas in the central portion of the cove and eelgrass in these areas will undoubtedly be reduced. However, with the existing suitable habitat conditions in Perez Cove, much of the eelgrass area lost to shading is expected to reestablish quickly through recruitment into the undeveloped portions of the cove. While the proposed project development would affect only a minor percentage of eelgrass within Mission Bay, any loss of eelgrass must be considered significant on a cumulative basis due to its limited regional distribution.

Mitigation

For final resolution of the issues, refer to the Summary.

The loss of existing eelgrass habitat in Perez Cove associated with the proposed project was discussed at an interagency review on May 8, 1984, in conjunction with a formal consultation with the U.S. Army Corps of Engineers. The resources agencies present at that meeting considered the loss to be significant, and requested modifications be made in the project to avoid the eelgrass loss. The most effective mitigation measure is considered a project redesign to avoid the existing eelgrass beds. Recommended changes include placing the T-dock northward and out of the continuous eelgrass bed, and redesign of the the new dock to move it away from the existing patchy eelgrass area. The suggested revisions are illustrated on Figure 4-8. If these two elements are incorporated into the marina design, the project would have no significant impact on the existing eelgrass resources, and no further mitigation would be required. The modifications in marina design and T-dock location should be incorporated into the Master Plan prior to approval. No detailed engineering design of the recommended changes has been completed, however they appear to be as feasible to implement as the existing proposal. The final project design will be reviewed by the resources agencies as part of the specific permit requirements for this project. It is expected that a Section 10 permit will be required from the U.S. Army Corps of Engineers for marina construction under the Rivers and Harbors Act. If the suggested marina modifications are not incorporated into the Master Plan, mitigation acceptable to the resources agencies will have to be determined prior to permit issuance.

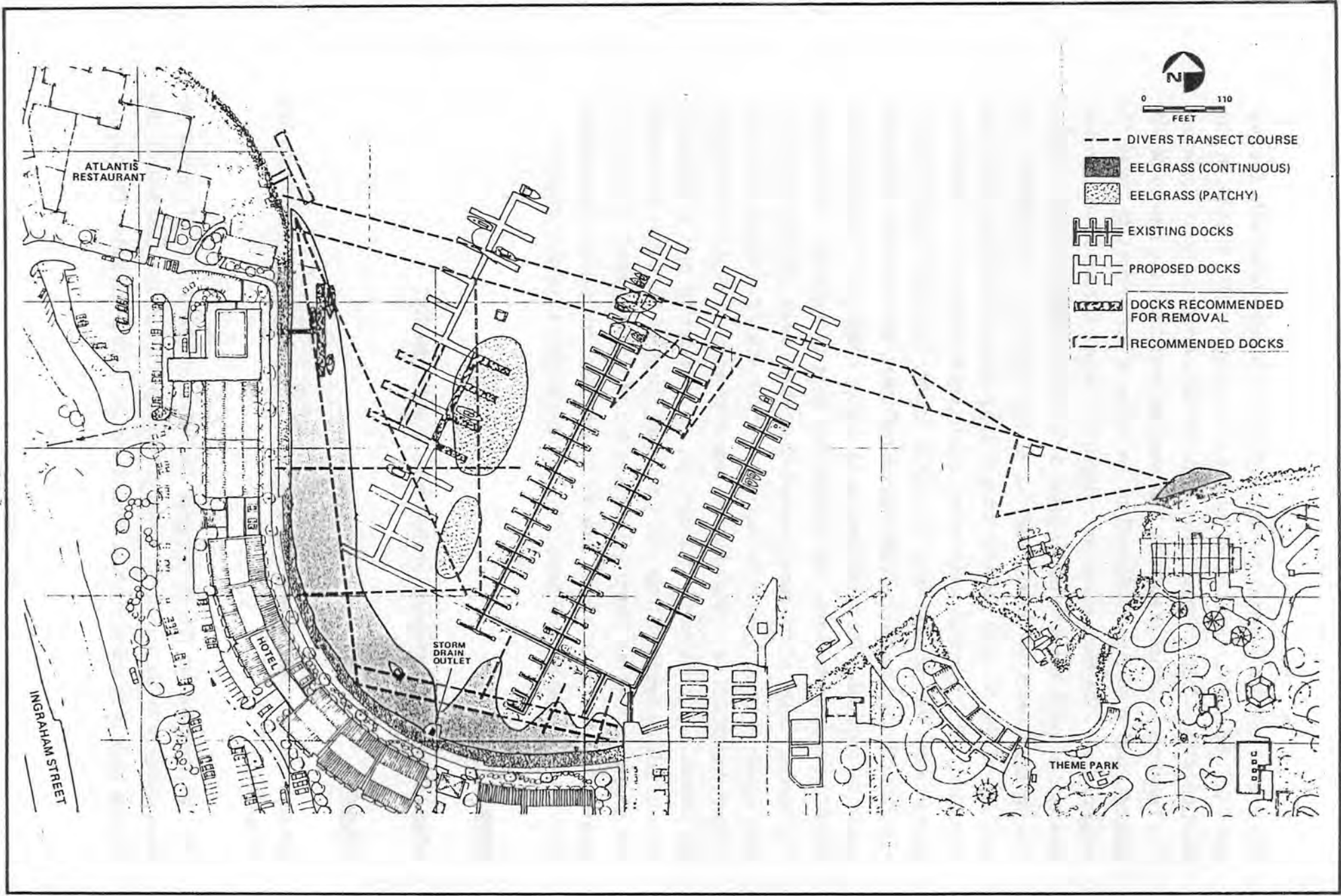
Issue

What effect will the proposed project have on water quality?

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

The construction of the new marina facilities will have a small impact on water quality in the cove. As noted previously, the major utilization of the fueling dock is by transient boat owners and not marina residents. The normal



Recommended Marina Design – Eelgrass Mitigation

FIGURE 4-8

weekend use rate for marina residents (includes stacked as well as berth storage) is 35-40 percent during the summer and 10 percent or less during the winter. With the elimination of the dry boat storage and the addition of 200 slips, boat usage will increase from 70-80 per day to potentially 100-110 per day (Dan Larson, Dockmaster, personal communication). This will incrementally add to the potential for discharge of spilled fuels and oil/grease into the basin. On a busy summer weekend, several hundred boats may be fueled at the dock of which less than half would be residents of the marina. The potential for significant water quality deterioration from the increase in the marina facility should not be high.

The increased level of boat activity has the potential to increase the illegal disposal of holding tank wastes. However, the residents have a convenient pumpout facility and have had a history of using that facility in lieu of illegal disposal. No significant impacts from holding tank spills or illegal disposal are anticipated.

Significance of Impacts

No significant impacts on water quality from the marina expansion are expected. In the event Sea World expands their wastewater discharge, an amended NPDES permit through the San Diego Regional Water Quality Control Board will be required.

Mitigation

For final resolution of the issues, refer to the Summary.

The water quality conditions previously discussed do not appear to present significant environmental impacts. The existing mechanisms such as exercising care in fueling and controlling the illegal disposal of holding tanks by the use of an accessible pumpout facility should adequately safeguard the bay waters from water quality deterioration attributable to this project.

In the event that the expansion of the theme park requires an expansion in their marine discharge, Sea World will be required to amend their existing NPDES permit through the San Diego Regional Water Quality Control Board. This would require full documentation of effluent changes and impact analysis.

C. TERRESTRIAL BIOLOGY

Recent revisions associated with this issue have been incorporated into the Summary.

Existing Conditions

Vegetation

The terrestrial habitats within the Master Plan area have been discussed in previous studies including Rieger and Beauchamp (1975) and MSA (1983). The only nonutilized or undeveloped portion of the study area is the area east of the main entrance off Sea World Drive and the new lease area (25 acres) east of and adjacent to the existing theme park. This area was reviewed by WESTEC senior biologist Mr. Stephen Lacy on April 19, 1984.

The majority of the undeveloped acreage east of the existing park is highly disturbed in character. The dominant plants are chaparral broom (Baccharis sara-throides), pampasgrass (Cortaderia sp.), coastal isocoma (Haplopappus venetus), and sea fig (Carpobrotus sp.). Other species present include little ice-plant (Gasoul nodiflorum), corn chrysanthemum (Chrysanthemum coronarium), Chinese pusley (Heliotropium curassavicum var. oculatum), everlasting (Gnaphalium beneolens), flattop buckwheat (Eriogonum fasciculatum), Australian saltbush (Atriplex semibaccata), and beach evening primrose (Camissonia cheiranthifolia ssp. suffruticosa).

The central portion of the new lease area and the immediate area adjacent to Sea World Drive are low areas where enough water accumulates to maintain salt marsh species such as glasswort (Salicornia subterminalis), alkalai heath (Frankenia grandiflora), saltgrass (Distichlis spicata), and a small amount of

brass buttons (Cotula coronopifolia). A grouping of small arroyo willows (Salix lasiolepis) is present in the east-central aspect of the new lease area.

Wildlife

Wildlife use of the disturbed new lease area is expected to be low due to the lack of herbaceous cover. Black-tailed jack rabbit (Lepus californicus) and desert cottontail (Sylvilagus audubonii) were observed as well as the vociferous Killdeer (Charadrius vociferus). The principal wildlife component on the study site is expected to be birds. Both Mission Bay and the flood control channel to the south are major wintering areas for shorebirds and waterfowl. Both of these avifaunal groups make use of the temporary wetlands and saltpans east of the new lease area but are expected to make limited use of lowland/marshy areas on the project site. A variety of raptors known from the area may utilize the project area on an intermittent basis. None are expected to nest on site but all could hunt over the property. These include Burrowing Owl (Atene cunicularia), Northern Harrier (Circus cyaneus), and Short-eared Owl (Asio flammeus). The Burrowing Owl nests farther east near Friars Road (MSA, 1983), but no nests were found onsite.

High Interest Species/Habitats

One plant species of interest which could be found onsite is Nuttall's lotus (Lotus nuttallianus). This species is listed by the California Native Plant Society (CNPS, 1980) as rare in California but common elsewhere. It is found in sandy places along the immediate coast in San Diego County and northern Lower California. This species is very common in the eastern portion of the South Shores Planning Area (MSA, 1983), but it was not observed in the new lease area. It may occur sparingly in sandier portions of the project, but since such areas are very limited in the lease area, the potential for this species to be common in the area is very low. No other sensitive plants are expected onsite. One state and federally listed endangered plant species which potentially occurs in salt marsh habitats along the San Diego coast is salt marsh bird's beak (Cordylanthus maritimus ssp. maritimus). This species is very rare in well developed marshlands and its likelihood of occurring onsite is considered very low.

A number of sensitive bird species could utilize the area. These include the state and federally listed endangered California Least Tern (*Sterna antillarum brownii*) and American Peregrine Falcon (*Falco peregrinus anatum*) and the state listed Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*). The California Least Tern historically nested at a number of locations in Mission Bay including north Fiesta Island, the Ramada Inn project site to the east near Interstate 5, and the open disturbed and salt pan areas south of Sea World Drive near Mission Bay Drive. This species is migratory arriving in the San Diego area in April and leaving in late summer. This species has not been reported to nest in the new lease area but could use the area for resting. Human activity along the Mission Bay shoreline and the lack of a sandy nesting substrate combine to retard any use of the area by this species. The American Peregrine Falcon occasionally winters in the area and has been reported in the vicinity of the adjacent flood control channel. This species could hunt over the site. The Belding's Savannah Sparrow is normally closely associated with *Salicornia* marshlands. Good nesting populations of this species have been recorded at the Kendall-Frost Mission Bay Preserve and in the San Diego River flood control channel (Massey, 1977). This species is a resident of local marshlands and two were sighted onsite in the central marsh area during an earlier survey (MSA, 1983). This species could potentially nest onsite but this has not been documented. The habitat is very marginal compared to that which exists in the adjacent flood control channel.

The Northern Harrier, Burrowing Owl and Short-eared Owl could utilize the site for hunting. All of these species are considered declining in the San Diego area (Everett, 1979) as well as statewide (Remsen, 1979).

Issue

Will the use of the eastern 25-acre lease expansion adversely affect sensitive biological resources.

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

The proposed development will eliminate the disturbed, ruderal habitats east of the existing theme park. The loss of this acreage reduces available wildlife habitat in the area including hunting areas for a number of declining raptors (Northern Harrier and Short-eared Owl). Potential nesting habitat for the Burrowing Owl will also be lost as well as nesting habitat for Killdeer.

In its current state, the lease expansion area is not considered suitable nesting habitat for California Least Terns, and has not historically been used as such. The planned development of the area would thus not impact existing nesting habitat, but would preclude the creation of potential nesting habitat in the future.

The development of the new lease area will eliminate the small extent of coastal salt marsh present onsite. This loss represents a minor reduction of potential Belding's Savannah Sparrow habitat within the region.

Significance of Impacts

The loss of the disturbed habitats within the new lease area do not represent a significant adverse affect. The site potentially supports species such as the Burrowing Owl or Least Tern predator. Because the presence of this species would conflict with the goals of providing Least Tern nesting sites within the Mission Bay area, the loss of potential Burrowing Owl habitat is not considered significant. There are ongoing negotiations between the City of San Diego and the wildlife agencies to resolve the number and locations of Least Tern nesting preserves in Mission Bay. The upland habitat present onsite could, if renovated and enhanced, potentially be utilized for Least Tern nesting. However, the site is not a current or historical nesting site for Least Terns, and is not presently being considered as a future nesting site. The development of this area for a parking lot as proposed is not considered to have any significant impact on Least Tern habitat.

The loss of the marshy habitats onsite is not considered significant. The South Shores Master Plan EIR (MSA, 1983) noted that the loss of these areas may be inconsistent with the wetlands preservation policies of the California Coastal

Commission and U.S. Fish and Wildlife Service. However, the Mission Bay LCP calls for marsh enhancement and the City of San Diego is currently working to resolve specific wetlands issued in Mission Bay as part of the LCP process. The marsh areas onsite do not warrant preservation because they are marginally developed, disjunctive from each other, and are expected to support limited wildlife use.

Mitigation

For final resolution of the issues, refer to the Summary.

No significant impacts to sensitive biological resources would be associated with use of the 25-acre lease expansion area, and no mitigation measures are necessary.

Issue

Will the proposed Perez Cove Marina expansion result in any adverse effects to the California Least Tern?

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

The marina development would eliminate some shallow surface water area which could be utilized as foraging habitat by the endangered California Least Tern. At the same time, the marina would provide an attractive protective habitat for small fish which are the mainstay of the Least Tern's diet. An increase in boat use in the bay due to the marina would potentially reduce foraging success of Least Terns by disturbing the upper water layer and driving the tern's prey species to inaccessible depths. Another potential effect of the marina development is the noise created by the increased boat use in the immediate area of a Least Tern nesting preserve across Pacific Passage at Stoney Point.

Significance of Impacts

The marina development does not adversely affect the currently proposed Least Tern Management Plan for Mission Bay. The reduction of surface water foraging habitat for the California Least Tern is not considered a significant effect due to the extent of nearshore shallow habitats about Mission Bay and in the adjacent San Diego River flood control channel. Previous observations of Least Tern foraging behavior would indicate that the species will occasionally forage about marinas, but such areas are not preferred foraging habitats (WESTEC Services, 1980; Massey and Atwood, 1981).

The increase in the type of boat use associated with a marina is not expected to cause significant adverse effects to the Least Tern or the nearby nesting preserve. At any one time only a percentage of the boats in the marina would be active in the bay and those boats are generally not the type which potentially disturb surface waters to a significant degree such as speedboats for water skiing. Currently there is no evidence to suggest that surface water habitat is a limiting resource to the recovery of the Least Tern in Mission Bay (Jehl, 1979). Also, given the types of boats associated with a marina and the existing boat use in the bay, the noise associated with the increased boat use is not considered significant. Traffic noise on major roadways and aircraft at Lindbergh Field and NAS North Island have not deterred the species from nesting adjacent to these facilities in the past.

Mitigation

For final resolution of the issues, refer to the Summary.

The proposed marina expansion would not have any significant adverse impacts on the Least Tern, including the nesting preserve at Stoney Point and foraging capabilities. No mitigation measures are necessary.

D. VISUAL/LANDSCAPING

Recent revisions associated with this issue have been incorporated into the Summary.

Existing Conditions

Sea World occupies relatively low coastal lands on Mission Bay. The theme park, excluding the PSA tower which is visible from all parts of the bay, can be seen from nearby Interstate 5. The freeway offers a fairly broad, flat view of the property. Sea World is also visible from adjacent roadways, many of which are elevated ramp-type interchanges. Sea World's visual exposure, from a distance and also close-up, is designed to be attractive and aesthetically pleasing. Effort is placed upon maintaining its visual appeal to both visitors who enter the site and passers-by, who someday may visit. Landscaping has accordingly been designed to be aesthetically pleasing, act as a visual barrier between the parking lot and off-site locations as well as between the theme park and parking lot, and conform to the Mission Bay Park Design Principals. Additionally, vegetation is designed to be well suited to the sandy soils and microclimate of Mission Bay and be affordable to plant in large quantities.

Landscaping within the parking lots are varied. On the asphalt paved portion of the theme park's parking lot rustyleaf fig (Ficus rubiginosa) is planted intermittently (see Figure 2-3). In the park's overflow parking areas where decomposed granite paves the lot, New Zealand Christmas trees (Metrosideros excelsa) are planted at 50 foot intervals in three east-west trending rows. Along Perez Cove Way and the perimeter adjacent to Sea World Drive a vegetative mix is designed to screen views into the property. Planted here are varieties of eucalyptus (Eucalyptus ssp.) and acacia (such as Willow Acacia (Acacia saligna)) and pampass grass (Cortaderia jubata). The intent of these larger, denser species is to create a complete visual barrier upon maturation of the species. While this has not yet been achieved, recent barrier plantings are expected to block onsite/offsite views of the property in the future.

Landscaping around the Atlantis is extensive and includes many ornamental varieties. Since no effective change will occur to the restaurant, the plethora of species need not be listed. Barrier planting occurs along the Atlantis Restaurant and parking area. The New Zealand Christmas tree, tobira (Pittosporum tobira), mock orange (Philadelphus sp.), Monterey pine (Pinus radiata), Torrey pine (Pinus torreyana) and various eucalyptus varieties all provide

landscape buffering. Between the Atlantis and Ingraham Street barrier planting restricts both visual and noise access.

The Mission Bay Park Master Plan recommends development be guided by the "Mission Bay Park Design Principals" and its supplement, "Instructions to Lessees Covering Preparation and Submission of Construction Plans." Among general guidelines, an entire section is devoted to landscaping. Sea World incorporates many of these recommendations into their landscaping plans.

In the adjacent areas surrounding Sea World visual quality is quite varied. To the east South Shores remains an undeveloped, vacant, low coastal expanse of land planned for future parkland, some commercial uses, and boat launching facilities. According to the draft South Shores Master Plan, Sea World's property will be adjoining some parking area and open parkland. Recent proposals including the possible relocation of the San Diego Mission Bay Boat and Ski Club to South Shores and minor boundary adjustments along the eastern border of Sea World may alter the draft South Shores Plan. Extensive freeway vegetation exists to the southwest of Sea World due to the numerous roadways, freeway-like interchanges and ramps. Because several of these roads parallel the border of Sea World, they effectively act as additional landscape buffering.

Plans to replace the Ingraham Street Bridge in FY 1985 will result in the loss of landscaping in the area if the intersection of Ingraham Street and Perez Cove Way is realigned. While designs have not been finalized, this realignment is expected. Bridge construction will also affect land underneath the bridge, where newly created land may be planted with landscaping. Land uses here have also not been decided and may not be until late 1984 or early 1985. Alternatives include a pedestrian walkway, a bikeway, additional parking area, a maintenance and emergency vehicle access road or a fishing locale. With most of these options landscaping would most likely be used to enhance the visual aspect of the land use.

Issue

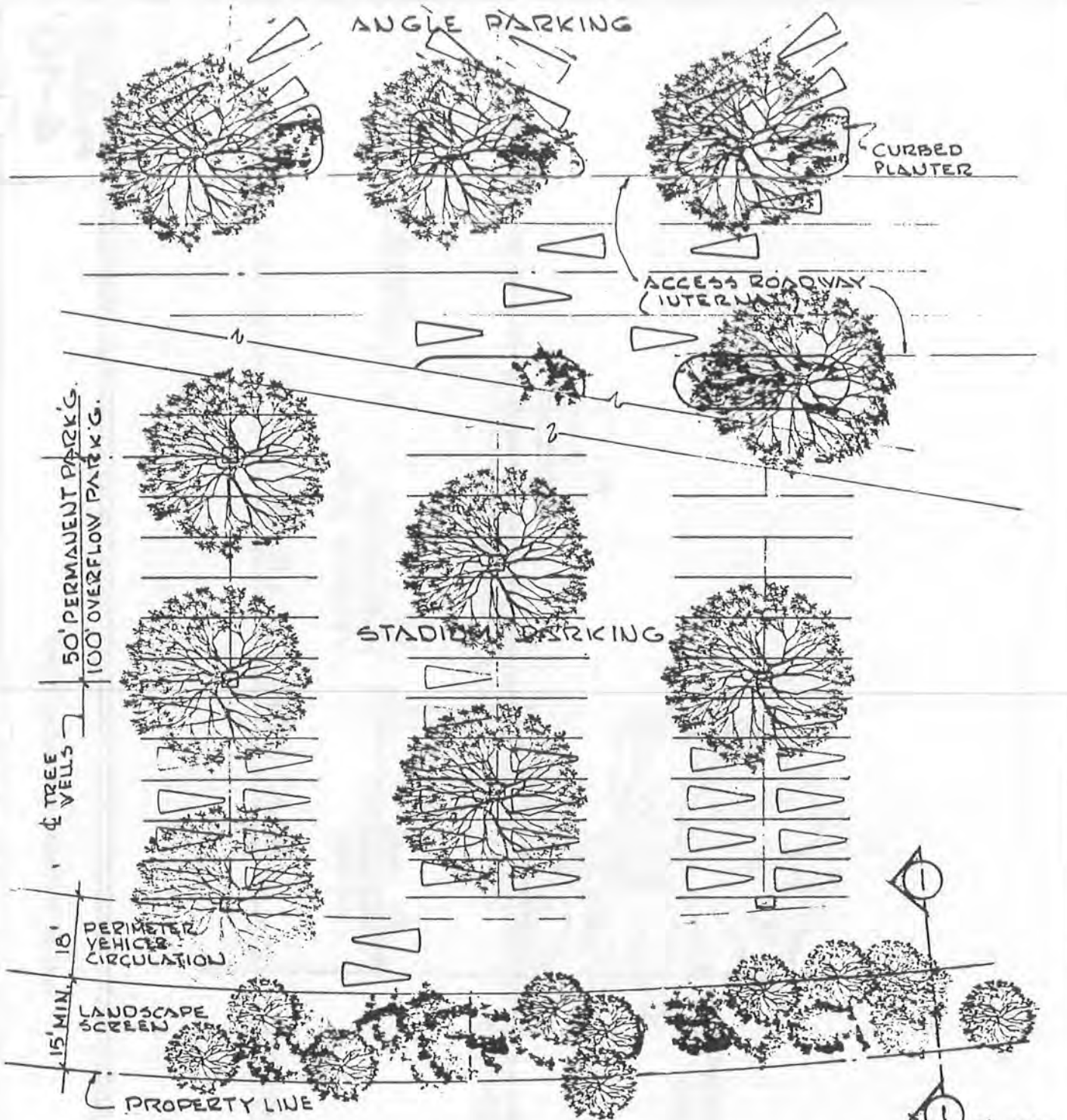
Will landscape treatments along the project boundaries maintain and enhance the beauty of Mission Bay Park? Will border landscaping be well integrated with street, bikeway or other required improvements?

Impact

Recent revisions associated with this issue have been incorporated into the Summary.

Sea World plans on continuing their present landscaping policy and direction with the exception of pampass grass. No pampass grass would be added under the proposed Master Plan. Landscaping within the theme park itself, entrance to which requires an admission fee, would be similar to the present landscaping. The exhibit area is not generally visible from offsite locations and thus does not affect the visual quality of the area. Perimeter landscaping is designed to provide a visual barrier from adjacent roadways. This intent also applies to the perimeter of the maintenance yard and plant nursery, the exterior of which will be densely landscaped. Additional plants have recently been added to the existing perimeter to enhance the effectiveness of screening. New perimeters (adjacent to the 25-acre lease expansion) would be planted in a similar manner as development occurs on this new lease area. The perimeter landscape screen would be 15 feet in width. Acacia and eucalyptus would be planted approximately every 6-1/2 feet, resulting in a tall tree every 3-1/4 feet. Figures 4-9 and 4-10 show the proposed parking lot and perimeter landscaping concepts. Barrier planting along the eastern perimeter would approximate the southern perimeter landscaping.

Interior parking lot landscaping would be maintained. The recently acquired 25 acres to the east and the unimproved section east of the main entrance would be parking areas planted similarly to the existing decomposed granite parking lot. New Zealand Christmas trees (Metrosideros excelsa) or rustyleaf figs (ficus rubiginosa) would be planted within these parking areas. Curb planters would contain the above trees as well as natal plum and a variety of



PARKING LOT PLANTING

1. TREE WELLS = RUSTY LEAF FIG OR NEW ZEALAND CHRISTMAS TREE
2. CURBED PLANTERS = TREES AS ABOVE + NATAL PLUM & FLOWERING PLANTS

LANDSCAPE SCREEN PLANTING

A MIXTURE OF VARIOUS VARIETIES OF EUCALYPTUS & ACACIA

SECTION THRU PLANT'S SCREEN

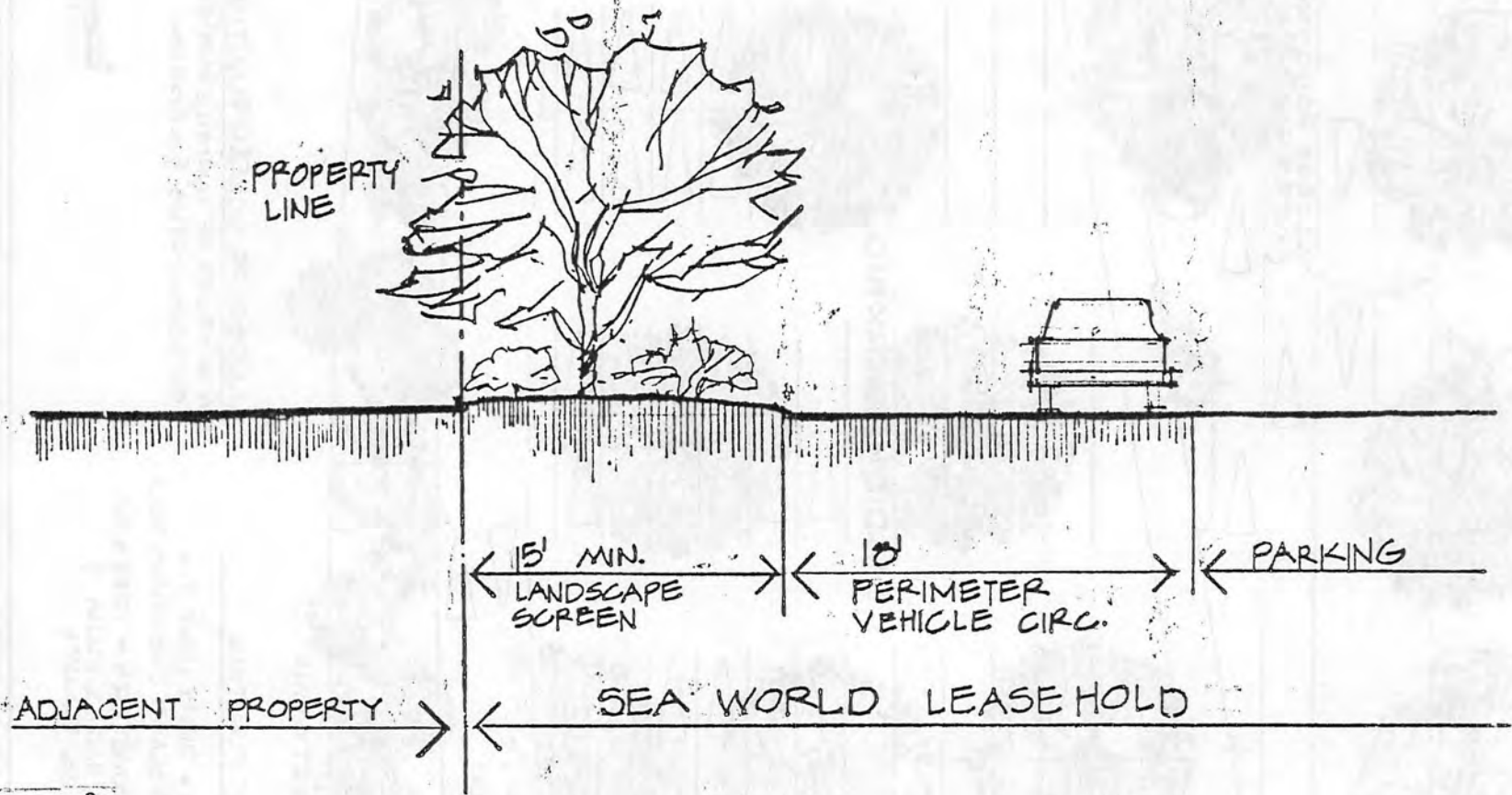


Sea World Parking Lot Landscape Plan

FIGURE 4-9



4-10
SECTION



Section Through Landscaping Screen

**FIGURE
4-10**

flowering plants. While the central and waterfront landscaping at the Atlantis will remain unchanged, the landscaping along Ingraham Street will necessarily be altered due to the bridge replacement. Landscaping plans for this perimeter have not been finalized, but because of the existing extensive landscaping in the Atlantis vicinity, no impacts are expected with bridge replacement. Hotel landscaping has also not been finalized, since the details of the hotel design are still in process. This landscaping would be expected to compliment the tourist-oriented appearance of the hotel. Because Sea World's Master Plan covers a lengthy 50 year period, many of the specifics remain in the conceptual stage to be finalized at the project level.

Phasing of landscaping would be concurrent with development according to Sea World's Master Plan. Most of the landscaping would be planted in the first phase, scheduled to begin upon Master Plan approval. In Phase One the new main entrance and hotel would be built, the marina addition would be constructed as well as two parking areas to the southeast of the exhibit area, dry boat storage would be converted to office space and parking area, and the exhibit area would be expanded as outlined on Table 2-2. Thus landscaping improvements would be provided as development proceeds in these areas. Phases Two and Three mainly encompass exhibit area improvements to the interior of the theme park.

The Environmental Quality Division of the City of San Diego has expressed concern over the extent of perimeter and parking lot landscaping. Along Perez Cove Way and Sea World Drive the existing planted areas currently afford views into the large parking lot. While Sea World has no present plans to add more trees to the existing parking lots, visual access to these lots will be prevented once the trees and bushes along the roadways reach maturity. Additionally, extensive recent planting of young shrubs will grow to block this visual access. The length of this time is dependent upon climatic conditions and the levels of care given to the vegetation. Sea World has an active landscaping department providing maintenance and replacement services to assure the quality of landscaping remains high. The two new parking lots would receive the same level of care. Over the short term, until the perimeter landscaping is established, the new parking areas in the eastern 25-acre lease

expansion area would likely be visible from offsite locations (particularly South Shores and Sea World Drive). The improvement of this internal area would be phased as necessitated by increases in attendance, and would be likely to take the entire 50 year lease period for full development. As parking lot construction proceeds, the lot would be planted with New Zealand Christmas trees placed 50 feet apart. While these trees would provide some visual relief from the expanse of paving, their placement would not eliminate the visibility of the large surface area of the lots. The perimeter landscaping at maturity, however, is expected to ultimately provide a visual buffer screening the lots from view.

Significance of Impact

The new parking lot areas at Sea World would be visible from adjacent offsite areas until the planned perimeter landscaping matures sufficiently to provide a visual screen. The parking areas would be planted to break up the expanse of paving surface, which will help to "soften" the views of the parking lot areas. Additionally, paving would be phased over several years rather than completed at once allowing additional time for barrier vegetation to mature. The proposed parking lot development may result in short term impacts until the landscape screening is established, but no significant impacts are anticipated if perimeter landscaping is planted as indicated on the Master Plan.

Mitigation

For final resolution of the issues, refer to the Summary.

The Sea World Master Plan has incorporated a landscaped perimeter along the entire eastern and southern leasehold boundary. The species proposed for this landscaping would be similar to the plant palette used along the southern perimeter of the existing leasehold. Detailed designs should be provided to the City for review prior to implementation. This proposed barrier planting would ultimately screen the parking lots from adjacent offsite areas, and would mitigate any potential for impacts to insignificance.

E. GEOLOGY

Recent revisions associated with this issue have been incorporated into the Summary.

Existing Conditions

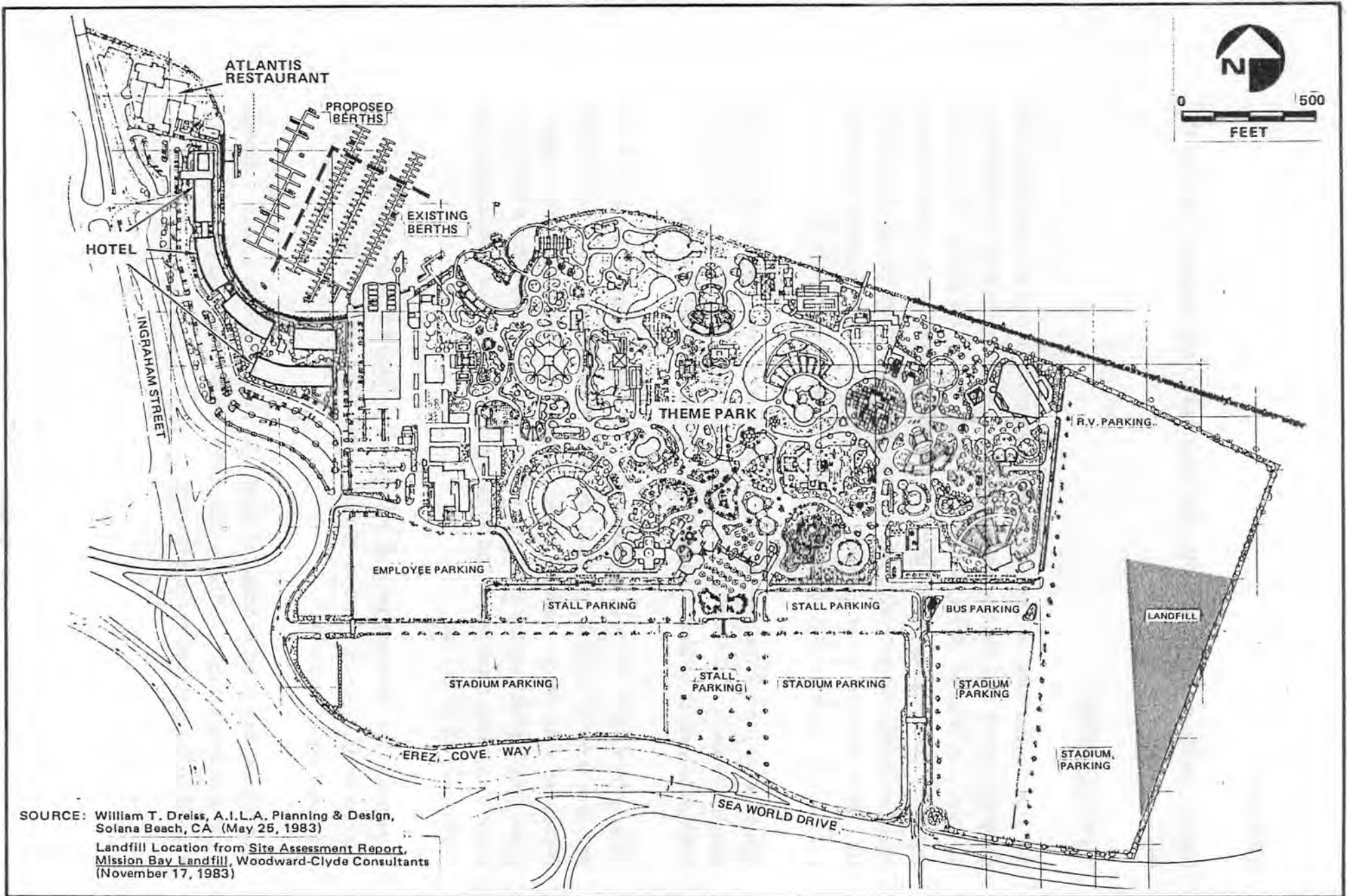
Sea World's additional 25-acre lease area proposed for use as a parking lot is situated east of Sea World's currently developed boundary and is bounded to the north by Mission Bay and to the south by Sea World Drive. The site is relatively flat ranging in elevation from approximately 13 to 21 feet above mean sea level. An extensive site-assessment report of the Mission Bay Landfill, which partially extends onto the subject parcel, was prepared by Woodward-Clyde Consultants (1983) and has been reviewed for this project.

The 25-acre lease expansion area is underlain by alluvial deltaic soils. This alluvium consists of interbedded silty sands, silts, and clays. This layer extends to a depth of about 100 feet below the existing land surface.

Above the alluvial layer in approximately the eastern-central portion of the site is a layer of landfill material (refer to Figure 4-11). The soil consists mainly of silty sand. Landfill material is mostly newspaper, wood, paper, glass, metal, plastic, grass and tree cuttings. On the average, the waste fill is about 65 percent trash debris and 35 percent silty sand. The landfill thickness is generally 15 to 20 feet.

Overlaying the proposed parking lot site is hydraulic fill (dredged material) varying in depth from 1-1/2 to 16 feet. This fill consists of fine to medium sands and shell fragments.

The Mission Bay Landfill operated from 1952 through 1959 as a Class I disposal site. Due to the nature of the landfill there are several areas of concern with respect to the proposed parking lot site.



Approximate Landfill Boundaries on Project Site

**FIGURE
4-11**

Methane Generation: The Mission Bay Landfill site is currently generating methane gases. Methane is a highly explosive gas produced through the decomposition of the landfill's materials. A combustible condition can be created if the gas is allowed to accumulate in subsurface voids or "pockets" covered by impervious structures (buildings, parking lots, roads, etc.). Under existing conditions the methane which migrates to the surface is able to disperse gradually because there are no structures restricting the flow of methane into the atmosphere. Therefore, the site is not presently considered an explosive threat.

The rate of methane generation will change according to the landfill's moisture level, and the varying decomposition rate of waste materials. An increase in the water infiltration rate would increase the decomposition rate and thereby produce more methane.

Migration of methane gases towards the surface is not always vertical. Some outward migration is possible, therefore methane can be located outside the landfill boundaries. Migration of methane at the Mission Bay landfill could occur within an approximate 100-foot radius.

Settling: An additional concern with construction over landfill areas is differential settling of landfill material. Differential settling occurs as a result of the varying decomposition rate of landfill waste materials; settling within a landfill will not be uniform. An accelerated rate of decomposition, which might be caused by an increase in the water infiltration rate affecting moisture content, would generally increase settling. Due to materials with varying decomposition rates, settling within the Mission Bay landfill is expected to continue for 50 to 100 years (Woodward-Clyde Consultants, 1983).

Toxic Materials: Although there is a wide variety of chemical substances within the Mission Bay landfill, the chemical analyses of the landfill site concluded that heavy metals and hazardous organic chemicals are not present in unusually large concentrations. Health hazards to humans from the Mission Bay Landfill waste are not considered significant. The conclusion is based on the following factors: 1) low potential for migration of chemicals; 2) few

pathways to human exposure (inhalation of gases or contaminated dust particles, and outer body contact); and 3) low concentration of contaminants within the landfill site (Woodward-Clyde Consultants, 1983).

The landfill wastes are potential contaminants to aquatic organisms in Mission Bay. If migration of chemical substances were to occur, and toxic levels were reached, the marine organisms could be adversely affected. The landfill is not currently considered a source of hazardous levels of contaminants into Mission Bay. However, semi-annual monitoring of water quality and testing for priority pollutants adjacent to the landfill is recommended by the Woodward-Clyde study to provide data on any future release of chemical substances.

Issue

Will the existence of an abandoned landfill under portions of the easterly 25-acre lease expansion present constraints to use of this land?

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

Development over the majority of the 25-acre lease expansion would not be subject to any constraints associated with the landfill. However, for that portion of the expanded lease area underlain by the old landfill (Figure 4-9) and an approximate 100-foot radius around it, some restrictions on use would be required. The three areas of potential concern are addressed in the following paragraphs, including accumulation of methane gas, differential settling and contact with toxic materials.

Methane Gas: Methane gas can accumulate under conditions where the ground is covered with an impermeable surface, which effectively "caps" the methane release. Impermeable conditions can be associated with buildings, various types of paving or other structural improvement over the landfill area.

The master plan for Sea World as proposed would use decomposed granite (dg) as a surface cover for the parking lot in the 25-acre expansion area. A dg surface is relatively permeable, and would not substantially restrict gas movement through the surface such that it can dissipate into the air. The composition of the dg surface will determine the actual permeability of the parking lot. Because this portion of the parking area would not be improved until a later phase (5-10 years) additional information regarding the paving material would need to be provided prior to development.

If asphalt or concrete surfaces were to be used in this parking lot area, there would be a potential for accumulation, trapping, and migration of methane gas due to the impervious nature of the surface material. These materials could pose potential adverse impacts. Under these conditions a mitigation program such as monitoring the methane would be required in order to minimize the potential for adverse health and safety impacts. It is recommended that additional studies be undertaken to provide detailed site-specific information concerning possible methane impacts.

Settling: Areas of differential settling may occur at the landfill due to varying decomposition rates of the organic materials and could affect the portion of the parking lot over the landfill. This settling would be gradual and there would be no constraint to use of the area as a parking lot, although it may create a need for increased maintenance of the parking lot.

Toxic Materials: During site grading, toxic materials could be exposed if cutting occurs below the hydraulic fill and into the landfill. No detailed grading plans are available at this time, but Sea World anticipates that grading for the parking lot would involve only a fill operation. No impacts would be associated with minor filling over the landfill, such as would be necessary for parking lot construction. If cutting is employed, additional testing to more accurately determine the landfill's depth in this location would be necessary. If it were determined that cutting would penetrate the landfill site, safety precautions would likely be required. These could include recommendations that workers wear protective clothing such as gloves and masks, and that there be monitoring for toxic and explosive gasses. No problems are anticipated if grading involves only fill or does not penetrate the landfill.

Exposure of humans could possibly occur through deep-rooted trees which penetrate the landfill. Depending on the depth of excavation, planting the trees could bring to the surface contaminated soil, or chemicals could migrate towards the surface. Gardeners could potentially be adversely affected, therefore it is recommended that they wear protective clothing such as gloves.

In accordance with California state law, a minimum 2 foot cover is required over the landfill. Generally, the hydraulic fill is greater than the required cover, however, an investigation should be conducted to determine areas where the cover may be less than 2 feet. These areas should be covered with compacted fill.

Significance of Impacts

Methane Gas: Methane gas buildup could create potentially significant impacts due to coverage of the landfill area with impervious structures, as an accumulation of a combustible level of methane could occur. If permeable surface materials are used (such as dg, as currently proposed) which would allow methane gas to gradually dissipate and not accumulate under the surface, no significant impacts would occur. However, until the actual paving materials are specified (at the time construction is planned) there is considered to be a potential for significant impacts.

Settling: Differential settling is a potential impact to pedestrian and vehicular use of the land. However, because of the varying rate of decomposition of landfill materials, differential settling should be gradual. Given the overlying land use; a parking lot covered with dg, significant impacts would not occur.

Toxic Materials: Minimal impacts are expected from toxic materials because of the low potential for human contact. However, if the landfill is penetrated, through grading operations or landscaping activities, potentially significant impacts could result.

Mitigation

For final resolution of the issues, refer to the Summary.

It is recommended that the parking lot allow sufficient openings for methane gas to escape. This can be accomplished by paving the parking lot with a permeable surface (such as dg), as well as planting vegetation. These measures, which have been included as part of the project, would reduce the potential impact that would be associated with methane buildup. If the landfill is penetrated, monitoring of methane would likely be recommended, and other hazardous vapors could need to be monitored using an indicator sampling, or continuous monitor alarms.

Prior to construction of a parking lot over the landfill and areas immediately adjacent to the landfill (Figure 4-9), additional studies should be completed, and their recommendations followed by Sea World. Some items to be addressed are: 1) permeability of the materials to be used in the parking lot surface; 2) changes in methane gas migration patterns, including cumulative impacts from this project and the hotel project on the east end of the landfill; 3) monitoring procedures proposed to check methane concentration at and near the parking area over time (if necessary); and 4) any safety precautions considered necessary during construction of the parking lot.

The requirement for detailed studies at the time any grading or construction over the landfill is to occur should be made a condition of the master plan, to assure that potential impacts would be considered. All recommendations of the supplemental study necessary to avoid impacts should be required to be implemented prior to grading or construction. These requirements would permit mitigation of the potential impacts to insignificance.

F. DRY BOAT STORAGE

Recent revisions associated with this issue have been incorporated into the Summary.

Existing Conditions

The "Local Coastal Program Addendum of the Mission Bay Master Plan for Land and Water Use" cites an inadequacy of existing dry boat storage areas (page 24). The addendum, published in January of 1982, states the provision of over 4500 dry storage spaces by private marinas in Mission Bay Park. No dry boat storage demand figures are cited. The Plan recommends on page 24:

including "provision for dry storage of boats in any future marina leases" (p. 86 Mission Bay Master Plan). Public moorings in Mariner's Basin Santa Barbara and San Juan Coves, are due to be evaluated for future phasing out as the demand for recreation water grows and additional private storage areas become available (p. 85 Mission Bay Master Plan).

Currently there exist approximately 820 dry boat storage spaces in Mission Bay. These spaces are identified on Table 4-3. Dry boat storage facilities are available at several commercial leaseholds in the park. Campland on the Bay, located off of Rose Creek Inlet on Pacific Beach Drive, is presently storing a total of 294 craft. While they have capacity for approximately 408 craft, 80 of these spaces are normally allocated to recreational vehicle storage. In Campland's uncovered lot most of the stored sailboats are catamarans, a wide, twin-hulled sailboat. The indoor storage is limited to power boats up to 22 feet in length. Campland has a launch service for this storage facility. The catamaran storage lot has a high occupancy rate of almost 100 percent year round and stores catamarans up to 20 feet in length. Mission Bay Marina, located on Quivara Way in the southwest corner of the bay, stores up to 50 boats of a maximum 31 feet in length.

Sea World is presently storing 76 power boats between 16 and 20 feet in length, 33 power boats between 21 and 24 feet, and 4 power boats between 25 and 28 feet. Of their stored sailboats, one is between 20 and 24 feet and the other is between 25 and 28 feet in length. Sea World's facilities are located on the southeast shore of Perez Cove and extend south by about 325 feet. The covered warehouse-type building of approximately 40,000 square feet and the parking lot south of it hold up to 130 boats and are filled

Table 4-3

MISSION BAY PARK DRY BOAT STORAGE FACILITIES

	<u>Sailboats</u>	<u>Power Boats</u>	<u>RVs</u>	<u>Total</u>	<u>Capacity</u>	<u>Normal Winter Occupancy Rate</u>	<u>Normal Summer Occupancy Rate</u>
Sea World Marina Covered and Uncovered	2	113	0	115	130	90%	100%
Campland on the Bay Uncovered Lot	12	48	60	120	160	70%	80%
Inside Warehouse	0	84	0	84	98	70%	100%
Uncovered Catamaran Lot	150	0	0	150	150	95%	100%
Mission Bay Marina Uncovered Lot	20	20	0	40	50	50%	100%
Beach Mooring Bars Mariner's Basin					80		
Santa Barbara Cove		N/A			75	N/A	
San Juan Cove					55		
Santa Clara Cove					25		
Average						75%	96%
TOTAL					823		

to capacity in the summer. The boats here range in size from 16 to 28 feet and rest on their own trailers. During winter months dry storage occupancy drops by, at most, 10 percent. Launch facilities are available to these crafts, as well as to the general public, by an overhead hoist, or crane launch. Eighty percent of the dry boat storage customers use the launch facilities. The crane is restricted to power boat users only and can hold a maximum of 1-3/4 tons and 23 feet in length. Although both dry storage customers and the general public pay a fee for this launch service, the fee to the General Public is much higher, resulting in a low general public usage rate of approximately 18 launches per year. Conversely, marina customers use the launch approximately 450 times per year. The operation rate is approximately five to ten launches per day in the summer and two to four launches per day in the winter. Sea World originally acquired the dry boat storage facilities when it first leased the marina lands. In addition to the storage facilities they acquired a boat sales and repair operation. While Sea World never considered operating the storage facilities on a permanent basis, in the short term this was their highest and best use.

The last four facilities listed on Table 4-3, the beach mooring bars, are operated by the City of San Diego and will be limited to boats up to a maximum of 10 feet in length and 4 feet in beam (width) on December 31, 1984. These moorings are designed to provide shore boat, or tender storage, for individuals having a vessel at an authorized mooring in the waters of Mission Bay Park. The craft moored on the bars include dinghies providing access to larger boats anchored in the bay, which is the intended use of the moorings, and catamarans, which will be prohibited beginning December 31, 1984.

No boats may be stored on any other Mission Bay beaches and, as of the summer of 1984, beached boats have been ticketed with citations. Beach use is being more strictly regulated since the prolonged storage of a large number of boats on the beaches obstructs other uses and views, prohibits beach cleaning, and causes excessive noise as the wind slaps the halyards against aluminum masts. Use of the beaches for dead storage of abandoned boats also creates safety hazards. A Subcommittee on Boat Beaching and Storage, formed in 1983 to investigate the prolonged beach storage of boats, initially

determined that a contributing factor was limited acceptable dry boat storage. In their subsequent research of the issue they established that the boats being stored on the beaches were catamarans and similar small sailboats. They also established that Mission Bay Park storage space for these boats:

was sufficient to handle current needs. The Subcommittee agreed that at some point in the future, more storage space may be required. When an additional need is identified, the Mission Bay Park Committee can address the question of potential locations and the means for providing the storage capacity. Following the presentation from the Subcommittee Chairman, the Mission Bay Park Committee unanimously passed a motion that the Committee forward to the Park and Recreation Board the finding that there is sufficient dry boat storage area within Mission Bay Park available on leased property to handle the present needs (minutes from report to the Park and Recreation Board, October 10, 1983).

The storage space for catamarans and similar types of boats may also be used by other boats, although catamarans are generally limited to specific storage space due to their wide beam. Given dry boat storage facilities' high summer occupancy levels and the increased number of boat owners looking for storage for their boats that will be displaced from the mooring bars and beaches, a corresponding rise in dry boat storage demand can be expected as early as this summer and assuredly by the summer of 1985.

Alternative forms of dry boat storage are available. Outside of Mission Bay, boat storage facilities and self serve storage warehouses are available. A boat owner may store their boat in a garage or backyard. Facilities of this type do not work well for boats over 25 feet or catamarans, since the bulk of the boat and/or mast is awkward on a trailer. Whether these and other alternatives would satisfy the expected demand for dry boat storage can only be assessed by examining such market dynamics as the availability, cost and convenience of alternatives, how changes in the supply affect the number of boatowners seeking dry boat storage, and related supply and demand factors. This type of market information is not readily available and is beyond the scope of this document.

Issue

Would the deletion of dry boat storage facilities from Perez Cove adversely affect the adequacy of such facilities in Mission Bay.

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

Sea World's Master Plan includes removal of 130 dry boat storage spaces. The spaces are presently being rented by owners of 113 power boats and 2 sailboats. Of the power boats, 109 are under 25 feet and thus can be easily transported by trailer. They could be stored elsewhere, either on or off a trailer, given suitable facilities. Four power boats between 25 and 28 feet in length and two sailboats between 20 and 28 feet would not be as adaptable to relocation. The sailboats' masts could need to be removed during transportation and storage and both types of boats could require hoist facilities rather than launch ramps when entering or exiting the water. Some of the boats could be stored in the new 200 water slips that Sea World plans to build, although this type of storage is not equivalent in kind to dry boat storage, and is not considered a replacement for dry boat storage.

The lower winter occupancy rates at Campland on the Bay and Mission Bay marina would allow storage for some of the displaced boats, but not all. Approximately 25 boats would be left without spaces. There is virtually no summer storage space available to store the displaced Sea World boats. Since all dry boat storage facilities would then be at capacity year round, an impact to dry boat storage customers, who would be forced to seek alternative forms of storage outside of Mission Bay Park, would occur. Because the availability of alternatives is not known and is not within the scope of this EIR, how well the market in the San Diego region can supply these displaced dry boat storage customers is not known.

In the long term the loss of 130 spaces represents a cumulative impact to dry boat storage in Mission Bay. All of the land allowed to be leased in Mission Bay Park is being leased, and thus no more would be available to be leased for dry boat storage. Furthermore, as the San Diego region grows, the visitor use of Mission Bay Park also grows. The park's main recreational orientation centers around water activities. The demand for support facilities for water activities, such as dry boat storage, can only be expected to increase over time. Finally, assuming offsite storage facilities can meet the increasing demand for storage in the future, new adverse effects would be created by offsite facilities. Traffic into the park would increase due to the "double-car" effect of pulling a boat trailer. The same effect would apply to parking availability. Launch ramps could also experience breakdowns in levels of service, since public ramps would be used in place of private hoists or ramps.

Significance of Impacts

The Mission Bay Master Plan states an inadequacy of existing dry boat storage facilities, although no statistics regarding actual demand are available to document this shortage. The Master Plan also does not explicitly nor implicitly prohibit the removal of dry boat storage facilities. A subcommittee of the Mission Bay Park Committee researched dry boat storage facilities in 1983 and stated they were adequate. Given conflicting data, the only real market indicators available are the estimates listed in Table 4-3. A shortage of existing facilities appears imminent during the summer months and possibly during the winter months. The magnitude of these shortages is impossible to predict without further market analysis. Sea World's facilities represent 16 percent of the total available dry boat storage in Mission Bay. This storage space is a significant portion of that total, and while offsite space may be readily available, the loss of Sea World's 130 spaces represents a significant impact to Mission Bay Park dry boat storage facilities on a cumulative basis.

Mitigation

For final resolution of the issues, refer to the Summary.

No mitigation measure is available to Sea World other than the alternative of providing dry boat storage in its present form, as described in Section V on Alternatives. A mitigation measure available to the City of San Diego involves amendment of the South Shores Master Plan to include dry boat storage facilities managed by the San Diego Mission Bay Boat and Ski Club. The South Shores Master Plan is already in the process of being amended to include the proposed relocation of the boat and ski club. At their present location and according to their lease with the City of San Diego, the club offers approximately 50 dry boat storage spaces to its members. The demand is high for storage space and is a main factor in attracting members. The club is quite amenable to offering more dry boat storage space to not only members but also to the general public. If the club's lease with the City of San Diego were to be amended to include more dry boat storage facilities, the loss of Sea World's spaces could be mitigated to insignificance.

G. AIR QUALITY

Recent revisions associated with this issue have been incorporated into the Summary.

Existing Conditions

Sea World is located in the level, open coastal wetlands of Mission Bay adjacent to the Pacific Ocean and its predominantly westerly sea breezes. Air quality in this area, as well as the San Diego region, experiences seasonal variability. More stable meteorological conditions during the fall and winter reduce dispersion of atmospheric pollutants, thereby increasing local concentrations and decreasing air quality. Surface inversions, known as Santa Ana wind conditions, also contribute to high pollutant concentrations during the spring and fall.

An extensive network of roadways serve the south-central portion of Mission Bay Park, where Sea World is located. Ingraham Street and Sea World Drive border the western and southern borders, respectively. West Mission Bay Drive and Sunset Cliffs Boulevard lead into the area from the northwest and

southwest, respectively. Interstate 8 provides access from the east while Interstate 5 brings vehicles from the north and south. Vehicular traffic on these routes contribute incrementally to the degradation of local air quality.

Within Sea World itself, approximately 70 acres of parking area serves visitors to the theme park, restaurant and marina. No queues form at the Atlantis or marina.

The theme park is open to the public year-round from 9:00 a.m. until dusk. Most visitors arrive between 10:30 a.m. and 1:00 p.m. and depart between 4:00 p.m. and dusk. At the theme park, no parking fee is collected although pamphlets are distributed to incoming cars at the main entrance on Sea World Way. A second entrance is located on Perez Cove Way. Queues of entering vehicles do not form within the park itself since in such a situation the attendants will cease distributing pamphlets so that vehicles may enter unimpeded. Queues do form at the intersection of Sea World Drive and Sea World Way. In the high volume summer months of July and August queues will form on Sea World Drive intermittently between 11:00 a.m. and 12:30 p.m. The maximum queue length is 20 cars long, occurring several times during this hour and a half period. During the Christmas vacation period in late December, queues occasionally form as most visitors, taking advantage of the shortened daylight hours, depart at dusk. As a result of these infrequent and relatively short queues, little if any degradation of air quality occurs. It is anticipated that these queues will decrease with the recommended replacement of the Sea World Drive/Sea World Way traffic light, further lessening queues and therefore air quality degradation.

Issue

Would emissions from mobile sources significantly affect air quality and the ability of the region to achieve federal or state air quality standards?

Impacts

Recent revisions associated with this issue have been incorporated into the Summary.

Sea World's proposed Master Plan indicates two theme park entrances, both of which would control entry with parking lot kiosks. These kiosks are intended for the distribution of park information, not the collection of parking fees. The entrances would be located in their same present locations. Sea World expects an increase in attendance of one million visitors with the completion of the proposed Master Plan. On an average summer weekday approximately 5653 vehicles would be anticipated.

Most of these vehicles would arrive at the park by Sea World Drive, where a traffic light controls flow onto Sea World Way. The restriction of traffic flow at both the traffic light and the two parking lot kiosks may create queues as vehicles enter or exit the area. This potential is not great however, since the present flow of traffic experiences queues so infrequently and the increase in vehicles is not substantial. Nonetheless, to examine possible air quality impacts arising from potential breakdowns in the levels of service at nearby intersections and on the project site, a worst case scenario was developed using the California Air Resources Board's Emfac6D model and California composite emission rate for cars in 1990. Levels of carbon monoxide (CO), the auto exhaust emission of greatest impact to regional air quality, were calculated assuming the following vehicle operational characteristics: 22.9 percent cold starts, 21.8 percent hot starts and 55.3 percent hot stabilized. A lengthy queue of 50 cars idling for a one hour period was assumed. Wind speed was assumed at a stable 2.5 meters per second. The resulting CO concentration, including the ambient background levels, was calculated to be 3.36 parts per million, representing only 10 percent of the Air Resources Board 1 hour standard. This concentration, based on a worst-case scenario, would not impact local or regional air quality and therefore is not expected to impede the region's compliance of federal or state air quality standards.

Significance of Impact

The calculation of potential carbon monoxide levels occurring at Sea World indicated that under the worst case assumptions, level would be far below the standard. No significant air quality impact would be associated with the proposed Master Plan.

Mitigation

For final resolution of the issues, refer to the Summary. No mitigation is necessary since no impacts were identified.

Mitigation

For final resolution of the issues refer to the Summary. No mitigation is necessary since no impacts were identified.

V. ALTERNATIVES

The proposed project has been determined to have one significant unmitigable impact: a cumulative impact to Mission Bay Park dry boat storage facilities resulting from removal of Sea World's dry boat storage facilities. Thus, in accordance with CEQA, the following alternatives are offered which would avoid or reduce to insignificance the impacts associated with Master Plan implementation.

A. NO PROJECT ALTERNATIVE

Under this alternative, Sea World's Master Plan would not be implemented. The theme park would not be expanded but would instead remain at its present size. Dry boat storage facilities may be retained although should Sea World need this space for an alternative use, the facilities may still be removed. The 200 proposed wet slips would not be added to the existing marina. No hotel would be built in the existing parking area between the marina and the Atlantis Restaurant. Parking lots would not be expanded as proposed, however, existing land uses may be altered to provide a larger parking area as attendance at the park increases. Sea World would have no need for the newly acquired 25-acre land lease or the 7.2-acre water lease, and the lease could be cancelled. The land lease would remain in its vacant condition until the City of San Diego designated a new use for the site. By eliminating the 25-acre area planned for parking and foregoing expansion of the exhibit area, the ultimate capacity of the Sea World Theme Park would be reduced and would probably not reach the 4 million visitors projected with the Master Plan.

Of the issues identified by the Environmental Quality Division as having the potential for significant impacts, only dry boat storage was determined to be impacted by project implementation. This was the only impact associated with the proposed Master Plan and avoidance of the impact is not assured by the no-project alternative. Should Sea World decide to retain their 130 dry boat storage spaces, a cumulative impact to the existing shortage of Mission Bay dry boat storage facilities would be avoided. This shortage is documented for the summer months and is expected to increase in the summer of 1985,

regardless of Sea World's Master Plan. While no adequate mitigation measure is available to Sea World, this impact could be reduced to insignificance by a less severe measure than adopting the no project alternative, which does not assure avoidance of impact. New dry boat storage facilities managed by the San Diego Mission Bay Boat and Ski Club in the South Shores Park east of Sea World could replace those eliminated at the Sea World Marina. This mitigation measure is discussed in Section IV-F.

B. RETENTION OF DRY BOAT STORAGE FACILITIES

Under this alternative project the existing shortage of Mission Bay dry boat storage facilities would not be further impacted by the loss of Sea World's 130 spaces. The Master Plan would remain as proposed with several key exceptions. Dry boat storage facilities would be retained under the authority of the discretionary action necessary for project approval. Since Sea World offices, support facilities, and some parking area, as proposed in the Master Plan, would thus be precluded from using the dry boat storage building, these uses would either need to be provided elsewhere or eliminated. The offices and support facilities would serve both Sea World and the hotel. The parking area would serve Sea World, the marina and perhaps overflow hotel parking. All of the land leased by Sea World has a designated use under the proposed Master Plan, i.e., there is no extra, undesignated land. Because offices, support facilities and parking areas are uses required to support a larger theme park, expanded marina and new hotel, these support facilities would need to be provided elsewhere. Either land designated for the proposed theme park expansion or for the hotel would need to be redesignated for support uses. Because hotel support facilities must be in close proximity to the hotel, the options for relocation are limited. The most feasible location would be on a portion of the hotel site. This could reduce hotel capacity by as much as 50 percent. While a more accurate estimation of the reduction is not available, a smaller hotel would not be economically acceptable to Sea World. It should be noted that under the existing lease Sea World is not required to provide dry boat storage. Should Sea World decide to use the area presently

occupied by dry boat storage for alternate uses more related to the predominant theme park character, there is no requirement for retaining those facilities. Dry boat storage is not necessary to the operation of Sea World's other facilities. Nonetheless, this alternative would avoid the cumulative impact associated with dry boat storage.

occupied by dry boat storage for alternate uses more related to the program than their park character, there is no requirement for retaining these facilities. Dry boat storage is not necessary to the operation of Sea World's other facilities. Nonetheless, this alternative would avoid the cumulative impact associated with dry boat storage.

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Mission Bay Marina

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VIII. CERTIFICATION

This report was prepared by WESTEC Services, Inc. of San Diego, California. Members of the WESTEC Services professional staff and consultants contributing to the report are listed below:

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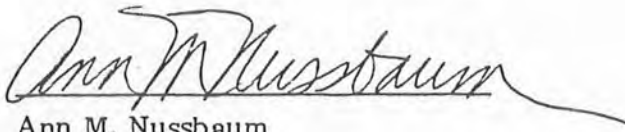
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I hereby affirm to the best of our knowledge and belief, the statements and information herein contained are in all respects true and correct and that all known information concerning the potentially significant environmental effects of the project has been included and fully evaluated in this EIR.



Ann M. Nussbaum
Project Manager

This report was prepared by WESTEC Services, Inc. of San Diego, California. Members of the WESTEC Services professional staff and consultants contributing to the report are listed below:

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- Ann M. Nassbaum, B.A., Geography
- James Federhart, P.E., Federhart and Associates - Traffic and Transportation Consultants.

I hereby affirm to the best of our knowledge and belief, the statements and information herein contained are in all respects true and correct and that all known information concerning the potentially significant environmental effects of the project has been included and fully evaluated in this EIR.


 Ann M. Nassbaum
 Project Manager

FINDINGS

Section 21081 of the California Public Resources Code requires that no project shall be approved when significant environmental effects have been identified unless one of the following findings can be made:

1. Mitigating measures have been incorporated into the project which reduce the effects to insignificance.
2. The mitigating measures are the responsibility of another public agency.
3. Specific economic, social or other considerations make the mitigating measures or project alternatives infeasible.

The following findings have been submitted by the project applicant as candidate findings to be made by the decision making body.

The Environmental Quality Division does not recommend that the discretionary body either adopt or reject these findings. They are attached to allow readers of this report an opportunity to review the applicant's position on this matter.

Dated: February 28, 1985
Revised February 21, 1985
Planning Commission Hearing

**CANDIDATE FINDINGS AND
STATEMENT OF OVERRIDING CONSIDERATIONS**

**SEA WORLD MASTER PLAN
EQD No. 84-0160**

The following Findings and Statement of Overriding Considerations are made relative to the Conclusions of the Final Environmental Impact Report (FEIR) for the proposed Sea World Master Plan. Implementation of the project requires adoption of a Master Plan as a condition of a 32-acre, 50-year ground and water lease negotiated by Sea World, Inc. and the City Manager of the City of San Diego. These Findings and Statement of Overriding Considerations have been prepared pursuant to Sections 15091 and 15093 of Title 14 of the California Administrative Code and Section 21081 of the California Public Resources Code.

FINDINGS

- A. The Planning Commission and City Council of the City of San Diego, having reviewed and considered the information contained in the FEIR for the Sea World Master Plan and the record, find that changes have been incorporated into the project which mitigate or avoid the majority of the significant environmental effects thereof, as identified in the FEIR and these Findings.

Traffic Circulation Impacts

Impact

The increased traffic from the expansion of Sea World would create unacceptable conditions at nearby intersections. The level of service (LOS) at the Sea World Drive/Sea World Way intersection would be reduced from the existing LOS D/E to LOS E/F, and the Ingraham Street/Perez Cove Way intersection would also experience a decrease in the level of service. Sea World expansion would incrementally worsen congestion at the I-8 off-ramp to Sports Arena Boulevard/Ingraham Street, which is currently operating at LOS F.

Finding

As stated in the of the FEIR (page 2), certain conditions of approval can satisfactorily mitigate the significant traffic impacts. Sea World, Inc. hereby commits to implementation of the following mitigation measures as specifically stated in the FEIR Conclusions.

1. Prior to building permits issued for construction of any facility within the theme park, Sea World shall complete and open to traffic the following:
 - a. Improve Perez Cove Way/Ingraham Street Intersection as shown in EIR Figure 4-4 (Perez Cove Way to be 66 feet wide). (This mitigation will not be required prior to widening of the Ingraham Street Bridge at Mission Bay Channel).
 - b. Reconstruct Driveway Access to Perez Cove Way as shown in EIR Figure 4-4 (Perez Cove Way to be 66 feet wide).
2. When the annual attendance at the theme park reaches 3,600,000 per year, Sea World shall relocate Sea World Way approximately 500 feet east along Sea World Drive and construct Sea World Way to its ultimate configuration (52 feet), plus all turn lanes to and from Sea World Way. Sea World shall also remove the old traffic signal and install new signals to City standards. This would also include the installation of sidewalks, and preservation of landscape buffers installed during earlier development phases.
3. When the annual attendance at the theme park reaches 4,000,000 per year, Sea World shall improve Sea World Drive along the leasehold frontage to half width of a six-lane primary arterial standard.
4. Sea World agrees to participate in the transit system.

Based upon incorporation of the above project changes into the approval of the Sea World Master Plan, the City of San Diego hereby finds that the significant traffic impacts are mitigated.

Bicycle/Pedestrian Circulation

Impact

A discontinuous system of bicycle/pedestrian pathways currently winds through Mission Bay Park. The Sea World Master Plan does not provide for improvement of the system through or along the leasehold. Not only would absence of this link be an impediment to a potentially upgraded system, but increased automobile traffic as a result of the theme park expansion would also affect safe bicycle travel along existing routes.

Finding

As stated in the Conclusions of the FEIR (page 3), bicycle/pedestrian impacts can be satisfactorily mitigated. Sea World, Inc. will construct a Class I or Class II bikeway along its leasehold. The bikeway will extend along Perez Cove Way from Ingraham Street to Sea World Drive and will continue from the Sea World Drive/Perez Cove Way intersection to the intersection of Sea World Drive/Sea World Way. The bikeway will be extended east from this intersection to connect with the South Shores bikeway segment. The bikeway will be reconstructed as improvements are made to the roadway system which affect the bikeway.

Sea World will provide pedestrian access to the general public through their leasehold during daylight hours. All pedestrian pathways will be paved. These mitigation measures will mitigate the bicycle/pedestrian circulation impacts. The Engineering and Development Department will determine the precise alignment and dimensions of the bikeway.

Urban Design/Visual Quality

Impact

The appearance of the perimeter of Sea World and its large parking lot have a major effect on the design and aesthetic quality of Mission Bay. The Sea World Master Plan contains only limited and inadequate detail on proposed landscaping, signing, major entry treatments, fencing and lighting. Without greater attention to design features as part of the Sea World Master Plan, an attractive interface of Sea World with the remainder of Mission Bay Park cannot be assured.

Finding

As stated in the Conclusions of the FEIR (page 3), urban design/visual quality impacts can be satisfactorily mitigated. Sea World, Inc. will submit a detailed landscaping plan and irrigation plan for the parking and perimeter areas of their leasehold for approval by the Planning Director and Planning Commission prior to obtaining any building permits. Based upon incorporation of the above project changes into the approval of the Sea World Master Plan, and Sea World's commitment to future review, the City of San Diego hereby finds that the significant urban design/visual quality impacts are mitigated.

Biological Resources

Impact

Expansion of Sea World Marina would eliminate approximately 6250 square feet of eelgrass. Although the loss is a minor percentage of the total eelgrass within Mission Bay, any loss is considered significant because of its limited distribution in southern California waters.

Finding

As stated in the Conclusions of the FEIR (page 3), biological impacts can be satisfactorily mitigated. Sea World, Inc. hereby commits to a revised dock design, as shown on EIR Figure 4-8, to mitigate eelgrass impacts. A detailed dock design shall be submitted to the Deputy Director of the Environmental Quality Division for review prior to marina expansion, and the revised design shall be incorporated into the marina expansion plans. Based upon incorporation of the above project changes into the approval of the Sea World Master Plan, the City of San Diego hereby finds that significant biological impacts are mitigated.

Dry Boat Storage

Impact

Implementation of the Sea World Master Plan would eliminate 150 dry boat storage spaces, 18 percent of the total spaces available within the bay. The Mission Bay Master Plan cites an existing inadequacy of spaces which would thus be exacerbated by expansion of the Sea World facilities.

Finding

The Final EIR states that no mitigation is available for the loss of dry boat storage spaces.

Analysis in the FEIR concludes that no other unmitigated impacts would occur.

- B. The City Council and the Planning Commission, having reviewed and considered the information contained in the FEIR and the record, find that none of those significant environmental effects anticipated as a result of the proposed project are within the responsibility or jurisdiction of another public agency.
- C. The City Council and the Planning Commission, having reviewed and considered the information contained in the FEIR and the record, find that specific economic, social or other considerations make infeasible the mitigation measures or project alternatives identified in the EIR. Specifically:

Dry Boat Storage

Finding

The design of the Sea World Master Plan cannot provide dry boat storage and still meet the other recreational needs which will be accommodated in the Master Plan. The FEIR did not identify any mitigation measures for this impact. Therefore, it is not feasible for Sea World to mitigate the loss of dry boat storage.

No Project Alternative

Finding

Sea World is an existing use in Mission Bay Park; the no project alternative would prevent expansion to meet projected demand of up to 4 million annual visitors. The capacity of the theme park would be limited, and there would be no feasible method on-site or at an alternative location to accomplish the project objectives. The no-project alternative is not necessary, since the proposed project is consistent with the Mission Bay Master Plan, and this alternative would not preserve any unique or sensitive environmental resources. If Sea World did not expand, some other lessee would likely develop the vacant 25-acre lease area with similar uses. Overall, the no-project alternative is not feasible and is not compatible with Sea World's goals.

Retention of Dry Boat Facilities Alternative

Finding

The Sea World Master Plan would utilize the existing dry boat storage building for offices and support facilities. In order to retain the existing dry boat storage facilities, the proposed office and support facilities would need to be located on a portion of the proposed hotel site. This alternative would reduce hotel capacity by as much as 50 percent; this is not economically feasible for Sea World. This financial hardship is not warranted since Sea World is not required to provide dry boat storage under its existing lease. New dry boat storage facilities may be provided within the Southshores Master Plan immediately east of Sea World; this would be an acceptable method of providing dry boat storage facilities without adverse impact to Sea World's operations.

STATEMENT OF OVERRIDING CONSIDERATIONS

The City Council and Planning Commission, having reviewed and considered the information contained in the FEIR and the record, make the following statement of overriding considerations.

Although potential project impacts have been substantially avoided or mitigated as described in the FEIR and the Findings, the FEIR states that the project would have a significant, unavoidable impact on dry boat storage. The City of San Diego finds that there are specific social and economic benefits which override this unavoidable environmental effect, as detailed below.

Sea World presently hosts almost 3 million visitors annually. The proposed expansion would double the size of the exhibit area within the theme park, to accommodate an additional 1.1 million visitors annually. The improvements proposed in the Sea World Master Plan would enhance the following benefits currently provided to the San Diego community by Sea World:

1. Employment

Sea World is one of the largest employers of youth in San Diego County. The largest percentage of employees are part-time, and many of these are students at area high schools and colleges who finance their education by working at Sea World weekends and holiday periods. Currently, Sea World employment is about 1,200 in the winter and 1,600 in the summer. The proposed expansion will significantly increase employment.

2. Fiscal

Annual rent to the City of San Diego now is over \$2 million, and Sea World's payroll exceeds \$14 million. Sea World relies primarily on local contractors and suppliers, and millions of capital dollars have been infused into the San Diego community. The proposed expansion will increase annual rent and payroll. Construction of new facilities will generate substantial revenue to the local economy and provide numerous jobs.

3. Tourism

Sea World's gross sales in 1984 were \$51,500,000. It is estimated that dollars spent at Sea World "turnover" seven times in the community, with a potential economic impact of \$360 million. About 70 percent of Sea World's nearly 3 million annual guests come from outside the San Diego area, spending money on hotels, restaurants, gasoline, public transportation and merchandise. The proposed expansion would proportionately increase these figures.

4. Education

Sea World's education program is endorsed by the San Diego school system. In 1984, Sea World's Education Department served approximately 100,000 San Diego area students (from pre-school through college levels). Sea World also participates in the school systems'

1

Adopt-a-School program. Sea World has adopted Clairemont High School and runs continuous cooperative programs with the school, including donations of usable equipment and special career education programs.

Additionally, Sea World's Education Department has cooperative agreements with San Diego State University and UCSD and is currently developing programs to help schools and teachers meet new state requirements for elementary science education. These educational benefits would be continued and expanded upon adoption of the Sea World Master Plan.

5. Community Service

In the last 20 years, Sea World has removed thousands of stranded dolphins, whales and pinnipeds from San Diego beaches and treated them medically. As many as 300-400 animals may be treated in a given year. All costs, including very expensive medications, are borne by Sea World.

More than 3,000 complimentary admissions are given each year to be used as fund raisers by local non-profit groups, a value of nearly \$40,000.

Sea World and Sea World personnel are active in support of a myriad of community groups and events: COMBO, Homeport San Diego Festival, Hire-a-Youth, Starlight, United Way, Old Globe, Easter Seals, March of Dimes and many more. More than \$2,000 a year in coins collected from Sea Worlds ponds are donated to various charities.

6. Recreation

As a theme park, Sea World provides significant recreational benefits to millions of visitors annually. The recreational opportunities for local citizens and tourists would be expanded by up to 33 percent with the full implementation of the proposed Sea World Master Plan.

The City of San Diego finds that substantial benefits in employment, fiscal effects, tourism, education, community service and recreation would directly result from approval and implementation of the Sea World Master Plan. The City of San Diego finds that the need for these benefits specifically overrides the impacts of the project on dry boat storage.

FINDINGS APPENDIX

- Letter from Sea World to Planning Department
- Tolerant Plant List
- Landscape Sections



January 30, 1985

City of San Diego
Office of Planning Department
202 "C" Street - MS 4A
San Diego, California 92101

Attention: Mr. Mike Stepner
Assistant Planning Director

Subject: Sea World Master Plan and Red Lion Hotel

Dear Mr. Stepner:

We are in receipt of your letter of January 29, 1985 regarding your request for documentation of our commitment to mitigation measures for the subject facilities. We will attempt hereinafter to satisfy your request, which covers all areas identified in the E.I.R. as well as additional items of your department. (Below we address those topics as itemized in your letter.)

I. CIRCULATION

- A. BIKEWAY - We are enclosing an overlay of our master plan depicting the bike routes as agreed to in meetings with various governmental staff, i.e. the City will add a bike lane to either side of Perez Cove Way from the intersection with Ingraham Street, a distance of approximately 4,000 feet to the traffic island, which is approximately 500 feet west of the signalized intersection at Sea World Way. Sea World will grant an easement to the City for construction of a two way bikeway for this 500 feet.
- B. PEDESTRIAN WALKS - The pedestrian walk locations are indicated on the overlay to our master plan, and the details on one of the plans in the E.I.R.
- C. TRAFFIC CIRCULATION - Sea World has agreed to all areas of traffic mitigation in the E.I.R. and listed in your letter as items C1, a and b, 2, and 3.

We show these elements as well as possible on our master plan overlay. Our commitment to satisfy City Traffic Engineering on the design should preclude showing items of construction details at this time.

Sea World will obviously benefit by an appropriate transit system and will continue to agree to participate in such system.

City of San Diego Planning Department
Attention: Mr. Mike Stepner
January 30, 1985
Page two



II. SIGNAGE - No change or addition to the existing signage is proposed or contemplated as related to exterior of the theme park. Internal signage will not change from the present concept of adding directional and informational material for new exhibits.

As related to the proposed Red Lion Hotel, the frontage road sign is not yet in design. A replacement of the one existing for the Atlantis Restaurant sign is contemplated with the design subject to all the criteria for the area.

III. ENTRYWAY DETAILS - We have difficulty with this request in that design is just now beginning for the new entrance to our park. It is uncertain whether or not we will proceed with implementation until design and cost estimates are complete and Sea World management approves the financing.

If all goes well, we could submit for Coastal Commission approval when our architects complete the conceptual drawings, but not prior to City Council approval of the E.I.R. for our master plan.

It would appear that we have a catch-22, or at least, a major delay if you require the details outlined in your letter prior to Planning Commission action.

IV. LANDSCAPING PLANS - We are indicating on the master plan overlay the approximate areas for application of the individual separate details submitted earlier.

We will incorporate low water use, salt tolerant material in accordance with the list you enclosed.

It would be easy for Sea World to say we will commit to 10% landscaping coverage in our parking lots. However, the potential to attain and maintain healthy landscaping varies radically throughout our leasehold due to the intrusion of salts from dredged bay deposits and ground water in much of the area, requiring an impractical amount of soil removal and replacement.

Sea World will conform to the detailed planting plans submitted for our parking area, and alleviate the poor soil condition as much as practicable.


City of San Diego Planning Department
Attention: Mr. Mike Stepner
January 30, 1985
Page three



V. RED LION HOTEL PLANS - The hotel design will be identical to that approved earlier by the Planning Department and Planning Commission. Those drawings and renderings are available for review.

Yours truly,

SEA WORLD, INC.


Farris Wankier, A.I.A.
Administrative Vice President
Development Department

FW/lk

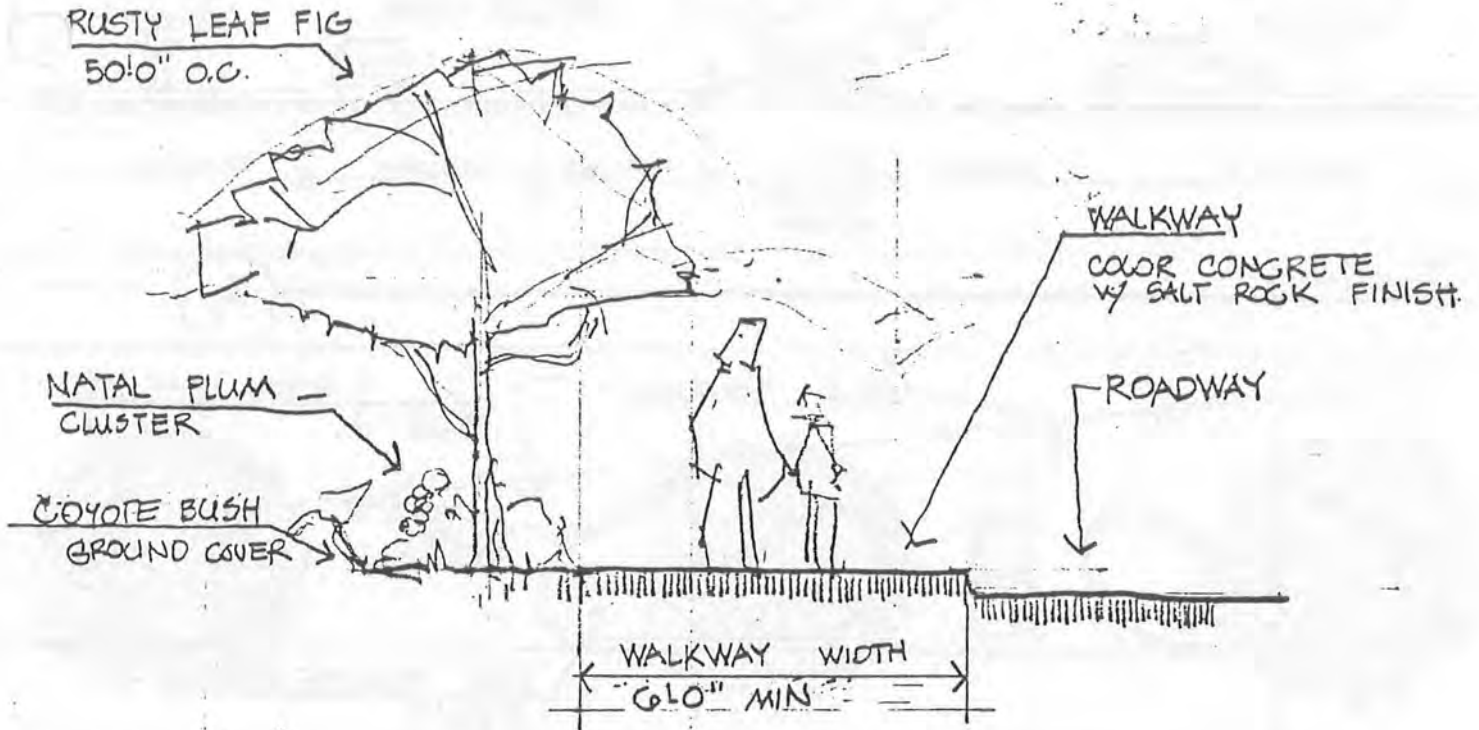
cc: Sue Williams
Westec
Allen Jones
James Spotts

PLANTS TOLERANT OF SALINE SOILS AND SUITABLE FOR SOUTHERN
CALIFORNIA LANDSCAPING¹

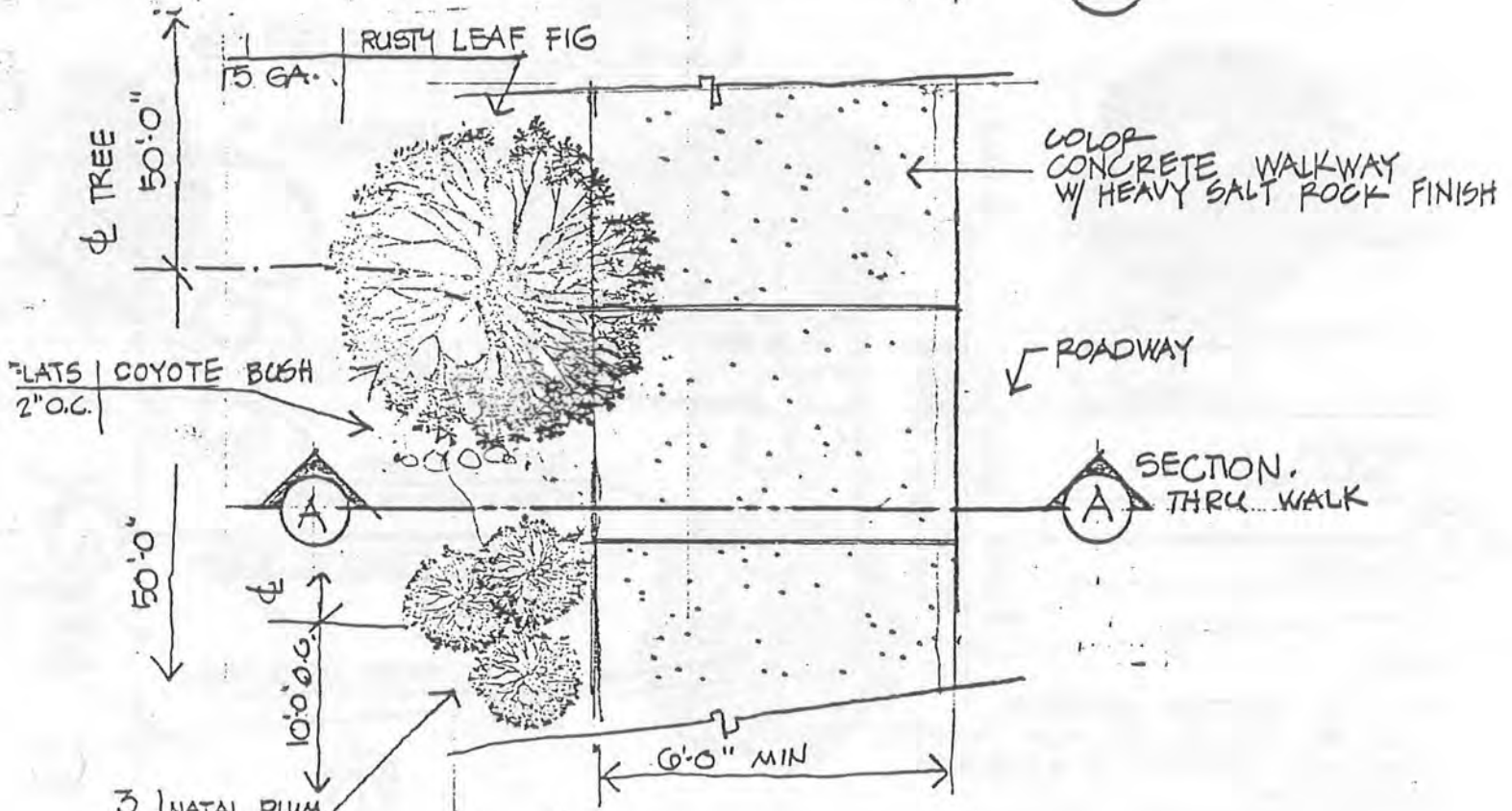
Atriplex Species	Saltbush
Artemisia pycnocephala	Sandhill Sage
Callistemon rigidus	Stiff Bottlebrush
Casuarina species	Beefwood
Elaeagnus angustifolia	Russian Olive
Eucalyptus camaldulensis	Red Gum
Eucalyptus rudis	Desert Gum
Eucalyptus torquata	Coral Gum
Gazania species	Gazania
Lavatera assurgentiflora	Tree Mallow
Melaleuca nesophila	Pink Melaleuca
Metrosideros tomentosus	New Zealand Christmas Tree
Myoporum laetum	Myoporum
Myoporum parvifolium	Myoporum
Nerium oleander	Oleander
Pinus halepensis	Aleppo Pine
Pittosporum crassifolium	Pittosporum
Pittosporum phillyraeoides	Willow Pittosporum
Schinus terebinthifolius	Brazilian Pepper
Tamarix species	Tamarisk
Zizyphus jujuba	Chinese Jujube

¹ Source - Trees and Shrubs for Dry California Landscapes,
Robert Perry, 1981

NOTE: NEW ZEALAND CHRISTMAS TREE MAY BE SUBSTITUTED FOR RUSTY LEAF FIG.

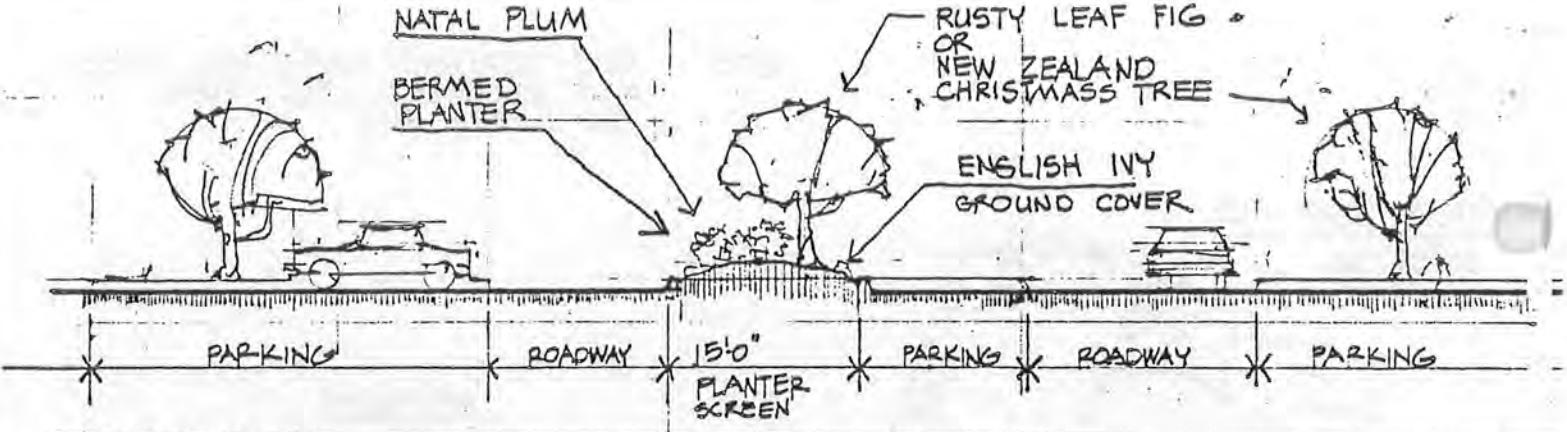


SECTION THRU WALKWAY (A)



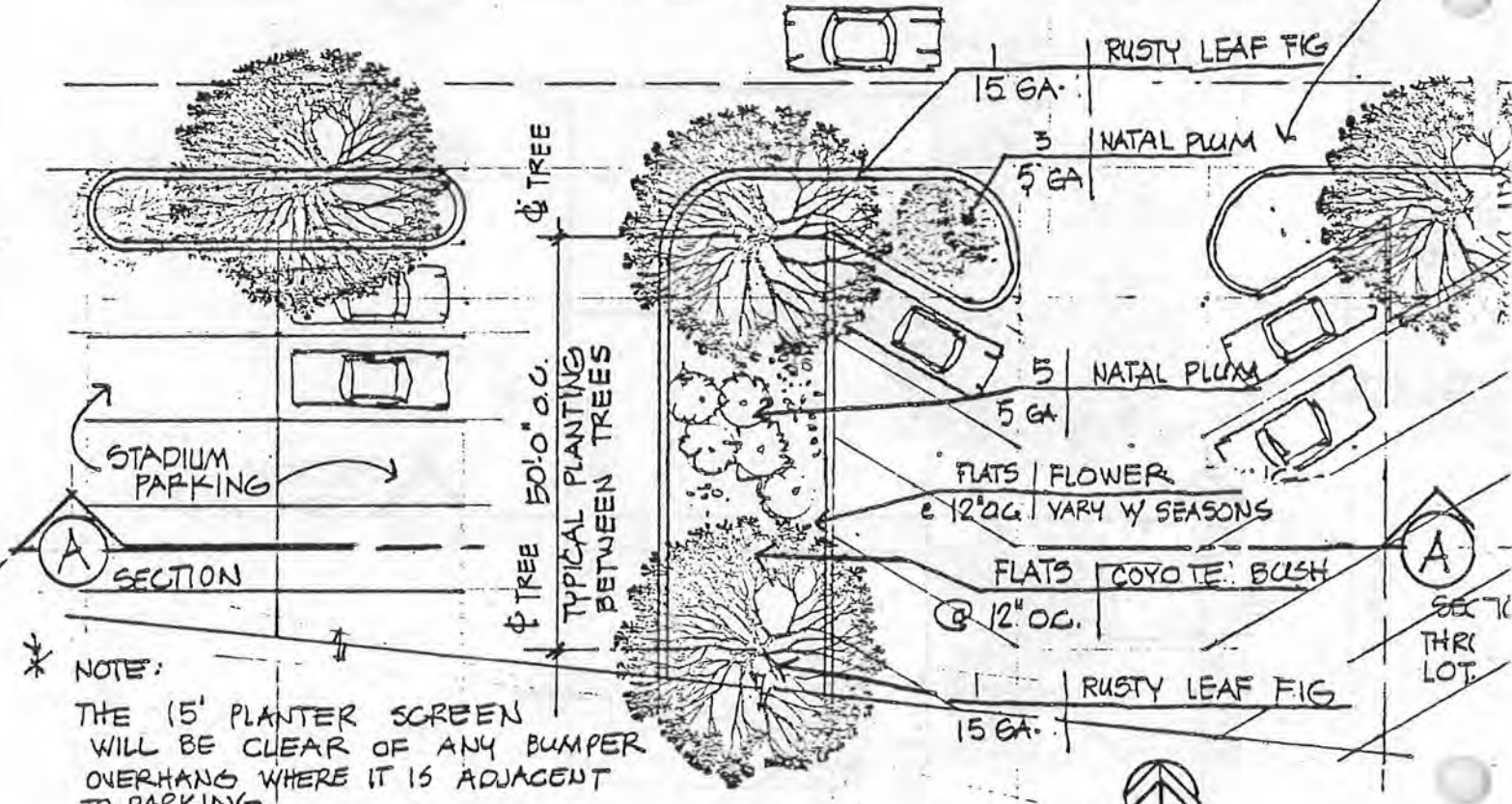
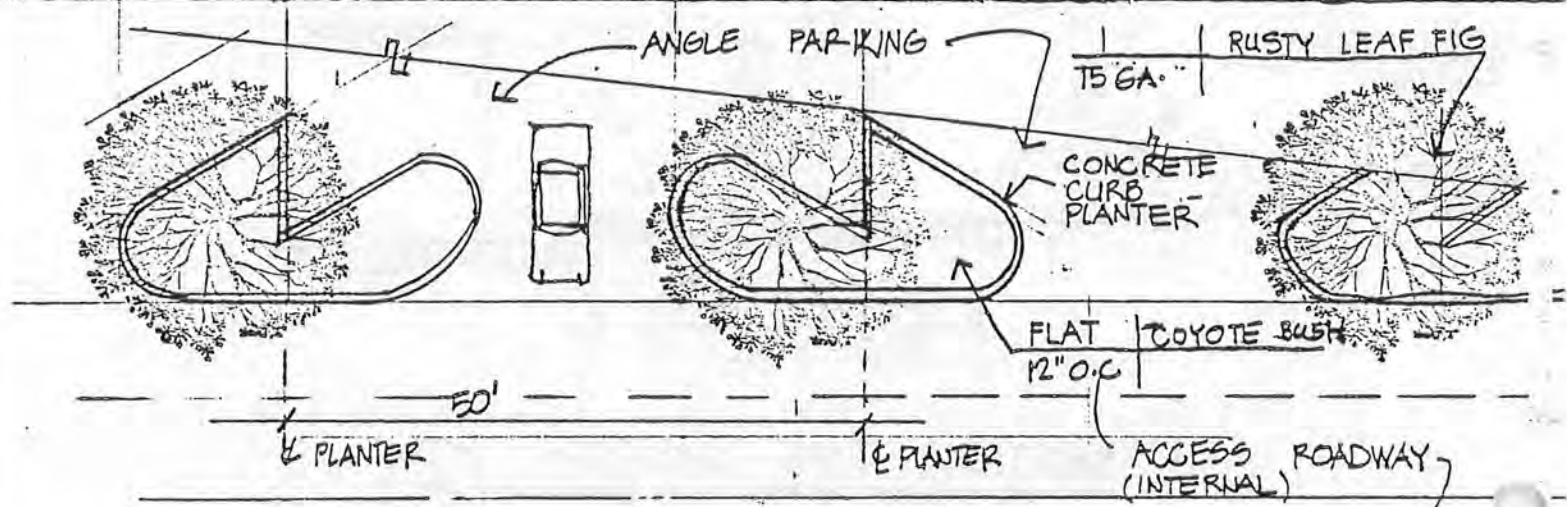
PLAN-TYPICAL WALKWAY

12-28-84
 75-11-85



SECTION

A



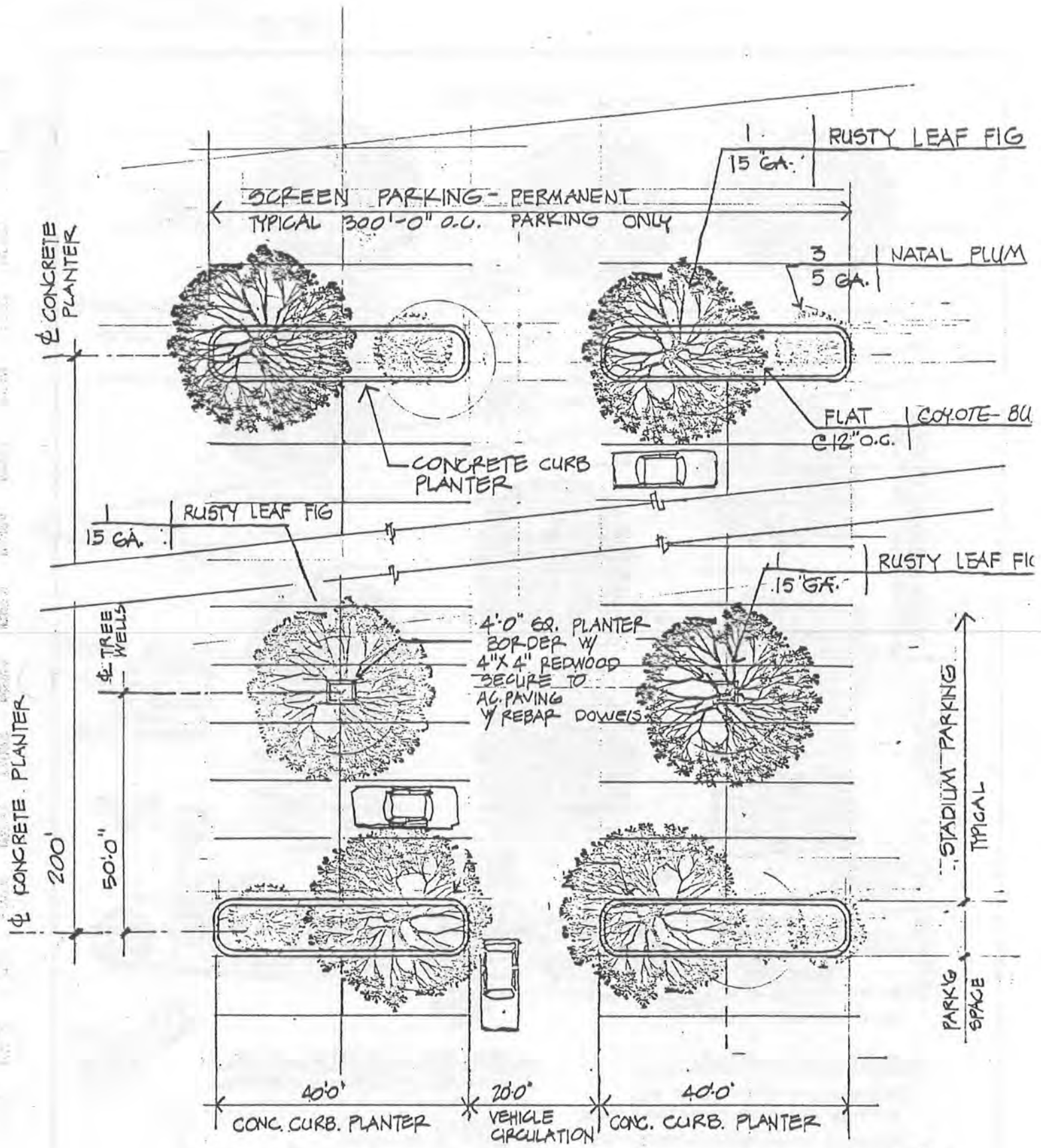
* NOTE:

THE 15' PLANTER SCREEN WILL BE CLEAR OF ANY BUMPER OVERHANGS WHERE IT IS ADJACENT TO PARKING.

LANDSCAPE PLAN
INTERNAL PARKING LOT SCREEN TYPICAL AT PERMANENT PARKING

NOTE: TYPICALLY USED TO BREAK UP PARKING LOT INTO SUB-PARKING LOTS.

* REVISED 1-18-85

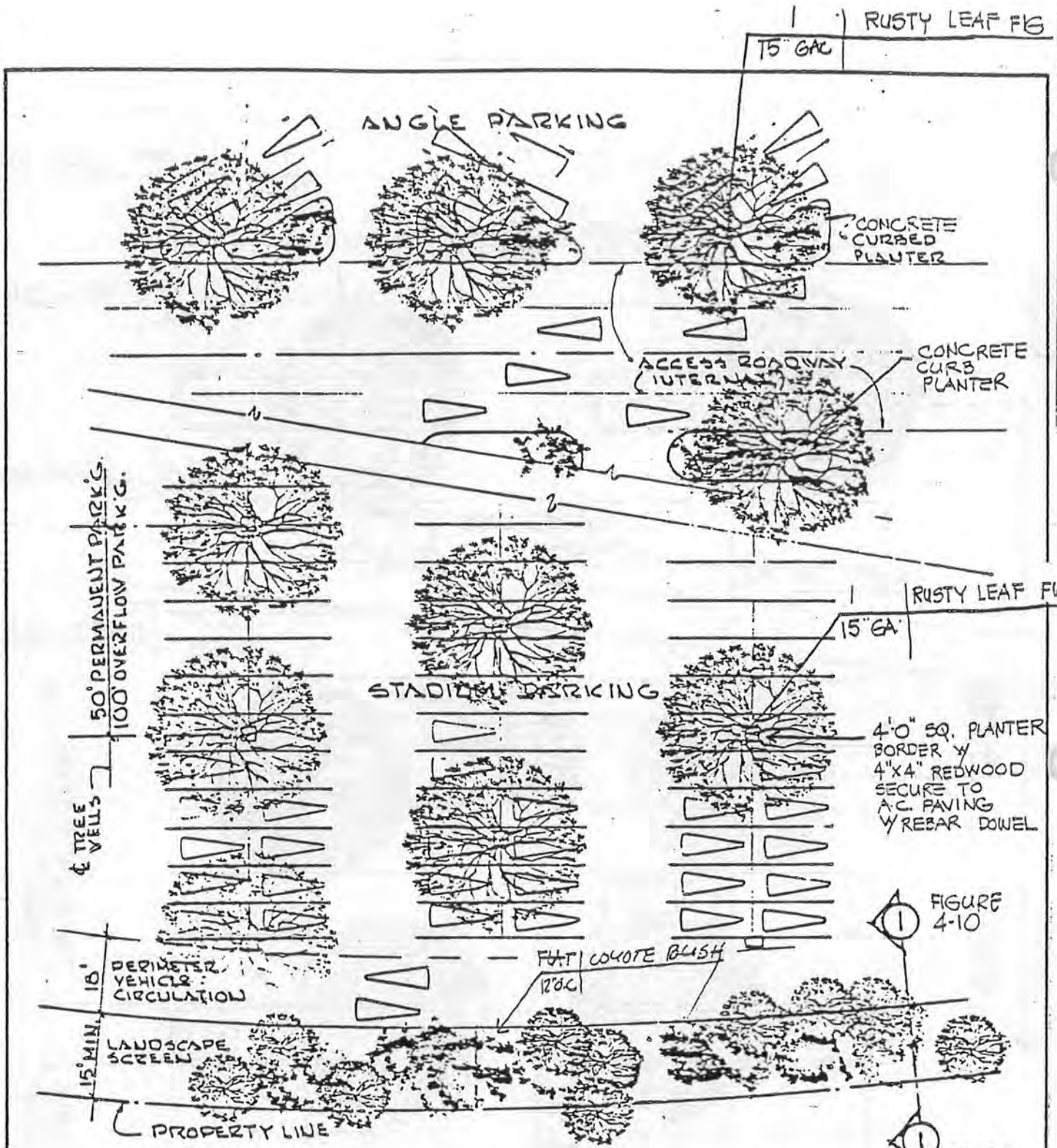


LANDSCAPE PLAN - SUB-PARKING LOT.

12-25-84
 REVISED 1-18-85

- NOTE: 1. PLANTS IDENTIFIED ARE TYPICAL FOR ALL PLANTERS.
 2. NEW ZEALAND CHRISTMASS TREE MAY BE SUBSTITUTED FOR RUSTY LEAF FIG.





PARKING LOT PLANTING

1. TREE WELLS = RUSTY LEAF FIG OR NEW ZEALAND CHRISTMAS TREE
2. CURBED PLANTERS = TREES AS ABOVE + NATAL PUM & FLOWERING PLANTS

LANDSCAPE SCREEN PLANTING

A MIXTURE OF VARIOUS VARIETIES OF EUCALYPTUS & ACACIA
 TYPICALLY 24" BOX @ 20'-0" O.C.
 SPECIES TO BE USED:
 • EUCALYPTUS
 • ACACIA

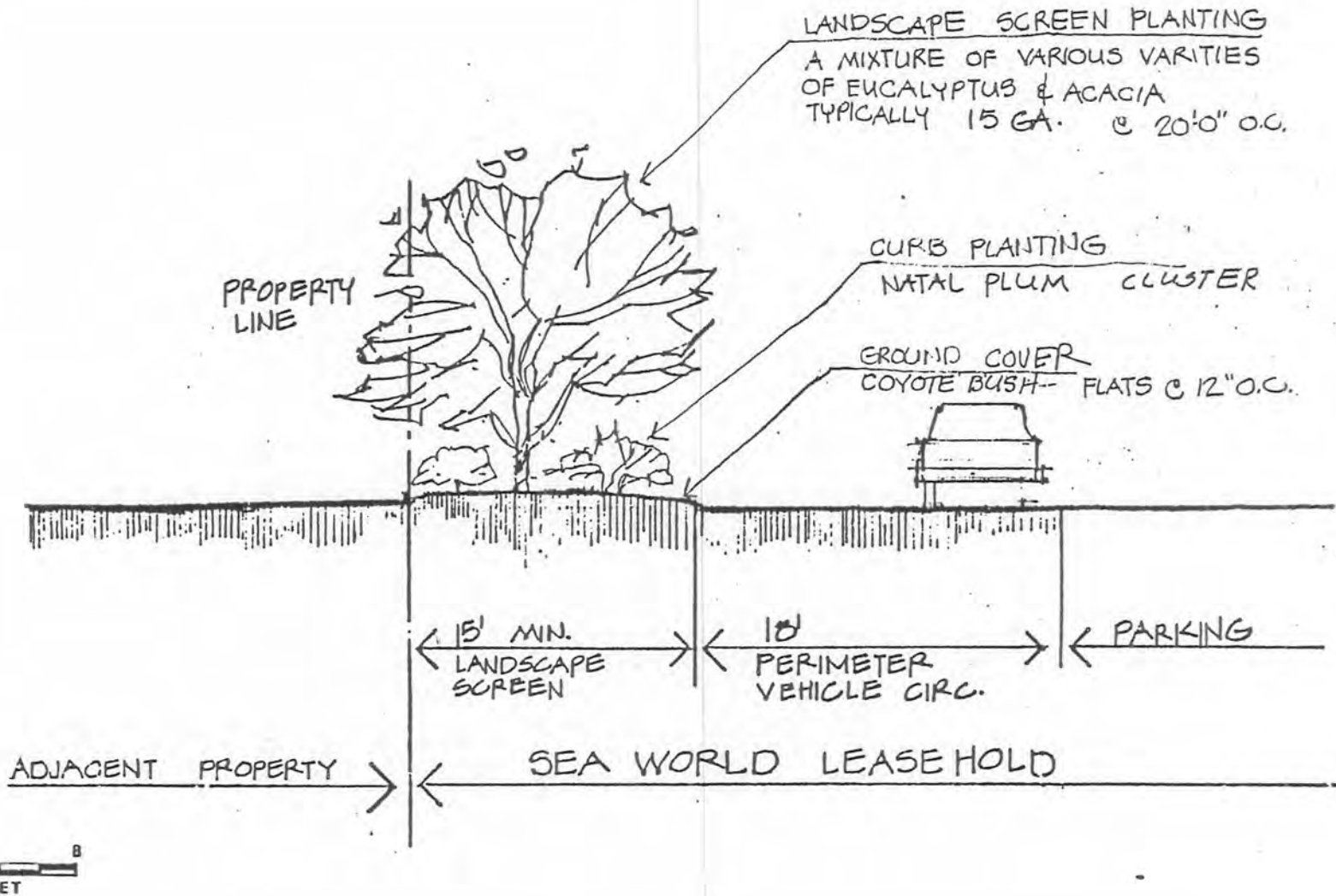


SECTION THRU PLANT'S SCREEN

Sea World Parking Lot Landscape Plan

FIGURE 4-9

4-51



Section Through Landscaping Screen

FIGURE 4-10

Dated: February 28, 1985
Revised February 21, 1985
Planning Commission Hearing

**CANDIDATE FINDINGS AND
STATEMENT OF OVERRIDING CONSIDERATIONS**

**SEA WORLD MASTER PLAN
EQD No. 84-0160**

The following Findings and Statement of Overriding Considerations are made relative to the Conclusions of the Final Environmental Impact Report (FEIR) for the proposed Sea World Master Plan. Implementation of the project requires adoption of a Master Plan as a condition of a 32-acre, 50-year ground and water lease negotiated by Sea World, Inc. and the City Manager of the City of San Diego. These Findings and Statement of Overriding Considerations have been prepared pursuant to Sections 15091 and 15093 of Title 14 of the California Administrative Code and Section 21081 of the California Public Resources Code.

FINDINGS

- A. The Planning Commission and City Council of the City of San Diego, having reviewed and considered the information contained in the FEIR for the Sea World Master Plan and the record, find that changes have been incorporated into the project which mitigate or avoid the majority of the significant environmental effects thereof, as identified in the FEIR and these Findings.

Traffic Circulation Impacts

Impact

The increased traffic from the expansion of Sea World would create unacceptable conditions at nearby intersections. The level of service (LOS) at the Sea World Drive/Sea World Way intersection would be reduced from the existing LOS D/E to LOS E/F, and the Ingraham Street/Perez Cove Way intersection would also experience a decrease in the level of service. Sea World expansion would incrementally worsen congestion at the I-8 off-ramp to Sports Arena Boulevard/Ingraham Street, which is currently operating at LOS F.

Finding

As stated in the of the FEIR (page 2), certain conditions of approval can satisfactorily mitigate the significant traffic impacts. Sea World, Inc. hereby commits to implementation of the following mitigation measures as specifically stated in the FEIR Conclusions.

1. Prior to occupancy of the proposed hotel, Sea World shall complete and open to traffic the following:
 - a. Improve Perez Cove Way/Ingraham Street Intersection as shown in EIR Figure 4-4 (Perez Cove Way to be 66 feet wide). (This mitigation will not be required prior to widening of the Ingraham Street Bridge at Mission Bay Channel).
 - b. Reconstruct Driveway Access to Perez Cove Way as shown in EIR Figure 4-4 (Perez Cove Way to be 66 feet wide).
2. When the annual attendance at the theme park reaches 3,600,000 per year, Sea World shall relocate Sea World Way approximately 500 feet east along Sea World Drive and construct Sea World Way to its ultimate configuration (52 feet), plus all turn lanes to and from Sea World Way. Sea World shall also remove the old traffic signal and install new signals to City standards. This would also include the installation of sidewalks, and preservation of landscape buffers installed during earlier development phases.
3. When the annual attendance at the theme park reaches 4,000,000 per year, Sea World shall improve Sea World Drive along the leasehold frontage to half width of a six-lane primary arterial standard.
4. Sea world agrees to continue participation in the transit system.

Based upon incorporation of the above project changes into the approval of the Sea World Master Plan, the City of San Diego hereby finds that the significant traffic impacts are mitigated.

Bicycle/Pedestrian Circulation

Impact

A discontinuous system of bicycle/pedestrian pathways currently winds through Mission Bay Park. The Sea World Master Plan does not provide for improvement of the system through or along the leasehold. Not only would absence of this link be an impediment to a potentially upgraded system, but increased automobile traffic as a result of the theme park expansion would also affect safe bicycle travel along existing routes.

Finding

As stated in the Conclusions of the FEIR (page 3), bicycle/pedestrian impacts can be satisfactorily mitigated. Sea World, Inc. will construct a Class I bikeway along its leasehold. The bikeway will extend along Perez Cove Way from Ingraham Street to Sea World Drive and will continue from the Sea World Drive/Perez Cove Way intersection to the intersection of Sea World Drive/Sea World Way. The bikeway will be extended east from this intersection to connect with the South Shores bikeway segment. The bikeway will be reconstructed as improvements are made to the roadway system which affect the bikeway.

Sea World will provide pedestrian access to the general public through their leasehold during daylight hours. The alignment of the pedestrian pathway system is shown on the attached Figure 1. All pedestrian pathways will be paved. These mitigation measures will mitigate the bicycle/pedestrian circulation impacts. The Engineering and Development Department will determine the precise alignment and dimensions of the bikeway. Attached Figure 4-6 revised illustrates the bike and pedestrian pathways.

Urban Design/Visual Quality

Impact

The appearance of the perimeter of Sea World and its large parking lot have a major effect on the design and aesthetic quality of Mission Bay. The Sea World Master Plan contains only limited and inadequate detail on proposed landscaping, signing, major entry treatments, fencing and lighting. Without greater attention to design features as part of the Sea World Master Plan, an attractive interface of Sea World with the remainder of Mission Bay Park cannot be assured.

Finding

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Expansion of Sea World Marina would eliminate approximately 6250 square feet of eelgrass. Although the loss is a minor percentage of the total eelgrass within Mission Bay, any loss is considered significant because of its limited distribution in southern California waters.

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As stated in the Conclusions of the FEIR (page 3), biological impacts can be satisfactorily mitigated. Sea World, Inc. hereby commits to a revised dock design, as shown on EIR Figure 4-8, to mitigate eelgrass impacts. A detailed dock design shall be submitted to the Deputy Director of the Environmental Quality Division for review prior to marina expansion, and the revised design shall be incorporated into the marina expansion plans. Based upon incorporation of the above project changes into the approval of the Sea World Master Plan, the City of San Diego hereby finds that significant biological impacts are mitigated.

Dry Boat Storage

Impact

Implementation of the Sea World Master Plan would eliminate 150 dry boat storage spaces, 18 percent of the total spaces available within the bay. The Mission Bay Master Plan cites an existing inadequacy of spaces which would thus be exacerbated by expansion of the Sea World facilities.

Finding

The Final EIR states that no mitigation is available for the loss of dry boat storage spaces.

Analysis in the FEIR concludes that no other unmitigated impacts would occur.

- B. The City Council and the Planning Commission, having reviewed and considered the information contained in the FEIR and the record, find that none of those significant environmental effects anticipated as a result of the proposed project are within the responsibility or jurisdiction of another public agency.
- C. The City Council and the Planning Commission, having reviewed and considered the information contained in the FEIR and the record, find that specific economic, social or other considerations make infeasible the mitigation measures or project alternatives identified in the EIR. Specifically:

Dry Boat Storage

Finding

The design of the Sea World Master Plan cannot provide dry boat storage and still meet the other recreational needs which will be accommodated in the Master Plan. The FEIR did not identify any mitigation measures for this impact. Therefore, it is not feasible for Sea World to mitigate the loss of dry boat storage.

No Project Alternative

Finding

Sea World is an existing use in Mission Bay Park; the no project alternative would prevent expansion to meet projected demand of up to 4 million annual visitors. The capacity of the theme park would be limited, and there would be no feasible method on-site or at an alternative location to accomplish the project objectives. The no-project alternative is not necessary, since the proposed project is consistent with the Mission Bay Master Plan, and this alternative would not preserve any unique or sensitive environmental resources. If Sea World did not expand, some other lessee would likely develop the vacant 25-acre lease area with similar uses. Overall, the no-project alternative is not feasible and is not compatible with Sea World's goals.

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Finding

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STATEMENT OF OVERRIDING CONSIDERATIONS

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Sea World presently hosts almost 3 million visitors annually. The proposed expansion would double the size of the exhibit area within the theme park, to accommodate an additional 1.1 million visitors annually. The improvements proposed in the Sea World Master Plan would enhance the following benefits currently provided to the San Diego community by Sea World:

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Annual rent to the City of San Diego now is over \$2 million, and Sea World's payroll exceeds \$14 million. Sea World relies primarily on local contractors and suppliers, and millions of capital dollars have been infused into the San Diego community. The proposed expansion will increase annual rent and payroll. Construction of new facilities will generate substantial revenue to the local economy and provide numerous jobs.

3. Tourism

Sea World's gross sales in 1984 were \$51,500,000. It is estimated that dollars spent at Sea World "turnover" seven times in the community, with a potential economic impact of \$360 million. About 70 percent of Sea World's nearly 3 million annual guests come from outside the San Diego area, spending money on hotels, restaurants, gasoline, public transportation and merchandise. The proposed expansion would proportionately increase these figures.

4. Education

Sea World's education program is endorsed by the San Diego school system. In 1984, Sea World's Education Department served approximately 100,000 San Diego area students (from pre-school through college levels). Sea World also participates in the school systems's

Adopt-a-School program. Sea World has adopted Clairemont High School and runs continuous cooperative programs with the school, including donations of usable equipment and special career education programs.

Additionally, Sea World's Education Department has cooperative agreements with San Diego State University and UCSD and is currently developing programs to help schools and teachers meet new state requirements for elementary science education. These educational benefits would be continued and expanded upon adoption of the Sea World Master Plan.

5. Community Service

In the last 20 years, Sea World has removed thousands of stranded dolphins, whales and pinnipeds from San Diego beaches and treated them medically. As many as 300-400 animals may be treated in a given year. All costs, including very expensive medications, are borne by Sea World.

More than 3,000 complimentary admissions are given each year to be used as fund raisers by local non-profit groups, a value of nearly \$40,000.

Sea World and Sea World personnel are active in support of a myriad of community groups and events: COMBO, Homeport San Diego Festival, Hire-a-Youth, Starlight, United Way, Old Globe, Easter Seals, March of Dimes and many more. More than \$2,000 a year in coins collected from Sea Worlds ponds are donated to various charities.

6. Recreation

As a theme park, Sea World provides significant recreational benefits to millions of visitors annually. The recreational opportunities for local citizens and tourists would be expanded by up to 33 percent with the full implementation of the proposed Sea World Master Plan.

The City of San Diego finds that substantial benefits in employment, fiscal effects, tourism, education, community service and recreation would directly result from approval and implementation of the Sea World Master Plan. The City of San Diego finds that the need for these benefits specifically overrides the impacts of the project on dry boat storage.

FINDINGS APPENDIX

- Letter from Sea World to Planning Department
- Tolerant Plant List
- Landscape Sections



January 30, 1985

City of San Diego
Office of Planning Department
202 "C" Street - MS 4A
San Diego, California 92101

Attention: Mr. Mike Stepner
Assistant Planning Director

Subject: Sea World Master Plan and Red Lion Hotel

Dear Mr. Stepner:

We are in receipt of your letter of January 29, 1985 regarding your request for documentation of our commitment to mitigation measures for the subject facilities. We will attempt hereinafter to satisfy your request, which covers all areas identified in the E.I.R. as well as additional items of your department. (Below we address those topics as itemized in your letter.)

I. CIRCULATION

- A. BIKEWAY - We are enclosing an overlay of our master plan depicting the bike routes as agreed to in meetings with various governmental staff, i.e. the City will add a bike lane to either side of Perez Cove Way from the intersection with Ingraham Street, a distance of approximately 4,000 feet to the traffic island, which is approximately 500 feet west of the signalized intersection at Sea World Way. Sea World will grant an easement to the City for construction of a two way bikeway for this 500 feet.
- B. PEDESTRIAN WALKS - The pedestrian walk locations are indicated on the overlay to our master plan, and the details on one of the plans in the E.I.R.
- C. TRAFFIC CIRCULATION - Sea World has agreed to all areas of traffic mitigation in the E.I.R. and listed in your letter as items C1, a and b, 2, and 3.

We show these elements as well as possible on our master plan overlay. Our commitment to satisfy City Traffic Engineering on the design should preclude showing items of construction details at this time.

Sea World will obviously benefit by an appropriate transit system and will continue to agree to participate in such system.

City of San Diego Planning Department
Attention: Mr. Mike Stepner
January 30, 1985
Page two



II. SIGNAGE - No change or addition to the existing signage is proposed or contemplated as related to exterior of the theme park. Internal signage will not change from the present concept of adding directional and informational material for new exhibits.

As related to the proposed Red Lion Hotel, the frontage road sign is not yet in design. A replacement of the one existing for the Atlantis Restaurant sign is contemplated with the design subject to all the criteria for the area.

III. ENTRYWAY DETAILS - We have difficulty with this request in that design is just now beginning for the new entrance to our park. It is uncertain whether or not we will proceed with implementation until design and cost estimates are complete and Sea World management approves the financing.

If all goes well, we could submit for Coastal Commission approval when our architects complete the conceptual drawings, but not prior to City Council approval of the E.I.R. for our master plan.

It would appear that we have a catch-22, or at least, a major delay if you require the details outlined in your letter prior to Planning Commission action.

IV. LANDSCAPING PLANS - We are indicating on the master plan overlay the approximate areas for application of the individual separate details submitted earlier.

We will incorporate low water use, salt tolerant material in accordance with the list you enclosed.

It would be easy for Sea World to say we will commit to 10% landscaping coverage in our parking lots. However, the potential to attain and maintain healthy landscaping varies radically throughout our leasehold due to the intrusion of salts from dredged bay deposits and ground water in much of the area, requiring an impractical amount of soil removal and replacement.

Sea World will conform to the detailed planting plans submitted for our parking area, and alleviate the poor soil condition as much as practicable.


City of San Diego Planning Department
Attention: Mr. Mike Stepner
January 30, 1985
Page three



V. RED LION HOTEL PLANS - The hotel design will be identical to that approved earlier by the Planning Department and Planning Commission. Those drawings and renderings are available for review.

Yours truly,

SEA WORLD, INC.


Farris Wankier, A.I.A.
Administrative Vice President
Development Department

FW/lk

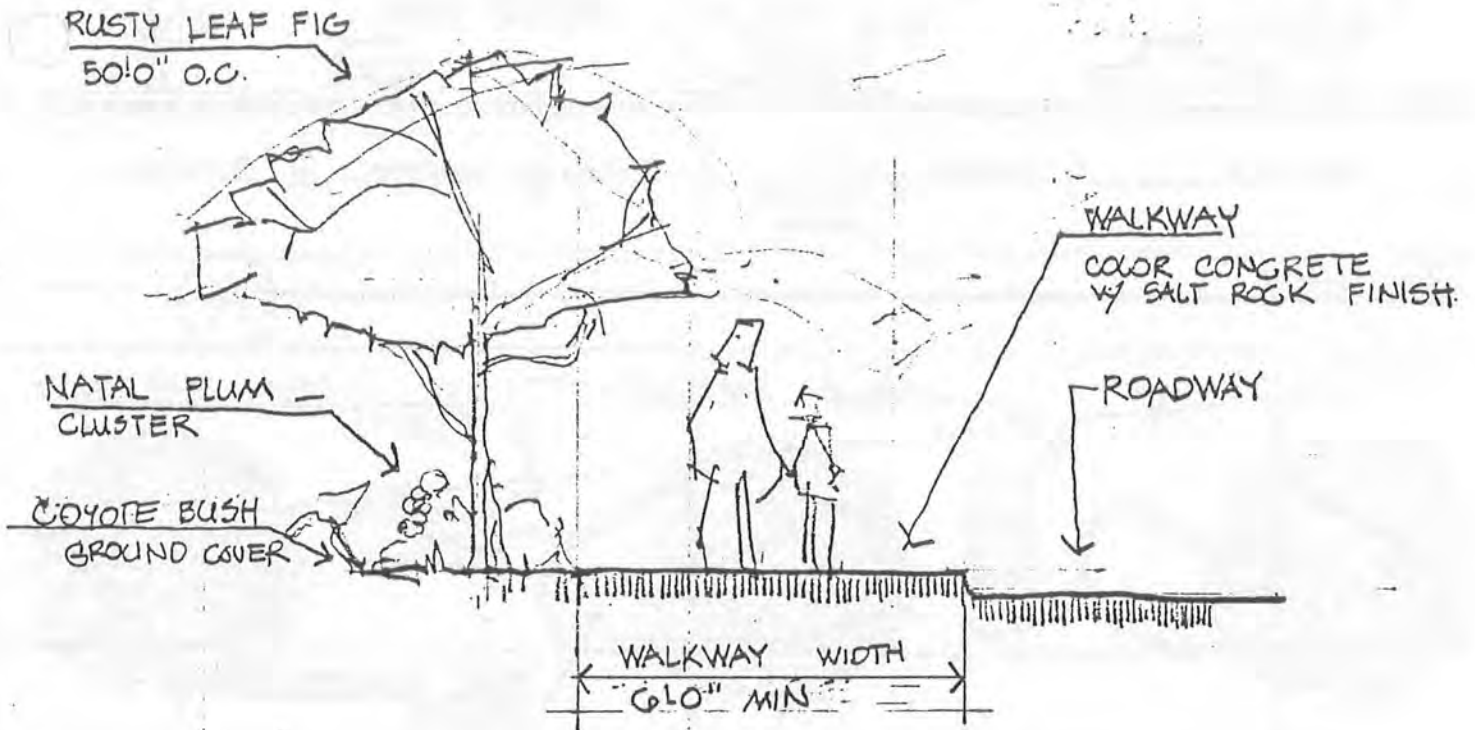
cc: Sue Williams
Westec
Allen Jones
James Spotts

PLANTS TOLERANT OF SALINE SOILS AND SUITABLE FOR SOUTHERN
CALIFORNIA LANDSCAPING¹

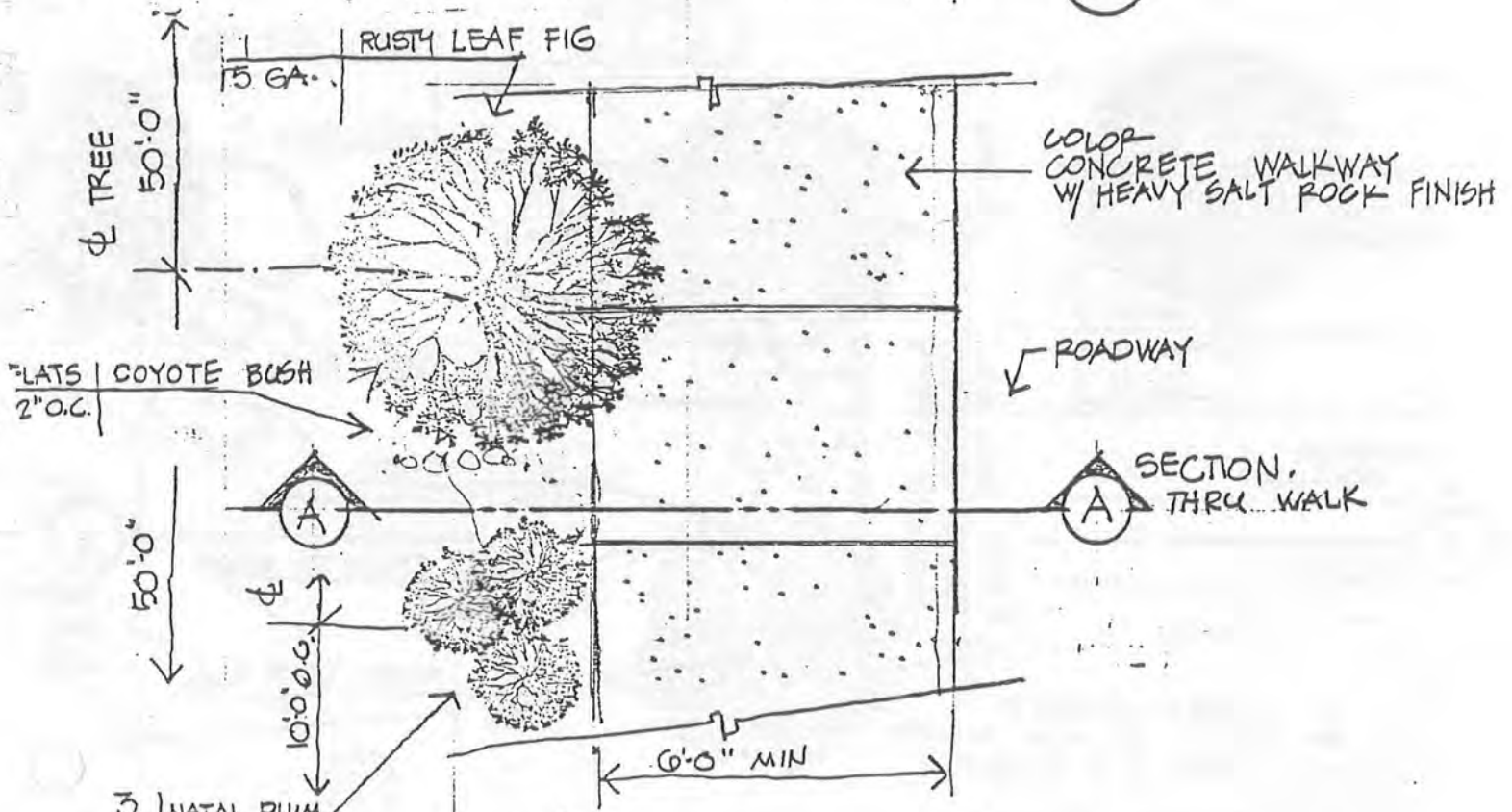
Atriplex Species	Saltbush
Artemisia pycnocephala	Sandhill Sage
Callistemon rigidus	Stiff Bottlebrush
Casuarina species	Beefwood
Elaeagnus angustifolia	Russian Olive
Eucalyptus camaldulensis	Red Gum
Eucalyptus rudis	Desert Gum
Eucalyptus torquata	Coral Gum
Gazania species	Gazania
Lavatera assurgentiflora	Tree Mallow
Melaleuca nesophila	Pink Melaleuca
Metrosideros tomentosus	New Zealand Christmas Tree
Myoporum laetum	Myoporum
Myoporum parvifolium	Myoporum
Nerium oleander	Oleander
Pinus halepensis	Aleppo Pine
Pittosporum crassifolium	Pittosporum
Pittosporum phillyraeoides	Willow Pittosporum
Schinus terebinthifolius	Brazilian Pepper
Tamarix species	Tamarisk
Zizyphus jujuba	Chinese Jujube

¹ Source - Trees and Shrubs for Dry California Landscapes,
Robert Perry, 1981

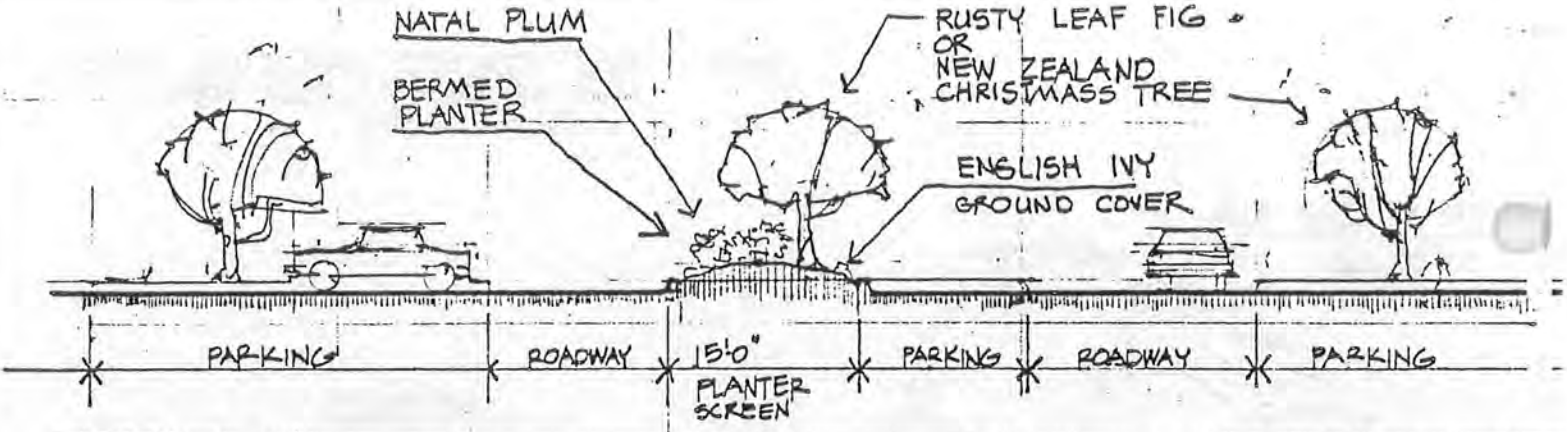
NOTE: NEW ZEALAND CHRISTMAS TREE MAY BE SUBSTITUTED FOR RUSTY LEAF FIG.



SECTION THRU WALKWAY

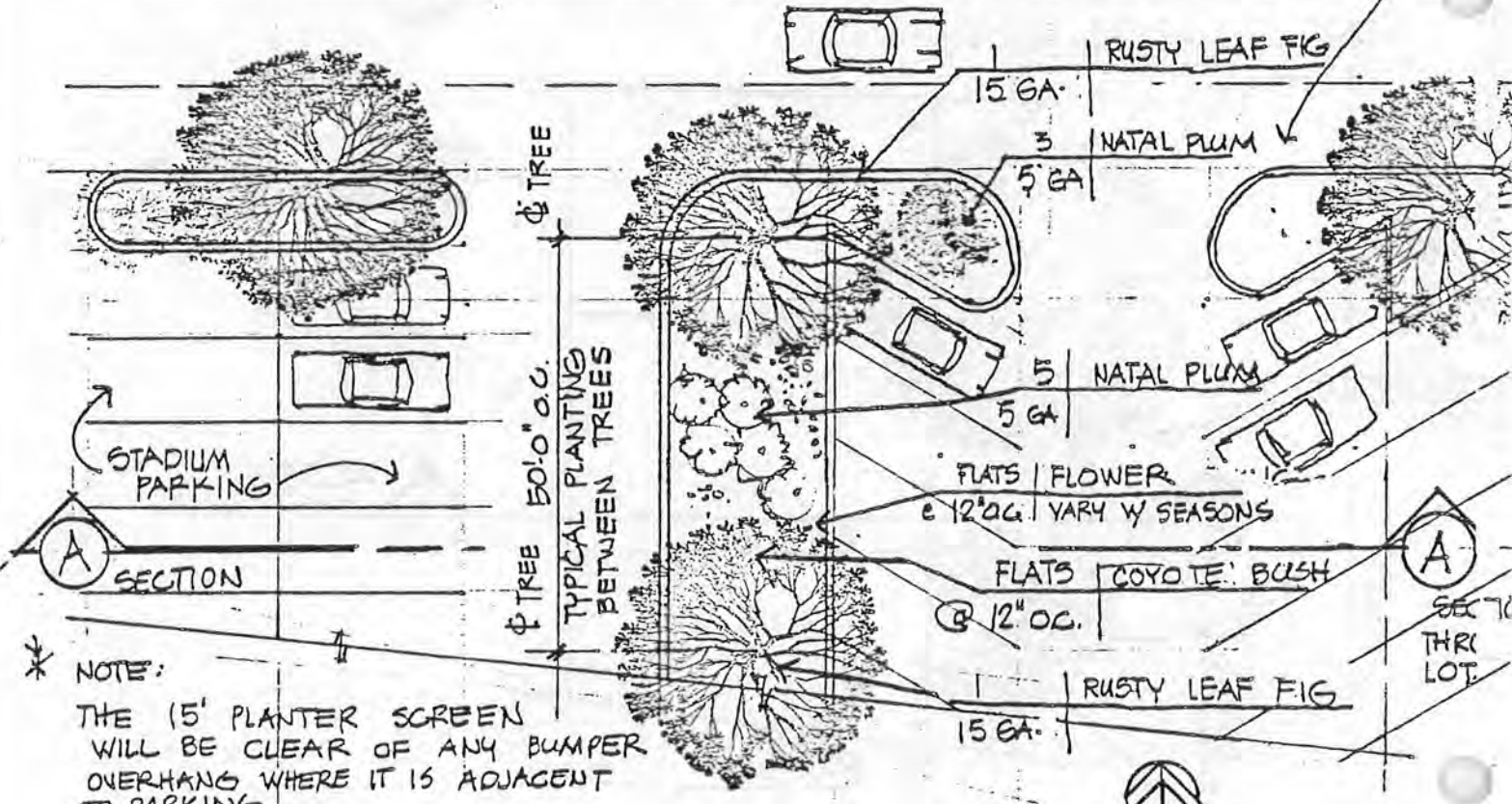
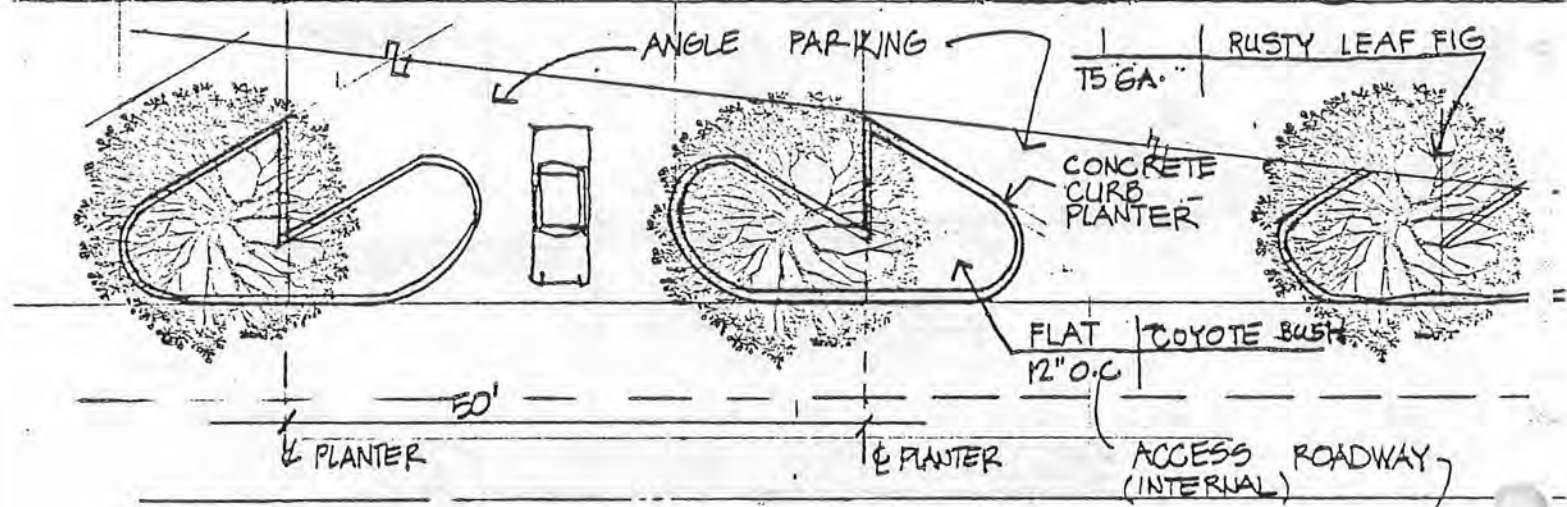


PLAN-TYPICAL WALKWAY



SECTION

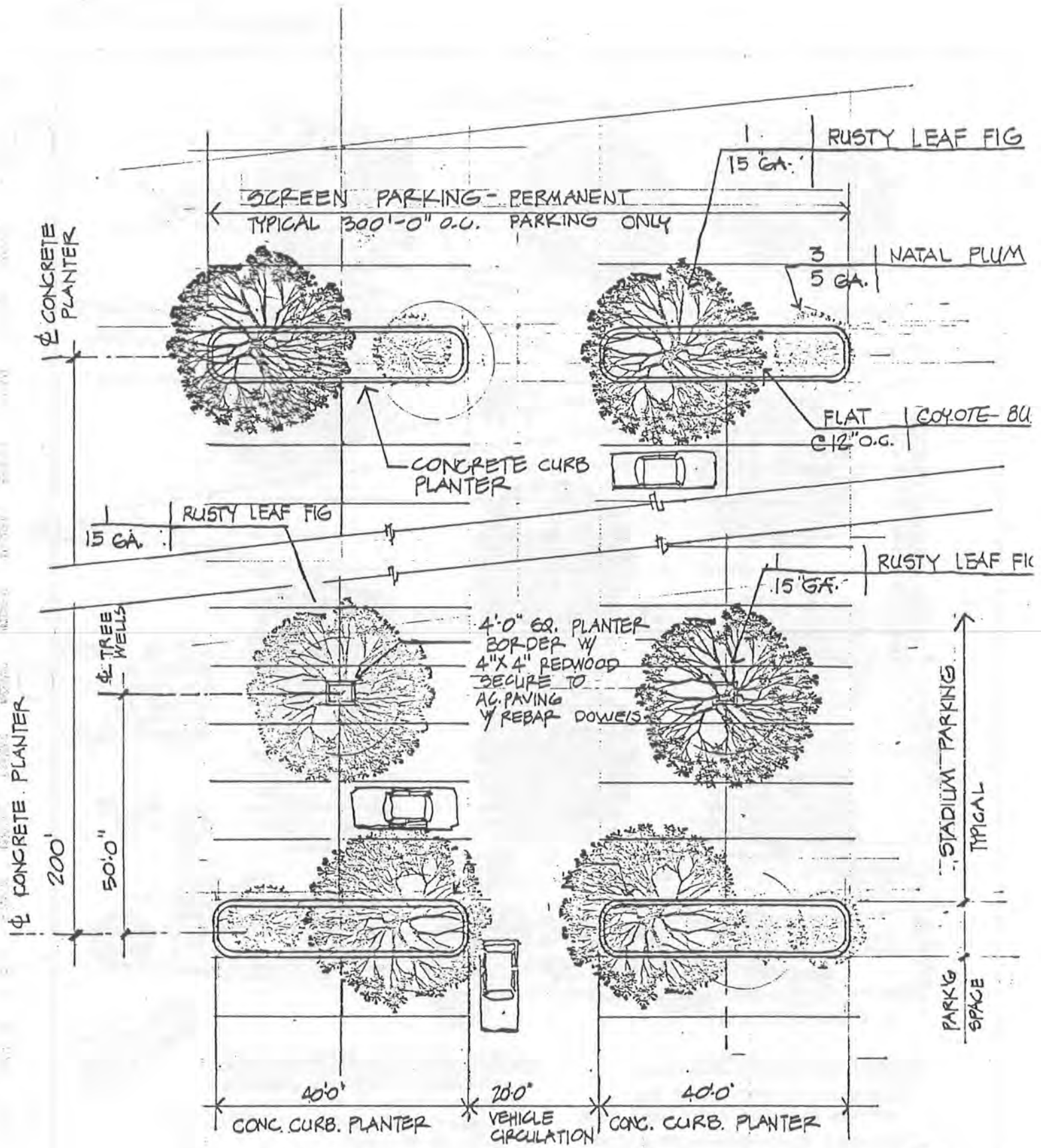
A



NOTE:
 THE 15' PLANTER SCREEN
 WILL BE CLEAR OF ANY BUMPER
 OVERHANG WHERE IT IS ADJACENT
 TO PARKING.

LANDSCAPE PLAN
 INTERNAL PARKING LOT SCREEN TYPICAL AT PERMANENT PARKING

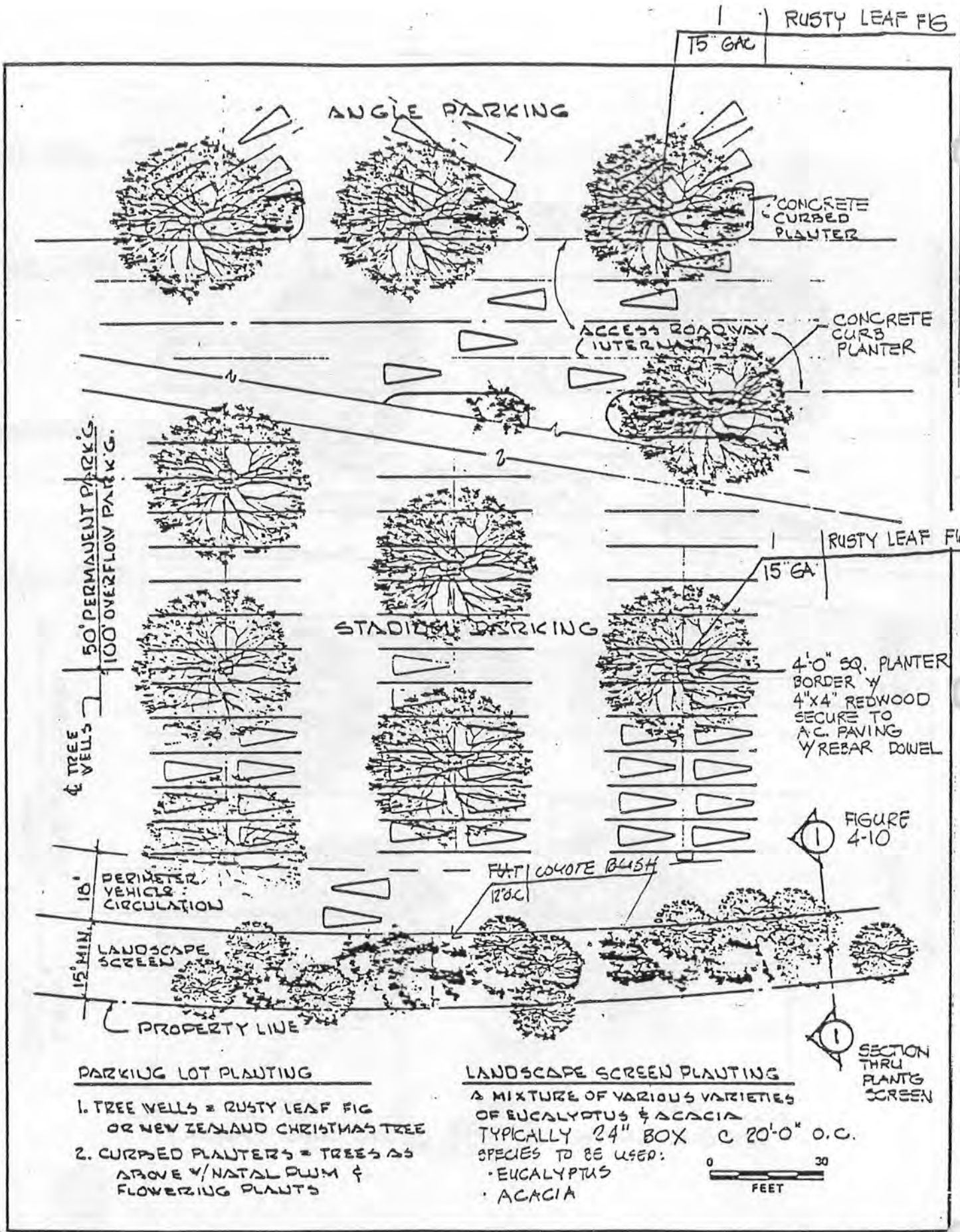
NOTE: TYPICALLY USED TO BREAK UP
 PARKING LOT INTO SUB-PARKING LOTS. * REVISED 1-18-85



LANDSCAPE PLAN - SUB-PARKING LOT.

12-20-84
REVISED 1-18-85

NOTE: 1. PLANTS IDENTIFIED ARE TYPICAL FOR ALL PLANTERS.
2. NEW ZEALAND CHRISTMASS TREE MAY BE SUBSTITUTED FOR RUSTY LEAF FIG.



PARKING LOT PLANTING

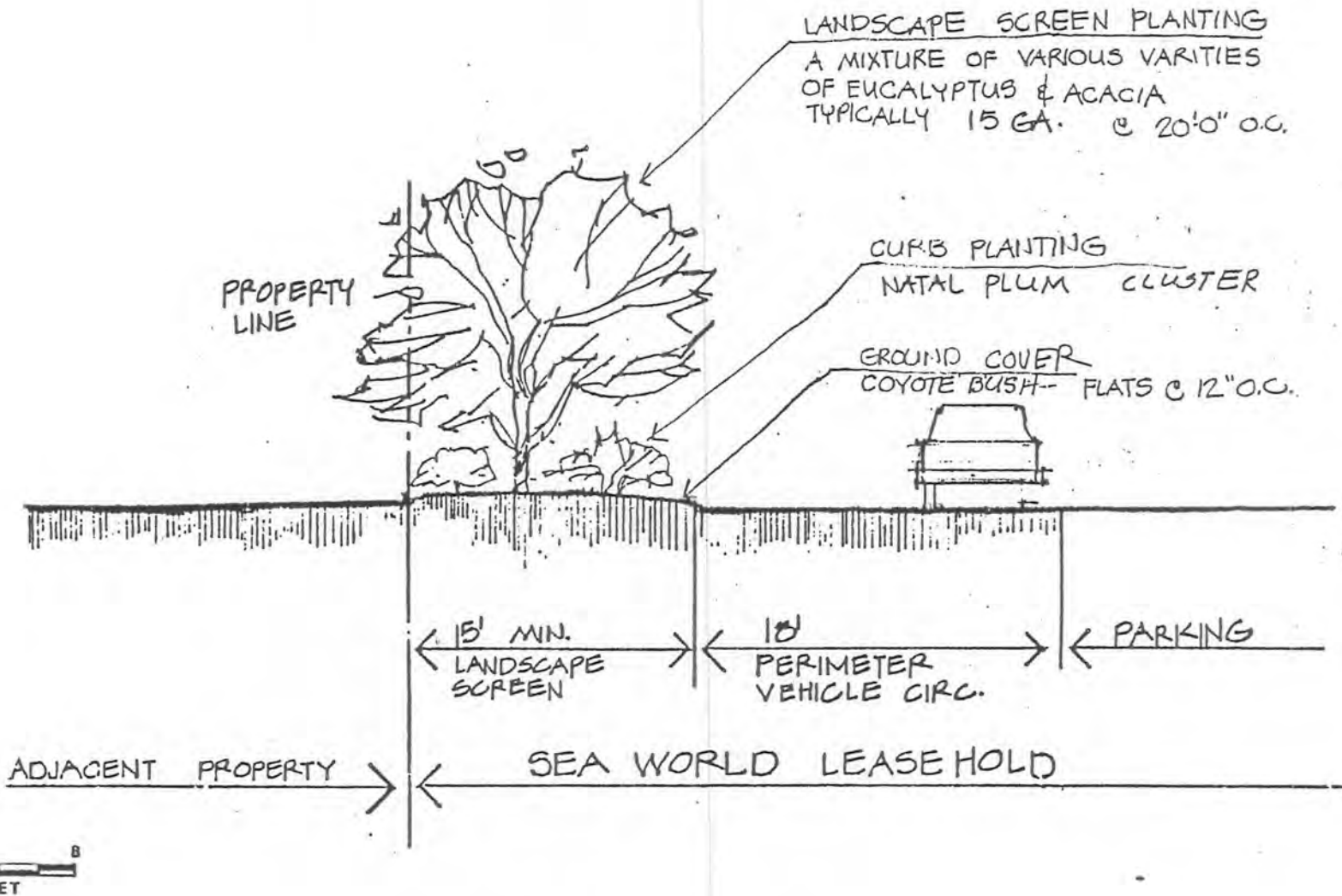
1. TREE WELLS = RUSTY LEAF FIG OR NEW ZEALAND CHRISTMAS TREE
2. CURBED PLANTERS = TREES AS ABOVE + NATAL PLUM & FLOWERING PLANTS

LANDSCAPE SCREEN PLANTING
 A MIXTURE OF VARIOUS VARIETIES OF EUCALYPTUS & ACACIA
 TYPICALLY 24" BOX @ 20'-0" O.C.
 SPECIES TO BE USED:
 • EUCALYPTUS
 • ACACIA



Sea World Parking Lot Landscape Plan

FIGURE 4-9



Section Through Landscaping Screen

FIGURE 4-10

12-28-84.