



EnterOcean Guam

Project Concept Report
April, 1993

Table of Contents

- I. ENTEROCEAN GUAM - Executive Summary
- II. ENTEROCEAN GUAM - Background
- III. ENTEROCEAN GUAM - Project Description
- IV. ENTEROCEAN GUAM - Product Research and Development
- V. ENTEROCEAN GUAM - Market Factors and Projected Economic Performance
- VI. ENTEROCEAN GUAM - Summary of Construction Considerations
- VII. ENTEROCEAN GUAM - Environmental Issues and Permits
- VIII. ENTEROCEAN GUAM - Political Feasibility
- IX. ENTEROCEAN GUAM - APPENDIX 1 - Economic Projections
- X. ENTEROCEAN GUAM - APPENDIX 2 - Probable Costs

I. ENTEROCEAN GUAM - SUMMARY

The proposed Guam Enterocean Facility will be a totally new type of ocean entertainment complex..a fantasy adventure combining a unique approach to the aquarium-like display of marine life with a variety of opportunities to actually enter the ocean to see and learn about ocean creatures first hand.

The Facility will consist of a series of replicated ocean lagoons and sea caverns, covering a land area of approximately 130,000 square feet. Man-made lagoons and undersea exhibits will contain sea water which is constantly replenished, permitting these lagoons and exhibits to host a wide variety of marine life.

Visitors will be introduced to the Facility via a magical trip on a 21st Century Submarine, visiting the bottom of ocean trenches, cavorting with a frisky pod of giant whales, experiencing an attack by a Great White Shark, and other similar experiences, all made possible by means of modern Dynamic Motion Simulation and High Resolution Television.

They will depart the submarine and exit into an Undersea Cavern, where they will be able to view and learn about a wide variety of exotic marine life in an aquarium-like atmosphere. Following this experience, guests will choose to undertake one or all of three optional adventures, including:

*** A trip through a Polynesian Lagoon onboard an intimate Semi-Submersible Submarine, where they observe all types of sea life..from sponges to sharks, complete with running commentary on the habits and habitats of the creatures they see.

*** An air-breathing Dive Trip through a Polynesian Lagoon, swimming with a thriving fish population, complete with a running commentary. During a portion of the trip huge sharks are encountered (safely contained behind glass panels).

*** An air-breathing Night Dive Trip through a Polynesian Lagoon. This tour is similar to the above, except for the added mystique and color which is only observable after dark with underwater lighting.

Visitors who purchase an optional experience will also receive a membership in the Facility Club. Club membership entitles visitors to enter the Sea Cave underwater cocktail lounge, as well as to purchase tickets to planned theme parties held on The Island, a tropical jungle inland surrounded by the lagoon water trails. Club Members are also entitled to discount prices on underwater experiences in which they have not yet participated, as well as discounts at other EnterOcean facilities. The objective of the Club is to provide Oriental visitors to Guam a unique and interesting venue for evening informal socializing, where they can come to share their underwater experiences with other like-minded visitors. Ocean Adventures has had many years of experience dealing with Japanese visitors to Guam and they believe that the Club will fill a much needed vacuum in the visitor experience.

Additional revenue opportunities will include a "Nature Company" style gift shop, photograph and video rentals and sales, a food and beverage service area (separate from the lounge and evening theme party events) and revenues from commissions on on-premise and referral sales by open ocean dive tour, jet ski, and parasail operations.

The project will be constructed on one of several alternate sites under consideration. It is likely that the chosen site will be adjacent to Tumon Bay, the location of the majority of resort hotels in Guam. This area is preferred because it will facilitate the use of a jitney-style mode of transportation to and from the majority of Guam hotels, as well as accessibility by foot from many.

The Facility will consist of two 600-foot artificial reef trails, which wind around islands and surround a central structure. The reef trails will be stocked with marine animals and corals native to the South Pacific. Within the 30,000 square foot enclosed building will be located the Dynamic Motion Simulation Submarine and the Undersea Cavern, which will house the aquarium tanks and galleries. At the apex of the Undersea Cavern and the two reef trails will be located a 5,000 square foot Shark Grotto, which will be separated from the galleries and reef trail by acrylic underwater viewing windows.

Adjacent to one reef trail, and separated from it by acrylic underwater viewing windows, will be located the Sea Cave lounge. The opposite wall of the Sea Cave will be formed by acrylic windows looking out into the free-swim Shipwreck Lagoon. Participants in the wet tours will be granted the privilege of unlimited snorkeling in Shipwreck Lagoon, which will be well-stocked with fish and corals.

Atop the roof structure of the Undersea Cavern, which is surrounded by the man-made reef trail lagoons, will be constructed The Island, a 40,000 square foot tropical jungle island with both jungle pathways and large open turf spaces. The latter will be utilized for the evening theme parties for

Club members.

Three major equipment development projects will be undertaken in support of the Guam project. The underwater group tow vehicle will be the same unit being developed for the Hilton Lagoon project, and is scheduled to be in limited quantity production by late 1995. The small semi-submersible submarines required for the submarine trail tour will also be developed by the EnterOcean development staff, largely utilizing commercially-available marine components in a custom fiberglass shell. Prototype testing is scheduled for late 1994, with limited production timed for soft opening. The basic equipment for the Dynamic Motion Simulation submarines is available commercially, requiring only customized fiberglass shell finishes and nautical fittings. Production of the video presentations will be underway in late 1993, proceeding to completion by the end of 1995. Programming of the platform computers and startup of the simulators will take place in early 1996.

The projected development cost for the project, including permitting, design, construction, and pre-opening costs, is approximately \$30 million. An ad hoc Limited Partnership will be established for the Guam project, wherein The EnterOcean Group has General Partner responsibilities. The Limited Partnership will contract with The EnterOcean Group for design, engineering, construction management, and operating management of the facility. The Limited Partnership will be funded in the amount of approximately \$34.3 million.

Overall project scheduling anticipates a site selection in the 2nd Quarter of 1993, permitting completed by mid-1994, and soft opening in early 1996.

The EnterOcean Group of companies are combining their successful collective experiences to create a world-class attraction for Guam. The economics of the project appear favorable. There are a number of excellent potential sites. We are committed to move aggressively ahead with this unique facility.

Guam, located in the Western Pacific, is a U.S. territory located 3,318 miles from Honolulu and 1,500 miles from Tokyo. It has an area of approximately 212 square miles and a tropical climate, with a temperature range

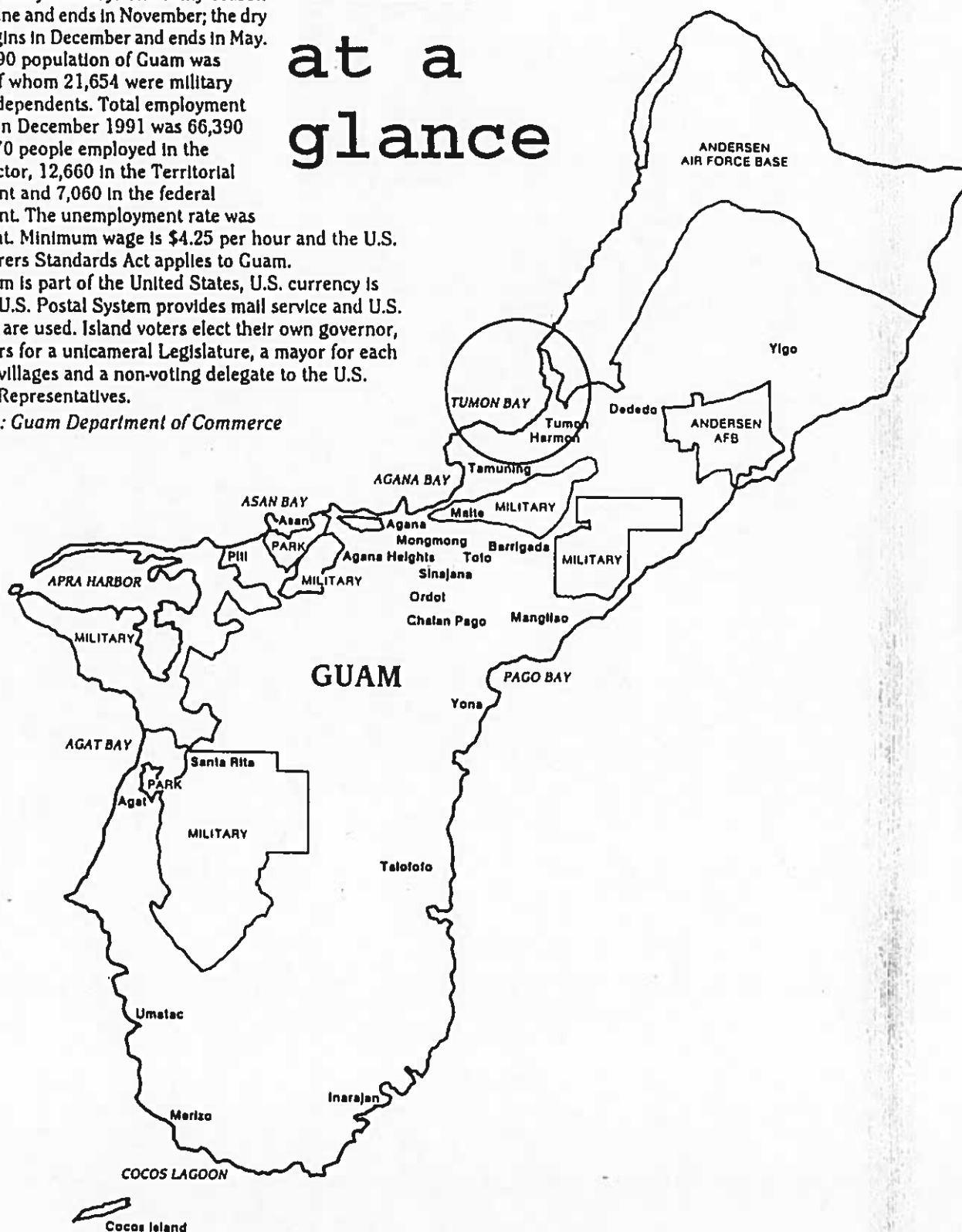
of 74 to 94 degrees Fahrenheit, average rainfall of 85 to 100 inches per year, average humidity of 72 to 86 percent. There are two seasons — rainy and dry. The rainy season starts in June and ends in November; the dry season begins in December and ends in May.

The 1990 population of Guam was 133,152 of whom 21,654 were military and their dependents. Total employment on Guam in December 1991 was 66,390 with 44,670 people employed in the private sector, 12,660 in the Territorial government and 7,060 in the federal government. The unemployment rate was 3.6 percent. Minimum wage is \$4.25 per hour and the U.S. Fair Laborers Standards Act applies to Guam.

As Guam is part of the United States, U.S. currency is used, the U.S. Postal System provides mail service and U.S. standards are used. Island voters elect their own governor, 21 senators for a unicameral Legislature, a mayor for each of the 19 villages and a non-voting delegate to the U.S. House of Representatives.

Source: Guam Department of Commerce

Guam at a glance



II. ENTEROCEAN GUAM FACILITY - BACKGROUND

Guam, located in the Western Pacific 3,300 miles from Honolulu and 1,500 miles from Tokyo, is one of the fastest-growing tourist destinations in the hemisphere. Guam is within four air hours from nearly three-fourths of the world's population.

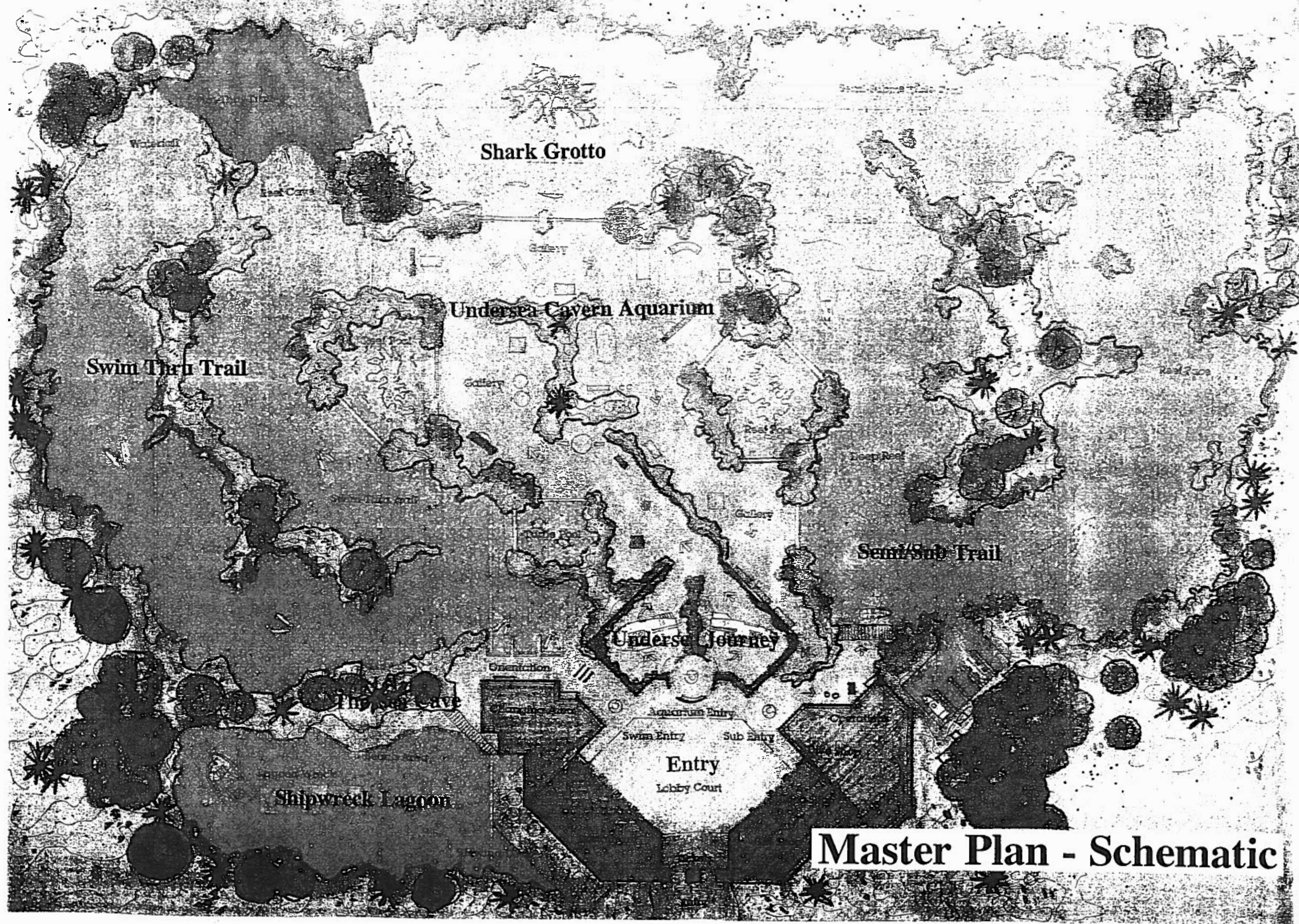
The tourist demographics favor younger Japanese, which, as a group, are more active and water-oriented than any other tourist group. Visitor arrivals in 1991 totaled 737,260 and despite the passage and destruction caused by the much-publicized Typhoon Omar, increased to over 860,000 in 1992, maintaining an average annual growth rate in excess of 15% per year. Predictions place visitor counts in 1995 over 1,360,000.

Exit interviews conducted in 1989 revealed that 60% of Japanese visitors can to Guam for the "beautiful seas". Similar interviews in 1992 show the "beautiful seas" incentive named by 80% of departing visitors. A vast majority of Japanese vacationers to Guam participate in some kind of ocean recreation, including jet ski rentals, snorkeling, SCUBA diving, parasailing, a ride on the Atlantis tourist submarine, etc. In addition to ocean recreation, visitors frequent gun shooting establishments, round-island sightseeing tours, and evening entertainment at the local hotels.

Discussions with key resort management personnel have pointed up the need for more facilities offering high quality visitor experiences, as much of the existing attractions are of the "home grown" variety..lacking the polish and entertainment value found at other tourist destinations, such as Hawaii.

For over ten years certain factions within the Government of Guam have been discussing the need for a Territorial Aquarium. Recognizing the

highly specialized technology inherent in operating such a facility, government officials have stated a requirement that if such a facility is to be developed, it should be operated privately, rather than as a public agency. In 1992 a study was commissioned to determine the feasibility of such a facility. Preliminary findings were published recently which indicated that a very marginal economic feasibility for a conventional aquarium, given the small resident population (140,000), the relatively high costs of operation, and the pre-established admission pricing for similar facilities in Japan and the US. Thus, it would appear that the Territorial Aquarium, of and by itself, probably will not become a reality unless substantial amounts of government funds, private donations, etc. are forthcoming. However, there are a number of government-owned sites which may be suitable for the EnterOcean Facility. Discussions will be held to explore the use of one or more of these with the intent of satisfying the government's interest in the creation of an aquarium facility, but coupled with the additional visitor attractions which form the total EnterOcean concept.



Master Plan - Schematic

THE ENTEROCEAN GROUP

InterActive Marine Recreation Design, Construction and Management
Copyright The EnterOcean Group, 1992

III. ENTEROCEAN GUAM FACILITY - PROJECT DESCRIPTION

The following narrative describes the physical and operational plan as envisioned in the early stage of the concept development phase. As concept development moves forward during 1993, it will be revised as new information on physical conditions, including the actual site, as well as other factors are incorporated. Likewise, as further economic analyses better define the future trends of the Guam visitor mix, the plan will evolve somewhat. However, the concepts presents here are fundamentally valid and form the basis for the EnterOcean Guam project.

The facility will consist of a network of manmade salt water lagoons, with water containment walls constructed from reinforced concrete. The concrete structures will be camouflaged by means of the installation of artificial rock and coral formations. There will be three principle bodies of sea water..two of these will incorporate island formations designed to create closed-loop "trails". The third will be smaller, and designed as an ideal habitat for pelagic (free-swimming) large ocean fish, including sharks, rays, and other predators.

The large lagoon trails, each containing a water surface area of approximately 20,000 square feet, are arranged so that the inner structural water containment walls define an enclosed space of about 24,000 square feet in size. Within this space are to be contained additional sea water tanks, each fitted with acrylic underwater viewing windows. Additional dividing walls are used to define passageways. The entire inner building is naturalized with artificial rockwork to create the impression of a winding series of cavern passageways, which open via underwater viewing windows onto the "ocean"

beyond. The entrance to this cavern network will be via two parallel passageways, each leading to a small cavern enclosing a subterranean waterway. Located within each cavern will be a Dynamic Motion Simulator motion platform disguised as a high tech submarine.

Each "submarine" will contain two "air lock" doors, one for ingress and one for egress. The egress doors will connect with passageways leading to the subterranean cavern system described above.

The roof structure of the "cavern" will be essentially flat, constructed from heavy reinforced structural concrete. Atop this roof structure will be constructed a three-quarter-acre "island", with jungle trees, ground covers, pathways, and grassy clearings.

Separated from the structural water-containment walls of one of the lagoon trails will be located another lagoon, again fully naturalized with synthetic rock and corals. This lagoon will be from 3 to 8 feet in depth.

The main entry building will be architectural, as opposed to natural, in character. This single-story structure will contain the admissions counter, a gift shop, changing rooms for men and women, and the administrative offices. It is designed to allow access to all the active components of the facility, and provide the transitions to the different activities available to visitors. Architectural style will be designed to reflect Micronesian and, specifically Marianas traditional architecture.

The entry building will incorporate:

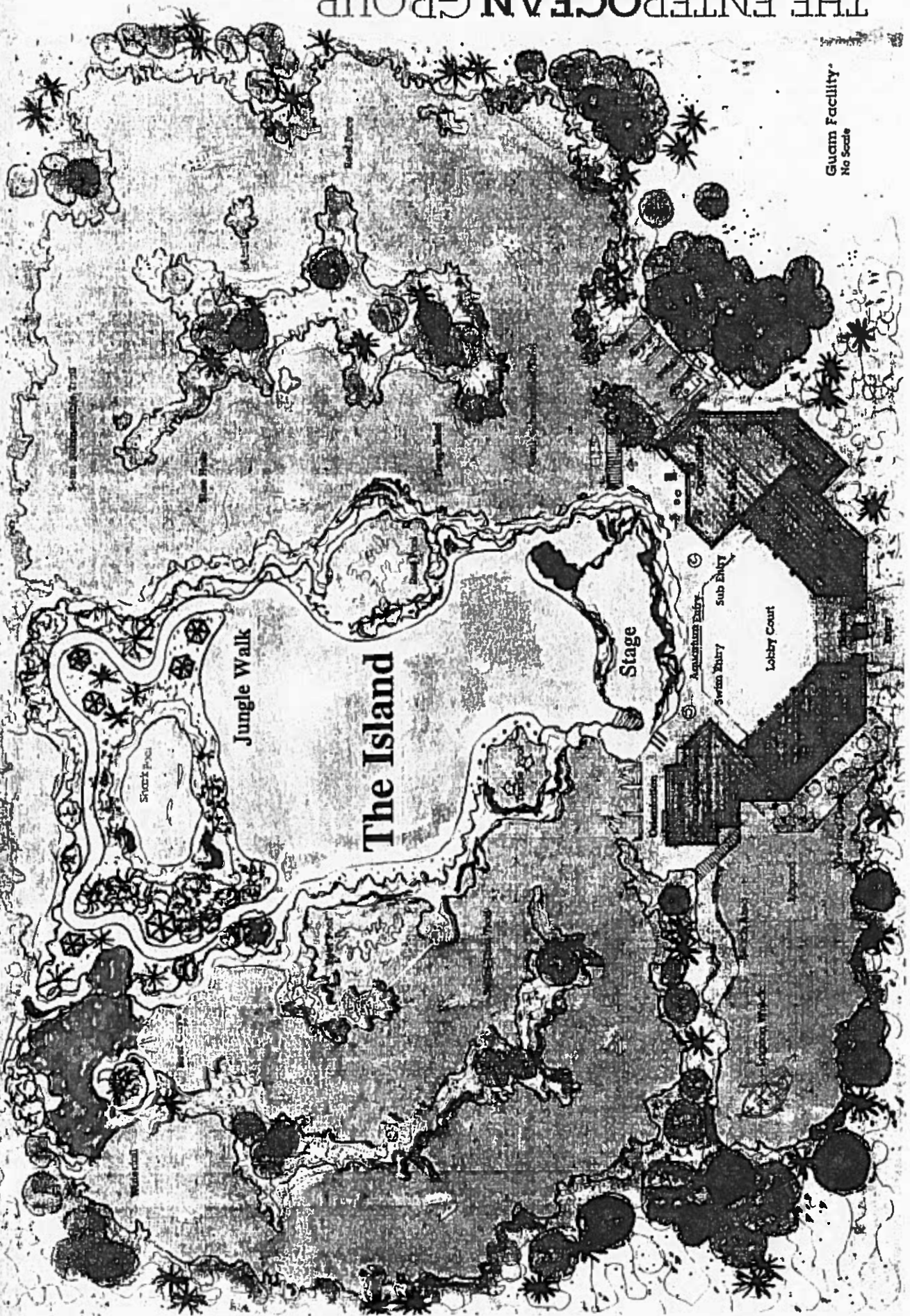
- Main Entrance

- Ticketing/Admissions

- Changing Rooms/Restrooms>Showers

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Guam Facility
No Scale



Clothes Storage

Equipment Dispensing/Storage

Food and Beverage

Pre-orientation Area

and Access to all active areas of the facility

Service areas for physical and biological maintenance, underwater vehicle maintenance, etc. will be located so as to make dual use of the heavy structural water-containment walls forming the lagoons.

It is anticipated that the several lagoons and marine display tanks will contain approximately 3,000,000 gallons of sea water. In order to maintain a safe and healthy environment for the thriving population of fish, corals and invertebrates, as well as to permit humans to physically share that environment, it will be necessary to pump natural sea water through the lagoons and tanks at a relatively high flow rate. To accomplish this, a system will be installed to pump fresh sea water directly from the ocean, flow it through the lagoons and display tanks, and permit it to return to the ocean. Therefore, proximity to a source of relatively clean ocean water is a must in the site selection process.

The facility footprint will occupy a land area of approximately 100,000 square feet. A specific site has not yet been selected. Total site area is dependent upon parking and access requirements, which depend partly on final determination of governmental requirements and partly on the specific site selection, including topography, necessary access infrastructure, etc.

The Visitor Experience

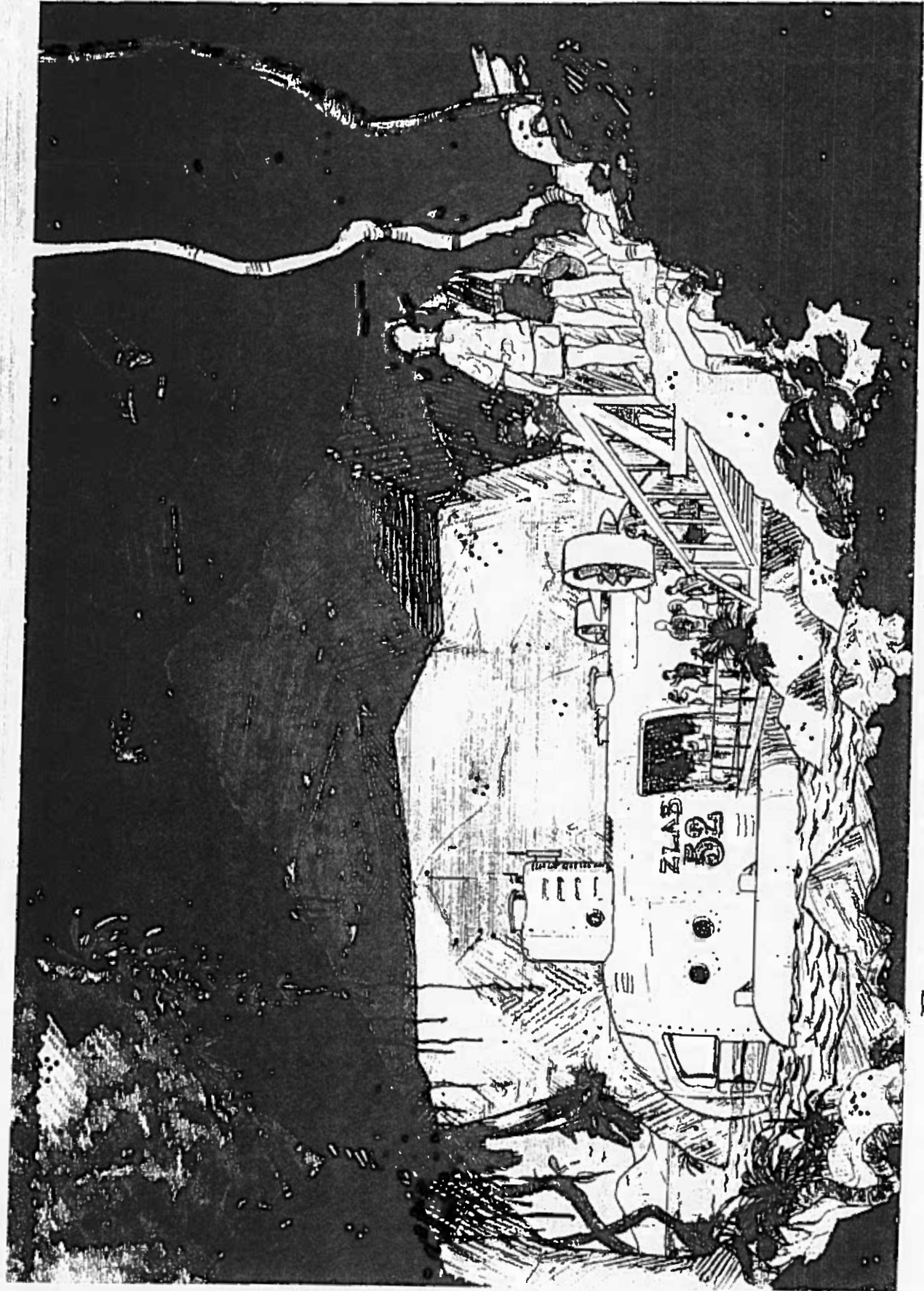
The Guam EnterOcean facility will provide to visitors a selection of activities which is unique in the world.

Journey to the Undersea Cavern.

Visitors will begin their journey by entering a 21st Century Submarine. *(In reality a sophisticated Dynamic Motion Simulator...an Undersea Version of the Disney "Star Tours" ride)* After they are strapped into their seat, the submarine will depart and carry them through an exciting ride under the oceans of the South Pacific. During the ride they will visit the Marianas trench, travel with a frisky pod of whales, experience the attack of a great White Shark off the Australian Great Barrier Reef, and witness first hand the wonders of the Deep Open Ocean. At the end of their journey, they will exit the submarine into a gigantic undersea cavern.

The Undersea Cavern.

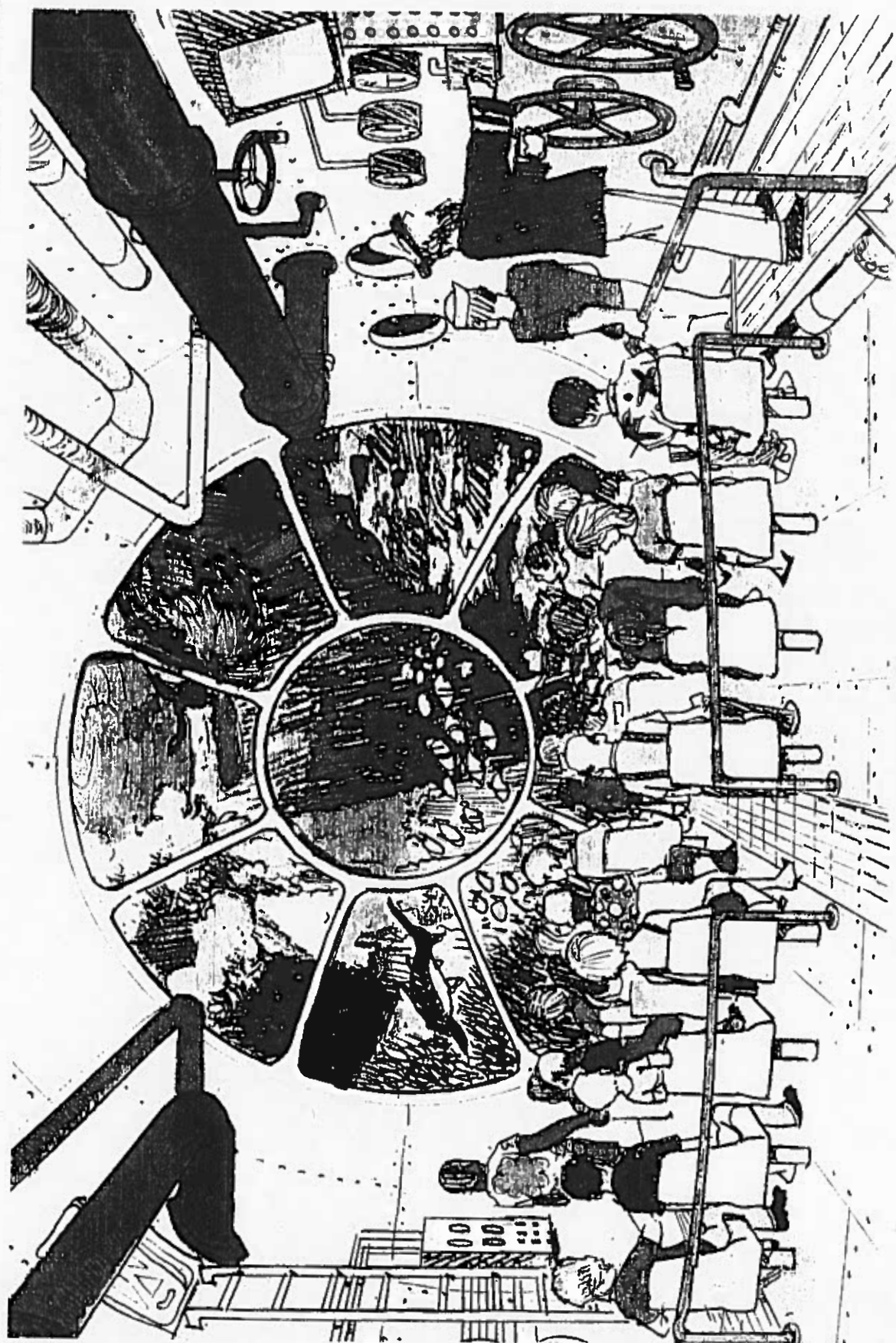
As they walk through the subterranean cavern passageways, *(In reality a roofed structure surrounded by the man-made lagoons and waterways forming the Swim-Thru Aquarium and the Semi-Submersible Trail)* visitors discover transparent windows onto the ocean depths, where they observe unique marine life forms of several different South Sea habitats. Nearby each habitat window, visitors have the opportunity to study the marine creatures more closely in smaller closed aquarium displays...each equipped with state-of-the-art interactive computer teaching kiosks. In addition, marine biology docents for additional questions and instruction in their native language. Progressing through the cavern, visitors discover six different ocean habitats...from Marianas Coral Reefs to Hawaiian Turtles.



Entrance to Undersea Journey

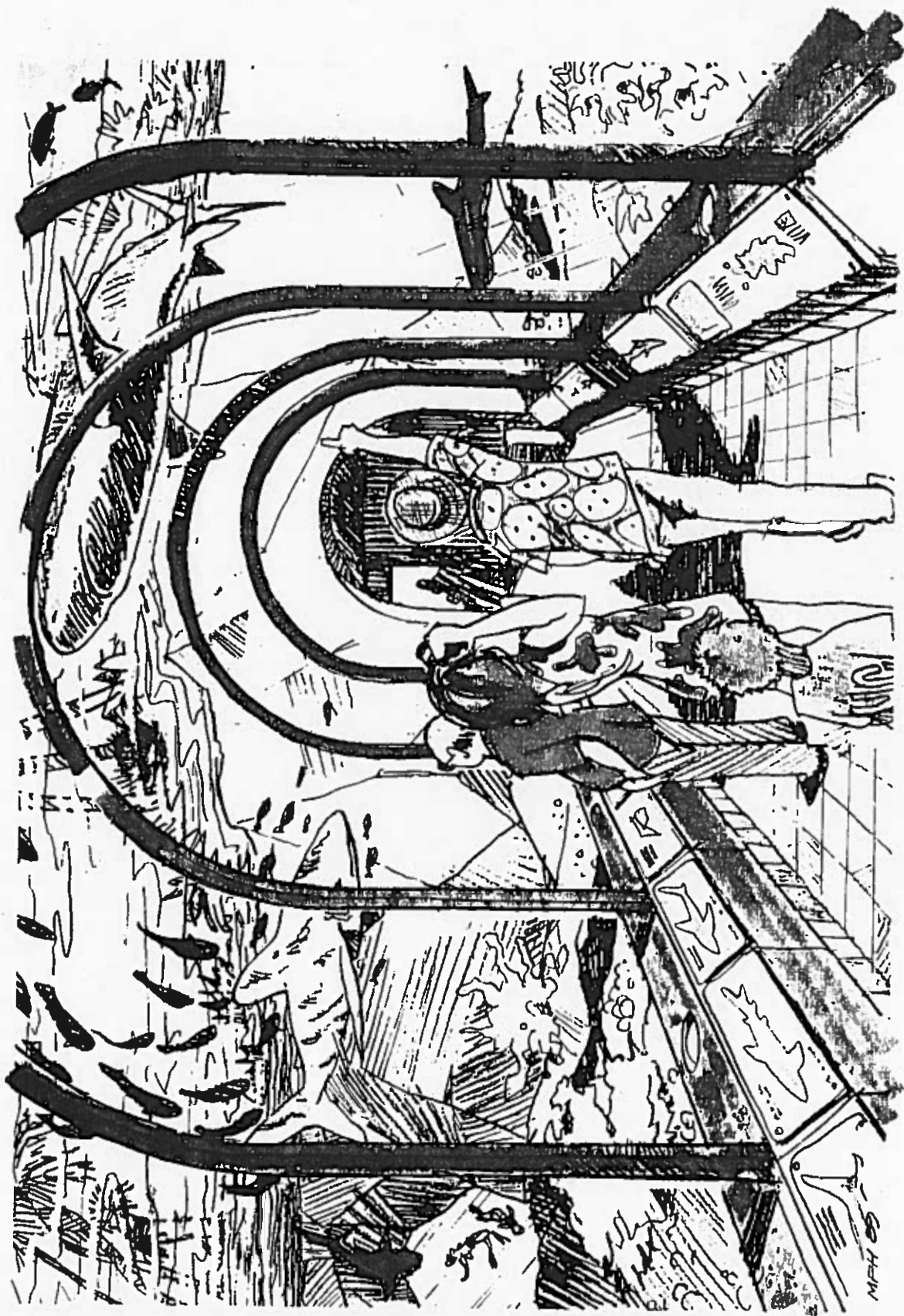
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Interactive Marine Recreation Design, Construction and Management

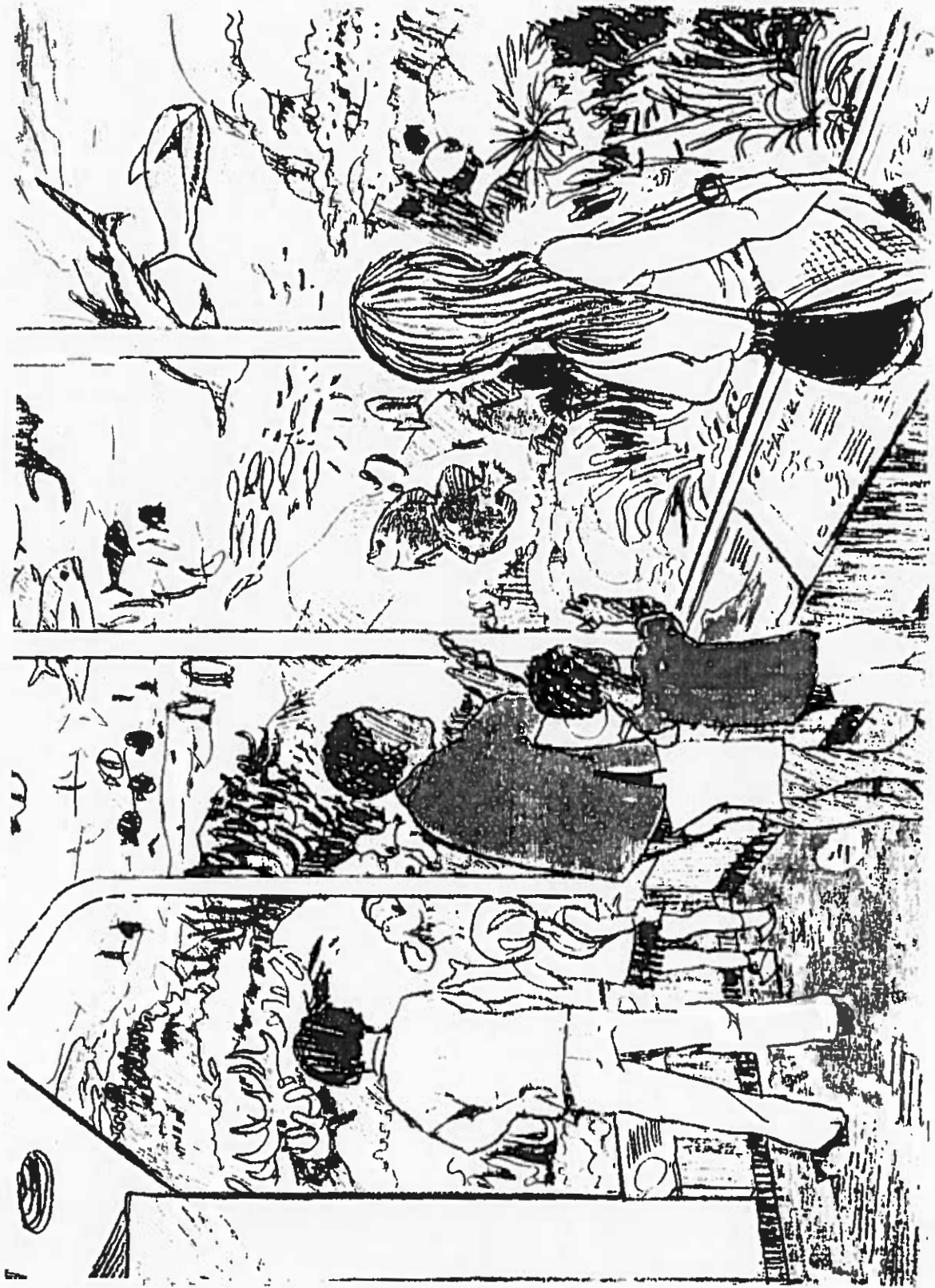


Undersea Journey

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Window to the Reef Trail

Along the way, visitors peering out into the "open ocean" discover that there are people in groups diving in the seas beyond the cavern. In another area, they see small submarines exploring the ocean. They are then made aware that they, too, will have those opportunities on the next leg of their EnterOcean experience.

Added Experiences - EnterOcean Club Memberships.

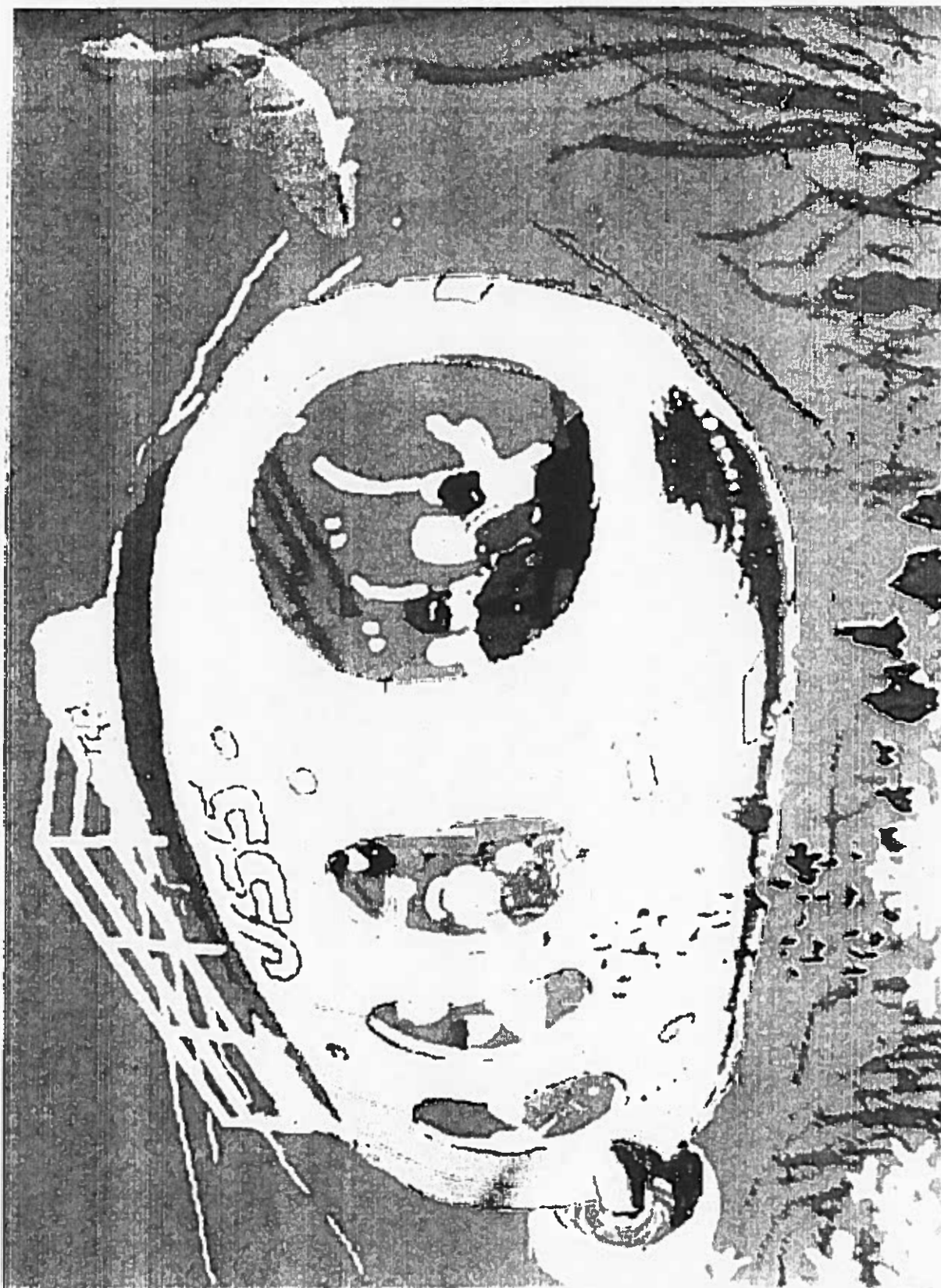
During and after their Undersea Adventure and Undersea Cavern tour, visitors will be told about the opportunity to enjoy additional exciting experiences through membership in the EnterOcean Club. They are then given the opportunity to purchase a membership in the Club at different levels, including EnterOcean Club, Ocean Club, and Ocean Explorer Club.

Semi-Submersible Submarine Lagoon Tour.

EnterOcean Club level members are directed to a special pier, where they board a unique six-passenger submarine. The small vessel is piloted by an experienced marine biologist who takes them on a journey through a South Pacific reef experience. The large viewing windows give visitors a panoramic view of the thriving marine life in a number of different sea life habitats. Protected by the underwater viewing windows of the sub, visitors come in close proximity to a wide variety of sea life, from colorful reef fish to sea turtles to large sharks. The submarine pilot lectures them about the sea life and habitats they are observing..adding greatly to the enjoyment of the overall experience.

Dive Tour.

Ocean Club level members are treated to the ultimate ocean experience..the opportunity to swim with the sea life while fully submerged



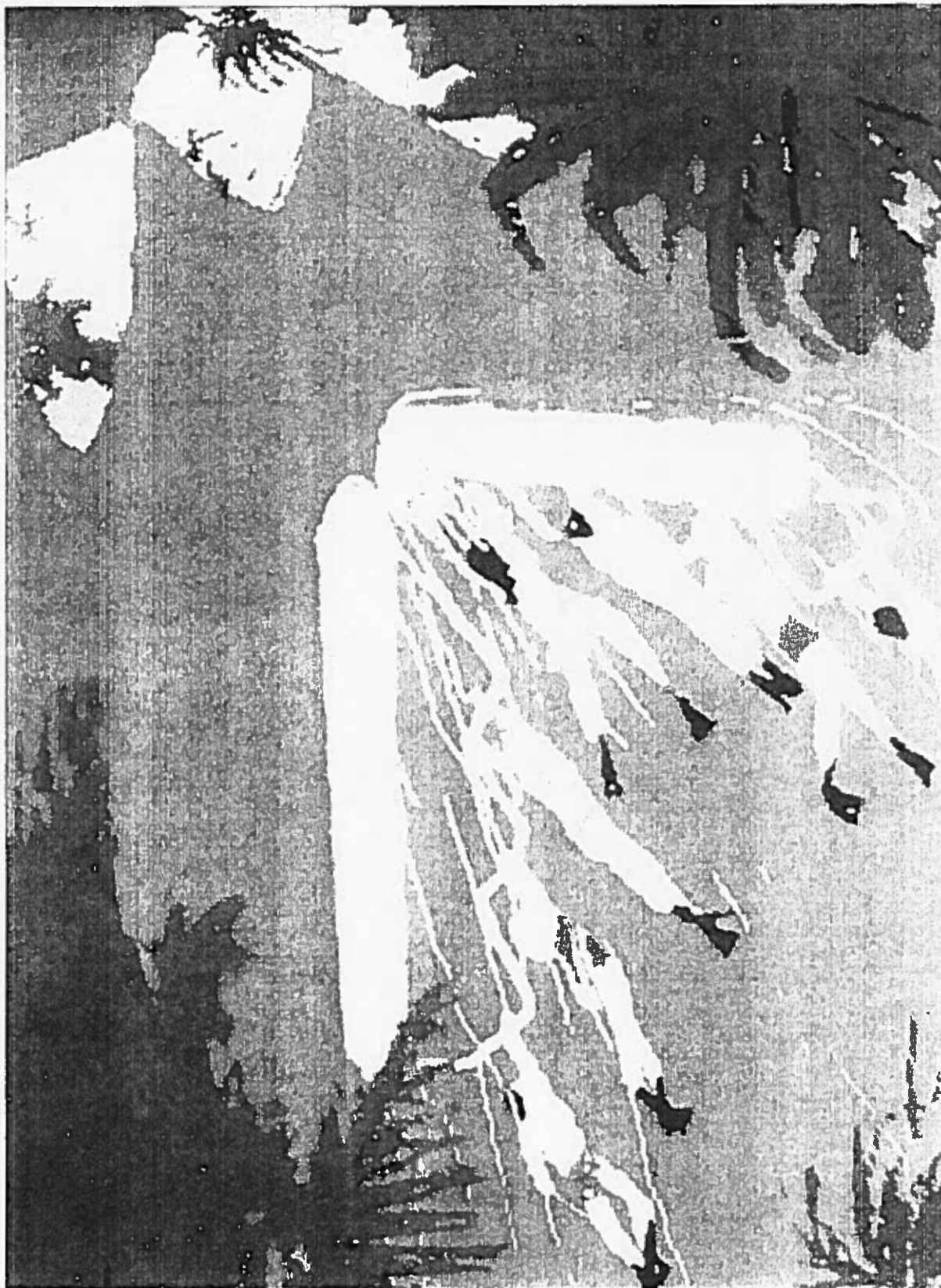
Semi/Submersible

and breathing compressed air.

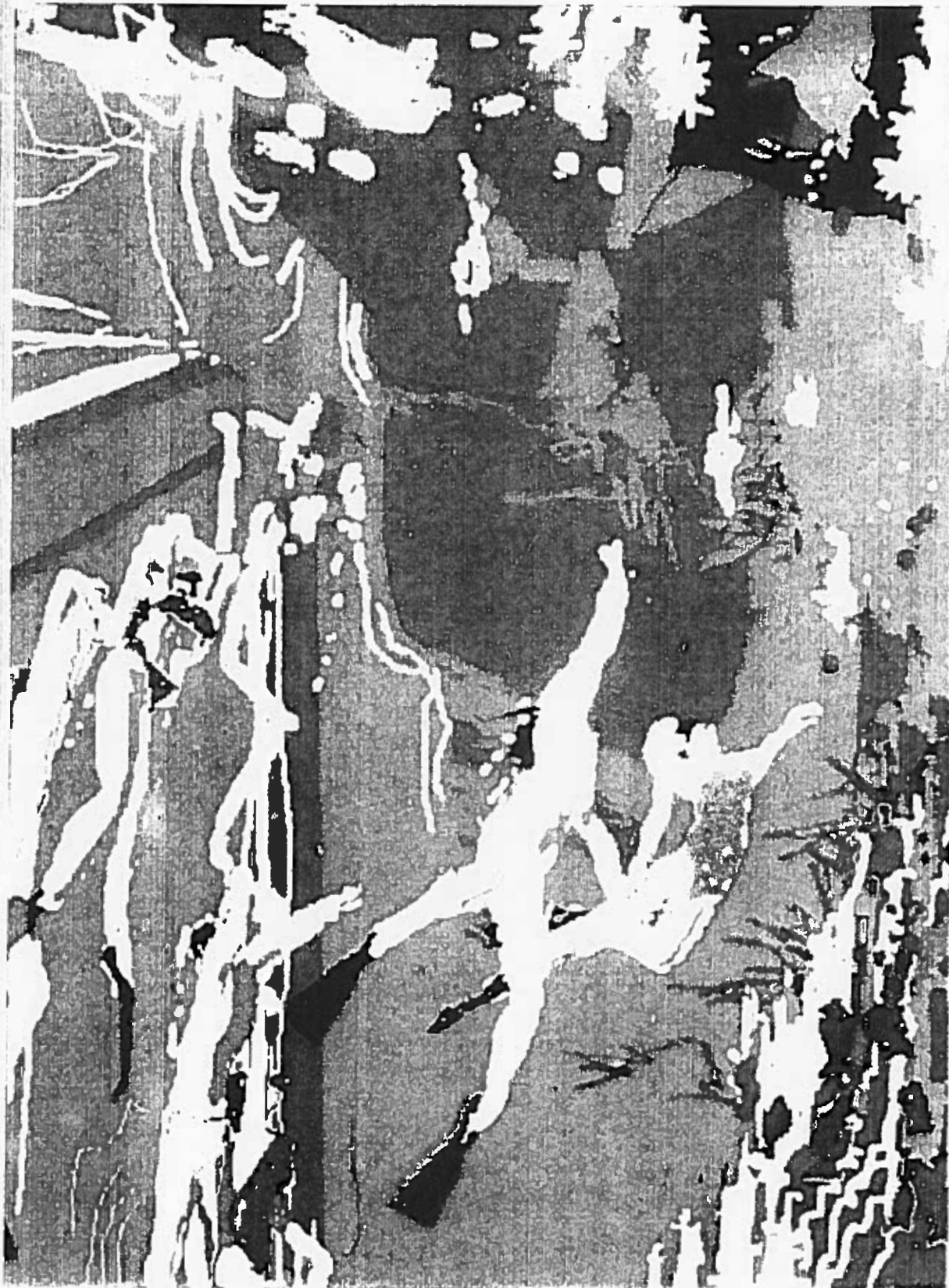
Club Members are directed to changing rooms, where they don swimming attire. They are then formed into groups of six people. Their tour group leader, a trained diver/biologist, then instructs them in the use of the Dolphinaire Group Underwater Towing Vehicle. The lesson is a brief one, since the use of the breathing device and underwater headset are simple and easy to become acclimated to..in fact, even easier than learning to snorkel. After a few minutes of instruction, the visitor group is ready to proceed on their underwater journey.

The Dolphinaire vehicle contains hand rails below the surface of the water, arranged so that each guest has a relatively unobstructed view. Guests grasp the handrail, and are gently pulled along, breathing through the air regulator installed at each passenger station. Guests wear a headset, which provides them with a running commentary in their native language on the sea life and habitats they discover as they proceed through the reef trails which comprise the underwater experience.

The underwater trail teems with marine life as it twists and turns, exposing new vistas and habitats, and different marine life forms. Participants are treated to the physical experience of being underwater without the need to surface to breathe, the visual experience of seeing the ocean world from the vantage point of the ocean dweller, as well as experiencing the sounds of the marine environment, coupled with an interesting and informative lecture about the habitats and sea life they are witnessing. Whale sounds are heard as if they come from the deeper ocean near the reef trails. At one point on the trail the vehicle proceeds into a cave,



Dolphinaire Underwater Tour Vehicle



The EnterOcean Group

where the vehicle passes close to a group of dangerous roving sharks (*safely contained behind transparent acrylic windows*).

The water is crystal clear..there are no dangerous currents or waves..and the quantity and variety of marine life is unsurpassed except perhaps for that experienced on dive trips to very remote parts of the world, costing many times the price paid for Club Membership and the experience..

Because the vehicle is powered, participants need only to hold onto the hand rail..there is no need to swim to keep up with the group. Should they experience the need to surface, this is easily accomplished by gently pushing down on the handrail..thereby raising their head above water. The experience is effortless, fun, and safe.

At the end of the trail, Club members are offered the opportunity to extend their underwater enjoyment by transiting to Shipwreck Lagoon. They are issued a snorkel, and directed to our private lagoon. Here they can again enjoy swimming with the fish in a reef environment complete with a sunken ship and the thriving marine life which inhabits it.

Night Dive Tours.

Most experienced snorkelers and divers would participate in open ocean night diving, because of the extreme beauty and diversity of nocturnal marine life. However, few do so because of the general difficulties involved with currents, wave action, as well as the perceived danger of unexpected visits by predators after dark in the open ocean.

However, the EnterOcean facility is designed and constructed to offer the night dive opportunity..not just to experienced divers, but to virtually everyone. The purchase of a Ocean Explorer Club level membership will

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Shipwreck Lagoon

entitle Members to enjoy the night diving experience.

In contrast to the real and perceived dangers of an open ocean dive after dark, the use of the Dolphinaire vehicle insures the Club Members of an exciting and informative night diving experience, safe from the dangers of a the open ocean.

EnterOcean Club Facilities and Events.

There is a certain euphoria which accompanies an interaction with the ocean world. These feelings beg to be shared with others who have enjoyed the experience. EnterOcean Club membership provides a variety of ways in which apris-tour groups can interact in a relaxing and educational setting.

The Sea Cave.

Club Members are entitled to enjoy the Sea Cave, a subterranean cavern surrounded by viewing windows with vistas of the lagoons and reef trails which members have recently toured. In the Sea Cave, Club Members may relax, enjoy a cocktail or juice and a snack, listen to music, and share their underwater experiences.

Periodically, a marine biologist will conduct lectures on the natural history of the sea life Members have seen in the reef trails. Portable aquarium tanks will be used so that Members will be given the opportunity to experience sea life forms close-up, even to touch them. High resolution video lectures will also be presented by the facility educational staff.

The Sea Cave will be open from late morning to late evening. Club Members have Sea Cave privileges on the day they first experience the EnterOcean Facility, and anytime thereafter.

The Island.

In stark contrast to the subterranean environment of the Sea Cave, The Island offers Club Members the opportunity to enjoy a lush tropical island surrounded by water. (*In reality the rooftop of the Undersea Cavern*)

During the day, Club Members may wander the jungle trails and admire the tropical plants and birds, or bask in the sun and enjoy a light meal and a beverage.

In the evening, The Island is the scene of special parties, hosted by the EnterOcean staff. Parties will be centered around a variety of educational themes, lectures and other educational programs. Interspersed with educational parties will be theme parties based on well-known novels, such as "20,000 Leagues Under the Sea", "Shipwrecked", etc.

Entertainment will include both popular and ethnic music and dance. Food service will be provided..emphasizing local and ethnic foods, as well as more conventional barbecue, generally prepared and consumed under the stars.

Informality will be stressed..EnterOcean Club Members are encouraged to mix, make new friends with like interests, relax, learn, and have fun!

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The Island

IV. ENTEROCEAN GUAM FACILITY - PRODUCT RESEARCH AND DEVELOPMENT

In order to support the activities intended for the Guam facility, The ENTEROCEAN GROUP is developing three new pieces of equipment. All are derived from existing art and do not present major research difficulties.
Group Underwater Towing Device

State-of-the-art artificial marine environments such as the Hilton Lagoon described here are costly to construct. They also necessarily host a great variety of live ocean animals, many of which are sensitive and develop symptoms of stress when in close contact with probing, over inquisitive divers or snorkelers.

Therefore, it is desirable, and perhaps even vital, to utilize a system in which underwater tour guests are positioned closely to their tour guide, to prevent them from inadvertently damaging the habitat or the more sensitive rare and exotic marine life.

At the same time, a system was sought which could make the rate of progress through the facility predictable, and not limited to the swimming speed of the least experienced novice guest. In this way the visitor capacity of the facility would be more predictable, allowing maximum utilization of these costly habitats for optimal project economics.

From the visitors viewpoint, it is well recognized that there is far greater satisfaction in an underwater experience involving the breathing of compressed air than in the use of a surface snorkel. The pricing differential between SCUBA experiences and snorkeling tours is marked. Therefore, the Company sought a way to deliver the compressed air experience, while at the

same time avoid the lengthy training and orientation time required for SCUBA, as well as the overburdened feeling experienced by the novice SCUBA participant created by the necessity of wearing buoyancy compensator, air tank, regulators, etc.

The Company plans to develop a special Group Underwater Towing Vehicle, which will be designed to satisfy all the requirements outlined above, plus deliver some added benefits. The Group Underwater Towing Device, tentatively named the "Dolphinaire" (after the legend about the Greek prince Aeolus rescued by dolphins, who towed him to safety), will be a floating system with self-contained electrical power supply and air source. An electrical thruster with swivel mount will propel the vehicle, under control of the tour guide, at a predetermined velocity.

Underwater hand rails, located at a suitable depth, will be grasped by the participants, who will be positioned on either side, and rearward of the tour guide. The present plans call for the vehicle to tow six participants. Two mirrors will allow the guide to see the face masks and air regulators of all participants. The rails will be positioned so as to permit the participants to raise their head out of water should they so chose.

Hoses will be installed from the air source to each participant's position, and equipped with suitable breathing regulators, which will be fitted with conventional replaceable mouthpieces. The vehicles will be equipped with remotely controllable underwater spot lights for use during night tours.

Electrical power and compressed air sources are yet to be determined, but the first choice will be to locate a suitable internal combustion engine which can be suitably muffled and also which will use

propane gas as a fuel, to eliminate environmental contamination in the event of a fuel spill. The engine would be coupled both to an electrical generator and an oilless air compressor. If this approach proves too complicated or costly, conventional ganged air tanks and rechargeable batteries will be incorporated into the design.

Underwater Communication System

In keeping with all EnterOcean visitor activities, the immersion (underwater) experiences will be enhanced with lectures on the natural history being witnessed, conducted by the tour guide. In addition, there are many sounds made by marine creatures which are interesting but difficult to hear except in the absence of exhale noise, etc. The Company plans to develop a special communication system to allow the guide to deliver lectures to his/her group (in their native language), as well as to permit the guests to hear the sounds of the animals, amplified for easy recognition.

The Underwater Communication System will consist of an assembly of commercially available components, packaged for this special use. The tour guide will be fitted with a full face mask, into which will be built a microphone. Tour participants will wear special face masks fitted with a custom-designed speaker, which plugs into an audio cord extending along the air hose. The communications system will be driven by an amplifier, equipped with an auxiliary compact disc deck. Individual guest stations will receive prerecorded information in his or her own language. Part of the under water presentation may be prerecorded, part will be "live", but all of it will be interactive, interesting and educational. This technology supports the EnterOcean Group's philosophy that the natural romance of the sea and the

life it holds will be the most interesting attraction we can offer to our clients.

Semi/Submersible Submarine

Tourist submarines with passenger capacities of 30 or more persons are currently in operation in numerous tourist destinations around the world. The Atlantis operation in Guam is a good example of these. Fully submersible submarine operations typically involve a fairly long term time involvement to participate in the experience, including ground transportation from hotel to pier, water surface transportation from the pier to the submarine dive site, and finally, the time of the experience. Visitor satisfaction is often in jeopardy due to less-than-ideal ocean conditions, and the high level of investment and maintenance results in a relatively high admission price.

The EnterOcean Facility will incorporate a submarine-like experience, but with few of the drawbacks of conventional tourist submarines. Man-made lagoon trails are more reliable than the open ocean, and the experience requires less than one hour, as opposed to two or more hours for an Atlantis experience.

The vehicle being developed to provide this experience will be designed to hold 4 - 6 passengers, plus a pilot. It will have the general appearance of a submarine, except that it will not fully submerge, but rather float on the surface, with passenger seating and viewing windows below waterline. As with the Dolphinaire, visitors will be treated to a running natural history commentary in their native language.

The concept permits the use of conventional marine propulsion equipment, and requires no special air processing equipment. Hull design and

prototyping will be based on the existing designs of a number of larger semi/submersible vehicles currently available on the market. Conventional acrylic technology will be utilized in the viewing windows.

The design simplicity and use of commercially available propulsion equipment will minimize the production cost of the vehicles, and when coupled with reduced certification and recertification costs, as well as the reduced skill level of the operator-pilots, should result in very competitive admission pricing and a good market share.

Dynamic Motion Simulation Submarine

In keeping with the EnterOcean mission to provide to guests an exciting Fantasy Adventure in its facilities, the introduction of visitors to the Undersea Cavern walking tour will commence with a fantasy voyage under the oceans of the South Pacific.

In recent years, sophisticated hydraulics, computers and high resolution film and video have been integrated into a technology called Dynamic Motion Simulation. Several companies have advanced this field, giving rise to such installations as Disneyland's "Star Tours" attraction. The principle advantage of dynamic motion simulation is that the visitor experience is very realistic but completely safe.

The Submarine Simulator will look and feel like a 21st Century undersea vehicle. Ingress and egress will be designed to set the stage both for the undersea ride as well as for the Undersea Cavern walking tour to follow. Each submarine will hold a smaller number of passengers..approximately 25. The experience will be designed to last approximately 15 minutes..although to participants it will seem to last much longer.

Hydraulic motion platforms and computer controls are available commercially. Both high resolution television and wide format motion picture technology are being considered for the visual component. The shell structures are available and modifiable for our purposes.

The production of the audio/visual story which forms the experience will be the largest part of the development project. A large body of film has already been shot by underwater photographers around the world, and a portion of those existing assets will be applicable to our storyline. The EnterOcean Group will assemble these existing components and contract for the shooting of the missing elements.

V. ENTEROCEAN GUAM FACILITY - MARKET FACTORS AND ECONOMIC PERFORMANCE

Visitor Demographics

The original Japanese conquest of Guam began about an hour after the attack on Pearl Harbor, when Saipan based Japanese bombers launched a series of raids on the U.S. possession. Guam surrendered on December 10, 1941.

Today, Japanese yen has become of paramount importance to Guam again if not the island's official currency. Annual visitor arrivals from 1983 to 1992 are charted in Table 1. Japanese contribute eight~~y~~percent (80%) of Guam's visitors. A recent survey of the top twenty-eight (28) travel agencies in Japan forecasts an expected 14,600,000 Japanese headed for vacation destinations outside of Japan in 1995. Large numbers of traveling families, a poorly performing Japan economy (measured in Japanese expectations), and a stronger yen will all help Guam garner a healthy marketshare of these outbound Japanese.

Several important trends defining the characteristics of Guam-bound Japanese are noteworthy:

- * Budget Travel - this category represents a significant difference from Japan visitors coming in the pre-Gulf war era of Guam tourism. Sales of cut-rate packages have outpaced those of major wholesalers. The major increase in hotel capacity (the number of rooms doubled from 1985 to 1991) and new regional air services (there are 1,460,524 available seats from Japan and 1,078,324 available seats from all other markets) has spawned

cut-rate marketing. This makes the island more attractive to young Japanese and families seeking to get away for long weekends.

* Office Ladies - The "OL" market that has been so rewarding for the travel industry is practically guaranteed to continue in force. OLs, while declining in outbounds during the gulf War, have surged in recent periods. As well traveled OLs mature to marriage and families, a new market of young family travelers is beginning to emerge.

* Silver Market - The number of pensioners is expected to triple within the next thirty years. The travelers coming some year in the future will be a much grayer lot than ever seen before.

* Novice Travelers - Forty-one percent (41 %) of Guam's visitors have no previous international experience. However, forty-six percent (46%) make individual "package" travel arrangements vs. groups tours. Thirty-three (33 %) of the visitors are repeat visitors to Guam:

and, twenty-five percent (25 %) of all Japan visitors to Guam have been on Hawaiian vacations.

Currently the average Japan visitor to Guam shows a Median income in the range of \$24,000 to \$32,000. The majority of visitors being young adults, with fifty-six percent (56%) being under the age of thirty (30), and thirty-four percent (34%) being under the age of twenty-five (25). The average traveler to Guam spends approximately \$2,250 per trip. When the estimated roundtrip airfare of \$500 is excluded, total on island spending on hotels, shopping, "Other" and meals is

GUAM AQUARIUM COUNCIL
ITC BUILDING - TAMUNING

July 13, 1993

TO: GUAM AQUARIUM COUNCIL

FROM: CHAIRMAN

PLEASE REVIEW THE ATTACHED REPORTS FOR DISCUSSION AT A COUNCIL
MEETING ON TUESDAY, 7/20, 10:00 A.M. AT THE GEDA CONFERENCE ROOM.

PLEASE CONFIRM ATTENDANCE BY CALLING MINA AT 649-4141 BY FRIDAY,
7/16.

I LOOK FORWARD TO SEEING YOU ALL.

approximately \$1,750 per person. Median length of stay is four (4) days. This means these visitors are spending about \$437.50 per day. Just exactly what is popular with visitors leaving Guam headed back to Japan is listed below.

**GUAM OPTIONAL TOURS
RANKED BY PARTICIPATION RATE**

ACTIVITY	SHARE	APPR. PRICE
Shopping	64.00%	N/A
Sight Seeing	56.00%	N/A
Gun Shooting	46.00%	\$30-\$100
Dinner Show	39.00%	N/A
Dinner Cruise	27.00%	\$50
Dog Racing	27.00%	N/A
Golf Tour	19.00%	\$80-\$125
Jet Ski Tour	17.00%	\$45
Atlantis Sub	16.00%	\$85
SCUBA	13.00%	\$70-\$95
PIC Day Tour	11.00%	\$75
Sand Castle	11.00%	\$100
Night Tour	10.00%	N/A
Jungle Tour	9.00%	\$48
Cocos Island	7.00%	\$100
Fishing	5.00%	\$200-\$300

NOTE: Some eighty percent (80%) of interviewees (polled by the Guam

Visitors Bureau prior to departure at Guam International Airport) indicated that what they expected to enjoy most when deciding to visit Guam were "Beautiful Seas". With consistent daytime temperatures of 84 to 89 degrees F (74 to 78 degrees F at night) and with a water temperature of 81 degrees F year round - the clear, azure seas bathing Guam are especially inviting.

The Marketing Mix

In order to explain how EOG intends to maximize the value of exchanges between EnterOCEAN Group and it's customers a traditional mix of Product, Price, (Distribution) Place, and Promotion functions will be discussed.

The Product can fairly be described as high quality in that the travel industry in Guam defines quality in terms of reliability and consistency. Because the artifical environment is controlled and because service delivery competence (backed by training and high technology tools; e.g. the Dolphinaire) is a company paradigm...consistent delivery of the product is attainable. Removed from the vagrancies of open ocean conditions, the EOG facility offers a reliable product day and night - something no other interactive marine experience in Guam can provide.

The product will be new. Pricing, place and promotional strategies (below) will be developed to encourage as many target market clients as possible to sample the introductory visitor experience. This product (the Journey to the Undersea Cavern and The Undersea Cavern, see Page 11 & 12) are highly involving, interesting, and educational. As clients enjoy this experience, they will be offered the opportunity

to join EOG on another experience. While on the introductory experience clients will be able to see and visualize first hand these other experiences: the Semi-submersible submarine Lagoon tour and the Lagoon dive tour on the Dolphinaire. Joining the additional experience automatically qualifies the participant for membership in the EOG Club. Our intention is to make sampling the introductory EOG product as easy as possible; and, to provide an extended product line that allows the enthusiast opportunity to participate as much as they would enjoy like. The unique selling point is that this form of entertainment is interactive education. Participants don't sit - they are involved, interested and learning to enjoy nature. Once a member of the EOG CLUB our clients will enjoy meeting others who appreciate marine activities at any time during their Guam stay. The intention here is to create an "Apres-Ski" atmosphere and to nurture an "Esprit de Corps" among our Club members. The reinforced appreciation of the clients accomplishments (e.g. interacting with the marine world) will build loyalty and enhance buying peaks in clients.

The Pricing strategy is to achieve high market penetration with the basic product and then skim marine enthusiasts from this total passenger count. The basic product price point is \$4 less than admission to the aquarium in Osaka, Japan; and, is believed to be the lowest priced event that will be offered to visitors staying on Guam.

Additional experience price points have been calculated using actual penetrations of Guam visitors reported by the Guam Visitor Bureau and confirmed by Ocean Adventures experience at the Japan Airlines owned

facility Cocos Super Marine Resort in Merizo, Guam. The result of this pricing scheme is believed to yield the numbers of clients shown in the projected economic performance schedules available as an addendum to this report.

(Distribution) Places to purchase the basic EOG product must include the major Japanese tour companies that control visitor traffic to Guam. Our capitalization structure allows for these Japan companies to own a portion of the facility - operating profits combined with agent commissions on sales make this a very lucrative proposition for these agencies. Local tour company group briefing sales and hotel travel desk sales will be supplemented by commissioning local dive shops, jetski and Parasail organizations, and individual instructors to sell EOG products as a supplement to their own activities. Over time we expect our product to be incorporated as an included feature in tour origin travel packages offered by agents.

Promotion - Complimentary EnterOcean Club membership to all travel agents, all ocean sport recreation instructors will be combined with complimentary familiarization tours for: travel agents, public and private school officials, representatives from the University of Guam, military recreation personnel. Advertising in local tour publications, in travel agency promotional brochures, and tour desk brochures are mandatory. Local tour company sales representation will be needed to maintain good industry relations. In time, tour origin advertising and direct advertising will be desirable.

VI. ENTEROCEAN GUAM -

SUMMARY OF CONSTRUCTION CONSIDERATIONS

Generally, the system of lagoons and display tanks will be constructed from reinforced concrete, similar to the techniques used to construct swimming pools. The structural requirements for the water containment walls will depend on the specific topography of the selected site. The intent of the overall design will be to present the lowest profile possible, both to blend in with the surrounding landscape as well as to preserve the image of the lagoons as natural bodies of seawater. The added benefit of this design approach will be to render the facility nearly immune to structural damage caused by typhoon winds.

The gallery (Undersea Cavern) located between the two major reef trails will share the reef trail structural walls. The ceiling of the central gallery will be constructed from steel reinforced concrete, designed to support the loading of the soil, ground covers, and trees necessary to create the "island" on the rooftop.

The entry building will be architecturally designed to be reminiscent of early Micronesian structures. It is anticipated that wood post and beam structural elements will be used, with decorative elements easily replaceable in the event of wind damage.

A high capacity sea water system will be required to maintain a constant flushing of the lagoons and exhibits, in order to maintain a healthy environment for fish and corals. For this reason, the facility will be sited so as to permit a direct intake from and discharge back into the ocean. The residence time of the water will be such as to render the water flowing back

into the ocean of nearly the same quality as that taken from it. With a total capacity of about 2.5 million gallons, it will be necessary to pump about 20,000 gallons of seawater per minute through the system, and discharge it back into the ocean.

It is anticipated that an auxiliary power generation capability will need to be designed into the facility to provide backup in the event of failure of Guam Power Authority power supply.

VII. ENTEROCEAN GUAM -

ENVIRONMENTAL ISSUES AND PERMITS

As with other planned EnterOcean installations, the Guam EnterOcean Facility will be very environmentally friendly. From an appearance standpoint, the installation will more resemble a natural landscape than a structure. Heights above base grade will be not much more than one story, with the exception of structures disguised as rock formations. The gallery rooftop will be finished as a jungle island, adding to the landscape appearance. The entry building will feature architecture reminiscent of the indigenous cultures of Micronesia.

The seawater system design will reflect the experience gained with similar systems installed in Hawaii and elsewhere. In-system residence times will be short enough that there will be virtually no measurable biological or thermal contamination of the water returned to the ocean, thus posing no threat to the naturally occurring sea life in the vicinity of the intake/outfall.

Permit Requirements

The following is a narrative and list of anticipated permit requirements.

TERRITORIAL LAND USE COMMISSION (TLUC)

Depending on the existing zoning of the site we select, any zoning changes will be enacted by the Department of Land Management, with review by the Development Review Committee. An Environmental Impact Assessment will need to accompany our application. A public hearing may also be required.

DEPARTMENT OF PUBLIC WORKS

The building permit is issued by the DPW. The construction plans

must be approved by the following agencies before DPW review:

Department of Land Management for compliance

Guam Power Authority, Guam Telephone Authority, and Public
Agency of Guam for utilities

Department of Public Health for lagoon water circulation

Department of Parks and Recreation for historic preservation

Division of Aquatic and Wildlife preservation for clearing and
marine exhibits

Guam Environmental Protection Agency for Environmental
Protection Plan

TERRITORIAL SEASHORE PROTECTION COMMISSION (TSPC)

A seashore clearance permit from TSPC is required for an open
ocean intake and outfall. The EIA must accompany the application.

ARMY CORPS OF ENGINEERS

Permit for ocean intake and outfall. Under existing national permit
for such structures.

FEDERAL CONSISTENCY REVIEW

A certificate of consistence with the Guam Coastal Management
Program is issued by the Bureau of Planning.

401 WATER QUALITY CERTIFICATION

A 401 Water Quality Certification is issued by GEPA to insure
compliance with Clean Water Act.

SUBMERGED LAND USE PERMIT

This permit, administered by the Department of Land Management,
covers the installation and maintenance of the seawater intake and outfall.

SEAWATER SYSTEM PERMIT

A permit to construct the seawater intake and outfall is issued by DPW. GEPA and DAWR must review and approve an Environmental protection Plan before DPW can issue a permit.

NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM

An NPDES permit which is issued by the USEPA will be required before the outfall can be put into operation.

VII. ENTEROCEAN GUAM - POLITICAL FEASIBILITY

The territorial government is and has been committed to the creation of tourist attractions on Guam. The concept of a Territorial Aquarium has been discussed and pursued for over ten years. There was general agreement that, in recognition of the technical expertise required, such a facility should be built and operated by other than government agencies. A request for proposal to construct such a facility was issued to all interested private developers ten years ago, with no response.

Undaunted, the idea has been kept alive by a number of interested parties both within the government and in the community. In 1992, a study of the feasibility of an aquarium was commissioned by the Guam Economic Development Authority. The West Coast consulting group issues its preliminary findings in early 1993. Based on the normal admission prices (even using the higher admission pricing typical of Japanese aquariums) the economics of an (conventional) aquarium in Guam were borderline, and very likely would not attract the interest of a private developer.

It is felt that this pre-existing favorable climate for aquarium facilities in Guam will set the stage for excellent governmental support for this project.