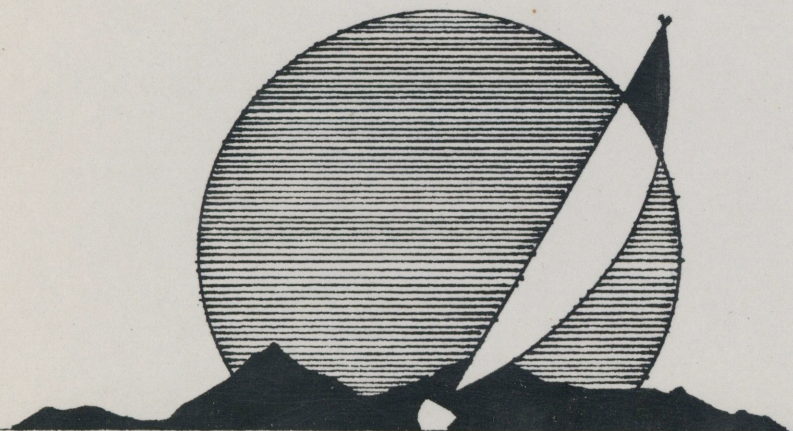




AMERICA'S CUP

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TO MY PARENTS
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THE AMERICA'S CUP FACILITIES 1991

RUSSELL J. WOLFE

A PROFESSIONAL PAPER SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
BACHELOR OF ARCHITECTURE

MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA

JUNE 1989

APPROVED:

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RUSSELL J. WOLFE

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INTRO.

THE MULTIPLE SENSATIONS THAT I FELT ON MY FEW VOYAGES SAILING ARE WHAT DROVE ME TO DO THIS PROJECT. SAILING ON A FRIENDS 34' CATALINA, HAS BEEN AN EXPERIENCE I WILL NEVER FORGET. AS A GROUP OF US PREPARED THE BOAT FOR DEPARTURE, MY EXPECTATIONS WERE CONFUSED BY THE MEMORIES OF MY FATHERS 16' MOTOR BOAT. REMOVAL OF THE PROTECTIVE COVERINGS UNVAILED SOME DRASTIC DIFFERENCES TO BOATING AS I KNEW IT.

AFTER CHECKING THE EQUIPMENT WE BEGAN TO MOTOR OUT OF THE MARINA. ONCE IN THE OPEN WATER OFF OF POINT LOMA, WE PREPARED TO RAISE THE MAIN SAIL. WITH-IN A MATTER OF TWO OR THREE MINUTES THE SAILS WERE STRETCHED UP THE 40' MAST AND THE STRONG OCEAN BREEZE BEGAN TO PROPELL US INTO THE DISTANT HORIZON. AS WE SAT IN COMPLETE SILENCE YOU COULD FEEL A FREEDOM FROM THE STRUCTURE OF THE CITY LEFT BEHIND. THE MOTION OF THE BOAT; THE SOUND OF US CUTTING THROUGH THE WATER; THE SMELL OF THE SALTY AIR; AND THE VASTNESS OF SPACE PUT ME IN A DRUNKEN STATE OF MIND.

(CONTINUED)

INTRO. CONTINUED

TIMELESS HOURS PASSED AS I WATCHED THE LAND BEHIND ME FADE OUT OF SIGHT. I FELT A EMPTINESS SIMILIAR TO THE GREAT PLAINS IN WHICH I GREW-UP.

AS WE PREPARED TO RETURN TO THE MARINA, I REMEMBER THINKING ABOUT OUR PRESENCE IN THIS DIFFERENT WORLD. WE WERE SAILING IN AN ENVIRONMENT FOR WHICH MAN HIMSELF WAS PHYSICALLY UNADAPTED FOR. SIMILIAR TO TO THE SAYING "LIKE A FISH OUT OF WATER". YET AS THE FISH CAN SURVIVE IN AN AQUARIUM, SO TOO CAN MAN SURVIVE IN THE OCEAN. IT IS THIS UNDERSTANDING AND UNIFICATION OF MAN AND NATURE THAT GIVES ME HOPE FOR OUR FUTURE HERE ON EARTH.

WATER//ARCHITECTURE

WATER AS A BASIC ELEMENT OF MANS EXISTENCE FORCES IT'S INTERACTION WITH ARCHITECTURE. MANS EARLY NEED FOR WATER CAUSED HIM TO ADAPT TO VARIOUS LANDSCAPES SCULPTED BY WATER IN MOTION. ECONOMIC, SPIRITUAL, AND SOCIAL STRUCTURES RESPONDED TO THE VALUES WATER PLACED ON EARLY CIVILIZATIONS. THUS, WATER WAS A REFLECTION OF THE QUALITY OF LIFE, AND ARCHITECTURE RESPONDED TO WATERS CONTROL OVER MAN.

OVER A PERIOD OF TIME MAN HAS EVOLVED THE RELATIONSHIP BETWEEN WATER AND ARCHITECTURE. CONSTRUCTION OF DYKES TURNED ARID LAND INTO FERTILE SOIL. MOATS, RIVERS, AND OTHER WATER FORMS BECAME USEFUL FOR DEFENSIVE PURPOSES. TRANSPORTATION AND EXPLORATION FALLOWED WATER-WAYS AROUND THE WORLD. SPIRITUALLY WATER BECAME AN ELEMENT OF ARCHITECTURAL DESIGN. MULTIPLE RELIGIONS USED WATER IN ARCHITECTURE AS A POINT OF CELEBRATION AND PURITY. ISLAMIC AND JAPANESE GARDENS UTILIZE THE HUMAN SENSATION THAT WATER BRINGS TO A SPACE. CHANNELS AND POOLS COOL AND ACHIEVE TRANQUIL VISUAL EFFECTS. THE GREEKS AND ROMANS USED WATER IN A MORE SOCIAL WAY.

WATER//ARCHITECTURE CONTINUED

BATHING AND CELEBRATION BECAME THE FOCUS
FOR THEIR USE OF WATER.

TODAY THE RELATIONSHIP BETWEEN WATER AND
ARCHITECTURE IS SOME-WHAT MISLEADING. MANS
UNDERSTANDING OF WATER LETS HIM ADAPT TO
ITS VARIOUS CONDITIONS. SEA WORLD, WATER-SLIDES,
FOUNTAINS, AND SWIMMING POOLS CONTRIBUTE TO
MANS ABILITY TO CAPTURE AND CONTROL WATER.
HOWEVER, AT THE SAME TIME MAN CAN EXPLORE
WATER IN ITS NATURAL STATE. SAILING IN THE
OPEN SEA, DIVING IN A CORAL REEF, OR
FLOATING DOWN A RIVER, MAN CAN ENJOY THE
NATURAL WONDERS OF WATER. THUS THE RELATION-
SHIP BETWEEN WATER-MAN-AND ARCHITECTURE GROWS
CLOSER. THIS UNDERSTANDING BY MAN "A LAND
ANIMAL" ALLOWS HIM TO CO-EXIST WITH WATER IN ITS
NATURAL STATE.

THESIS STATEMENT

THE INTENT OF THIS PROJECT IS
TO STUDY THE RELATIONSHIP BETWEEN
WATER AND MAN'S BUILT ENVIRONMENT
"ARCHITECTURE." FOCUS WILL BE
GIVEN TO THE MOTION OF WATER
AND HOW MAN HAS ADAPTED
WATER TO BECOME MORE THAN
AN ESSENTIAL ELEMENT OF LIFE.

THESIS STATEMENT

THE PROJECT

THE REALITY THAT SAN DIEGO, CA. WILL HOST THE 1991 AMERICA'S CUP WILL BE THE FOCUS OF MY DESIGN. THIS INTERNATIONAL EVENT WILL BRING 200,000 PLUS PEOPLE TO THE VIBRANT ATMOSPHERE OF SOUTHERN CALIFORNIA. HIGH SPIRITS AND PRESTIGE ARE JUST A FEW WORDS THAT MAY BE USED TO DESCRIBE THE EMOTIONS OF THIS EVENT. STARS & STRIPES, CHALLENGER, FRANCE, AND THE NEW ZEALANDER ARE NAMES OF 12-METER YACHTS THAT WILL COMPETE FOR THE CUP. REPRESENTATION FROM CLUBS ALL OVER THE WORLD WILL BE COMPETING AND ENJOYING SAN DIEGIAN HOSPITALITY.

THE GOAL

THE GOAL OF THIS PROJECT SHALL BE TO CAPTURE THE SPIRIT OF THE AMERICA'S CUP. UNIQUE CHARACTERISTICS OF THE SITE, PEOPLE, AND ACTIVITIES WILL BE EXPRESSED IN MY DESIGN SOLUTION. PERSONAL EXPLORATION OF EMOTIONAL REACTIONS TO SAILING, WATER, AND ARCHITECTURE WILL AID IN THE MANIFESTATION OF MY DESIGN SOLUTION.

THE AMERICA'S CUP

THE AMERICA'S CUP IS THE OLDEST TROPHY STILL CONTESTED IN THE WORLD OF SPORTS. ORIGINALLY CALLED THE "ROYAL YACHT SQUADRON ONE HUNDRED GUINEA CUP", THE TROPHY WAS CREATED BY ROBERT GARRARD OF GARRARD CROWN JEWELERS IN THE UNITED KINGDOM IN 1848.

THE CUP'S WORTH IS PRICELESS, ALTHOUGH IT IS INSURED FOR \$250,000. WHEN NOT ON TOUR, THE CUP RESIDES AT ITS NEW HOME IN THE SAN DIEGO YACHT CLUB.

THE TROPHY WAS OFFERED FOR FIRST PLACE IN A RACE OFF GREAT BRITAIN'S ISLE OF WIGHT "OPEN TO YACHTS BELONGING TO THE CLUBS OF ALL NATIONS" DURING THE GREAT LONDON EXPOSITION IN 1851.

JOHN COX STEVENS, COMMODORE OF THE NEW YORK YACHT CLUB, THE FIRST AND, AT THE TIME, ONLY YACHT CLUB IN THE UNITED STATES, FORMED A SYNDICATE TO CONSTRUCT A SCHOONER TO COMPETE IN THE RACE. ARTLY NAMED AMERICA, THE YANKEE SCHOONER SOUNDLY DEFEATED A SIZABLE FIELD. THE CUP, RECHRISTENED THE AMERICA'S CUP, EMIGRATED TO THE U.S., WHERE IT WAS TO REMAIN FOR THE NEXT 132 YEARS.

AMERICA'S CUP CONTINUED

THE STEVENS SYNDICATE DEEDED THE CUP TO THE NEW YORK YACHT CLUB TO BE "PRESERVED AS A PERPETUAL CHALLENGE CUP FOR FRIENDLY COMPETITION BETWEEN FOREIGN COUNTRIES". THUS THE BEST-KNOWN SAILING EVENT IN THE WORLD WAS BORN. EARLY RACES WERE SAILED IN LARGE SCHOONERS AND CUTTERS BY PROFESSIONAL SKIPPERS AND CREWS, BUT THE WORLD'S CHANGING ECONOMY FORCED A CHANGE TO YACHTS OF MORE MODERATE SIZE SAILED BY AMATEURS.

ORGANIZATION AND TECHNOLOGY WERE HELD TO BE THE KEYS THAT KEPT THE AMERICA'S CUP FIRMLY LOCKED UP FOR THE U.S. HOWEVER, THE CHALLENGERS, PERENIALLY EMERGING AS AUSTRALIA, ADAPTED U.S. TECHNOLOGY AND DEVELOPED NEW IDEAS OF THEIR OWN. THEN, IN 1983 IT HAPPENED. AUSTRALIA II WITH ITS REVOLUTIONARY WINGED KEEL BROKE THE LONGEST WINNING STREAK IN SPORTS HISTORY.

NEW YORK YACHT CLUB'S GRASP ON THE CUP WAS BROKEN AND FOR THE FIRST TIME U.S. YACHTS WOULD HAVE TO COMPETE AGAINST EACH OTHER -- AS WELL AS THOSE FROM OTHER COUNTRIES -- FOR THE RIGHT TO CHALLENGE FOR THE CUP.

AMERICA'S CUP CONTINUED

TWELVE CHALLENGERS FROM SIX COUNTRIES MET IN FREEMANTLE, AUSTRALIA IN OCT. 1986 TO BEGIN A SERIES OF THREE ROUND ROBIN REGATTAS, SEMI-FINALS AND A FINAL SERIES TO DETERMINE THE CHALLENGER TO MEET AUSTRALIA'S DEFENSE.

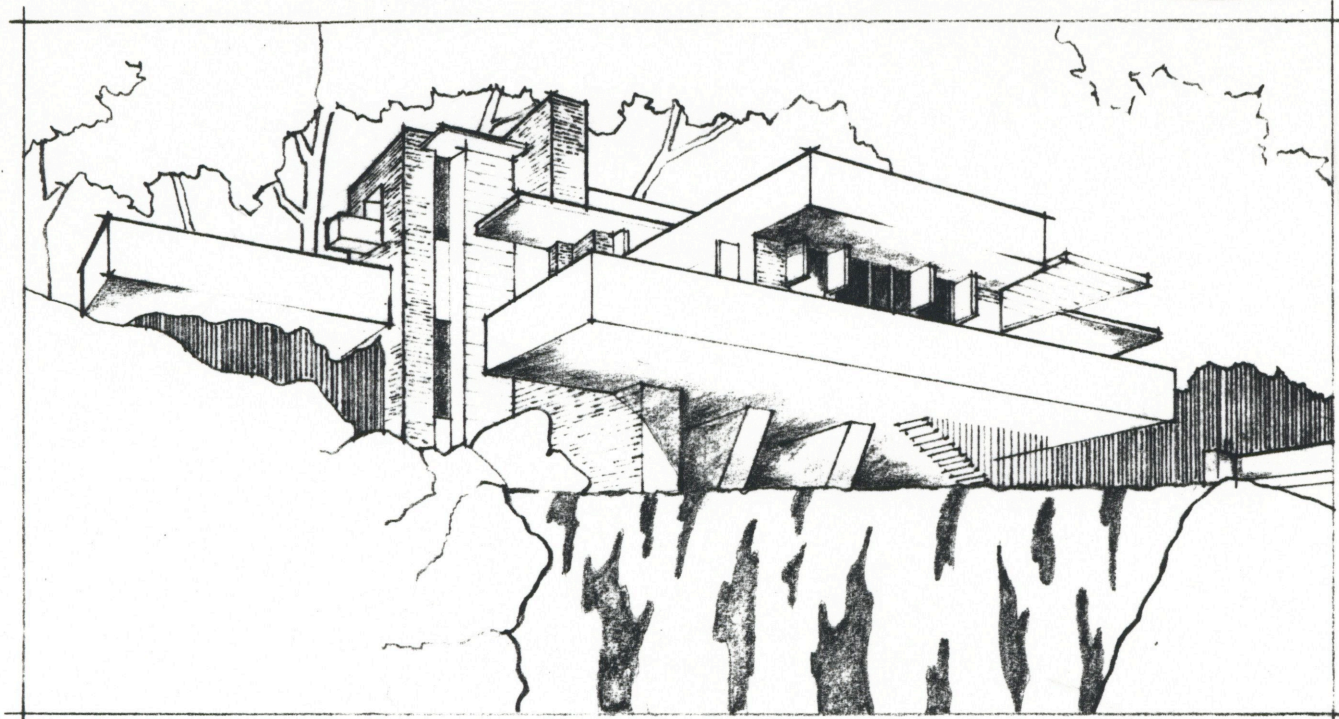
IN FIESTY CONDITIONS, STARS & STRIPES DEFEATED THE OTHER U.S. CHALLENGERS AS WELL AS THOSE OF ITALY, CANADA, BRITAIN, FRANCE, AND NEW ZEALAND TO FACE OFF AGAINST AUSTRALIAN DEFENDER KOOKABURRA II.

STARS & STRIPES, SKIPPED BY DENNIS CONNER, WHO HAD LOST THE CUP IN 1983, MET THE AUSTRALIAN YACHT ON JAN. 31 1987 FOR THE FIRST OF A BEST-OF-SEVEN SERIES. AFTER FIVE DAYS OF RACING, DENNIS CONNER AND THE STARS & STRIPES DEFEATED THE AUSTRALIANS. THUS, THE CUP WAS RETURNED TO THE UNITED STATES, WHERE IT RESIDES IN THE SAN DIEGO YACHT CLUB.

RACE FOR THE CUP 1988

THE CHALLENGE BY MICHEAL FAY OF NEW ZEALAND TO LIFT THE CUP FROM THE SAN DIEGO YACHT CLUB IS STILL UNDECIDED. DENNIS CONNER SKIPPER OF STARS & STRIPES EASILY DEFEATED FAY AND THE NEW ZEALAND - 3 MILES OFF OF POINT LOMA SAN DIEGO, CA. HOWEVER, THE VALIDITY OF THE CHALLENGE HAS YET TO BE DECIDED.

INTERPRETATION OF THE DEED OF GIFT (CONSTITUTION) WILL BE DECIDED BY THE NEW YORK SUPREME COURT. THE 90' MONOHULL OF FAY AND THE 60' CATAMARAN OF CONNER WILL MAKE THE TYPICAL 12-METER YACHT OBSOLETE. USE OF THESE NEW VESSELS COULD ENTIRELY CHANGE THE LEVEL OF COMPETITION FOR THE CUP.



KAUFMANN HOUSE 1936-7
F.L. WRIGHT

FALLINGWATER

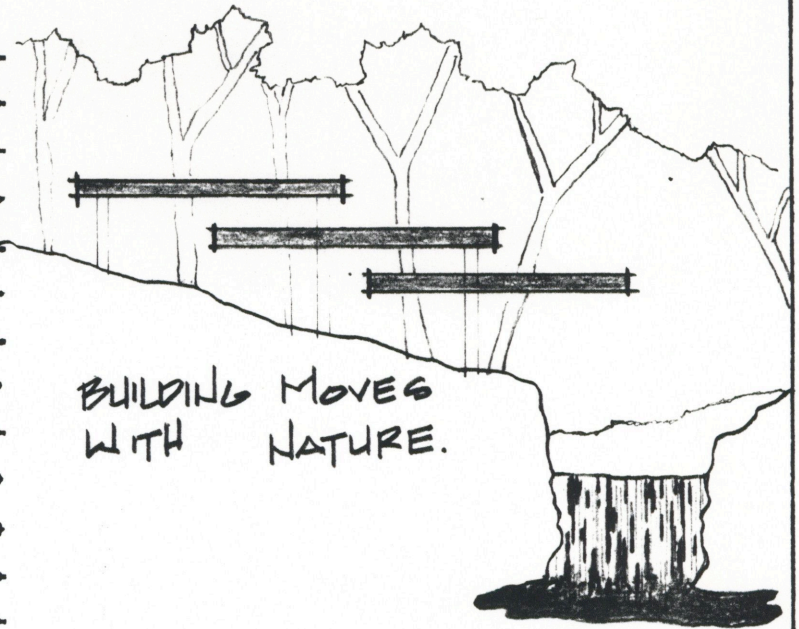
THIS BUILDING IS A GREAT
EXAMPLE OF ARCHITECTURE
AS A "SPIRIT OF A PLACE"
INTEGRATION OF BUILT-ENVIRON-
MENT AND NATURE WORK TO-
GETHER IN HARMONY.

THE EMOTIONAL QUALITIES ARE
SPARKED THROUGH SIGHT,
SOUND, AND FEEL

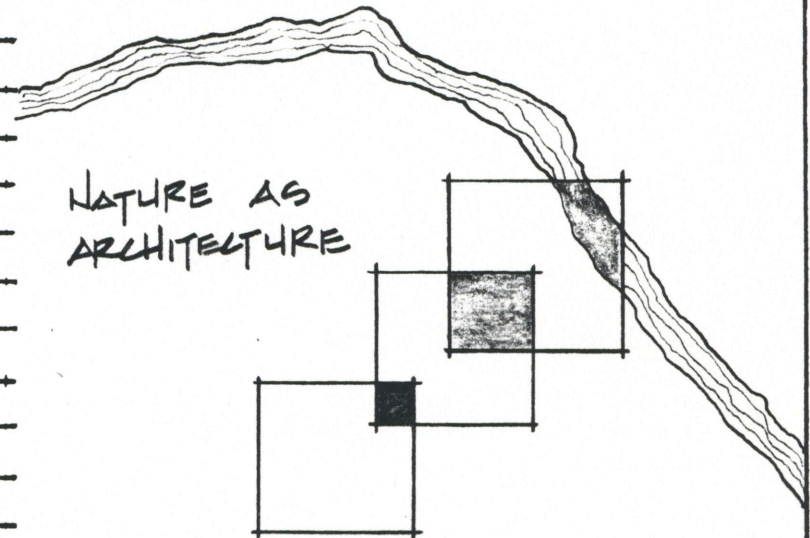
WATER BECOMES PART OF
THE ARCHITECTURE.

ORGANIC USE OF MATERIALS

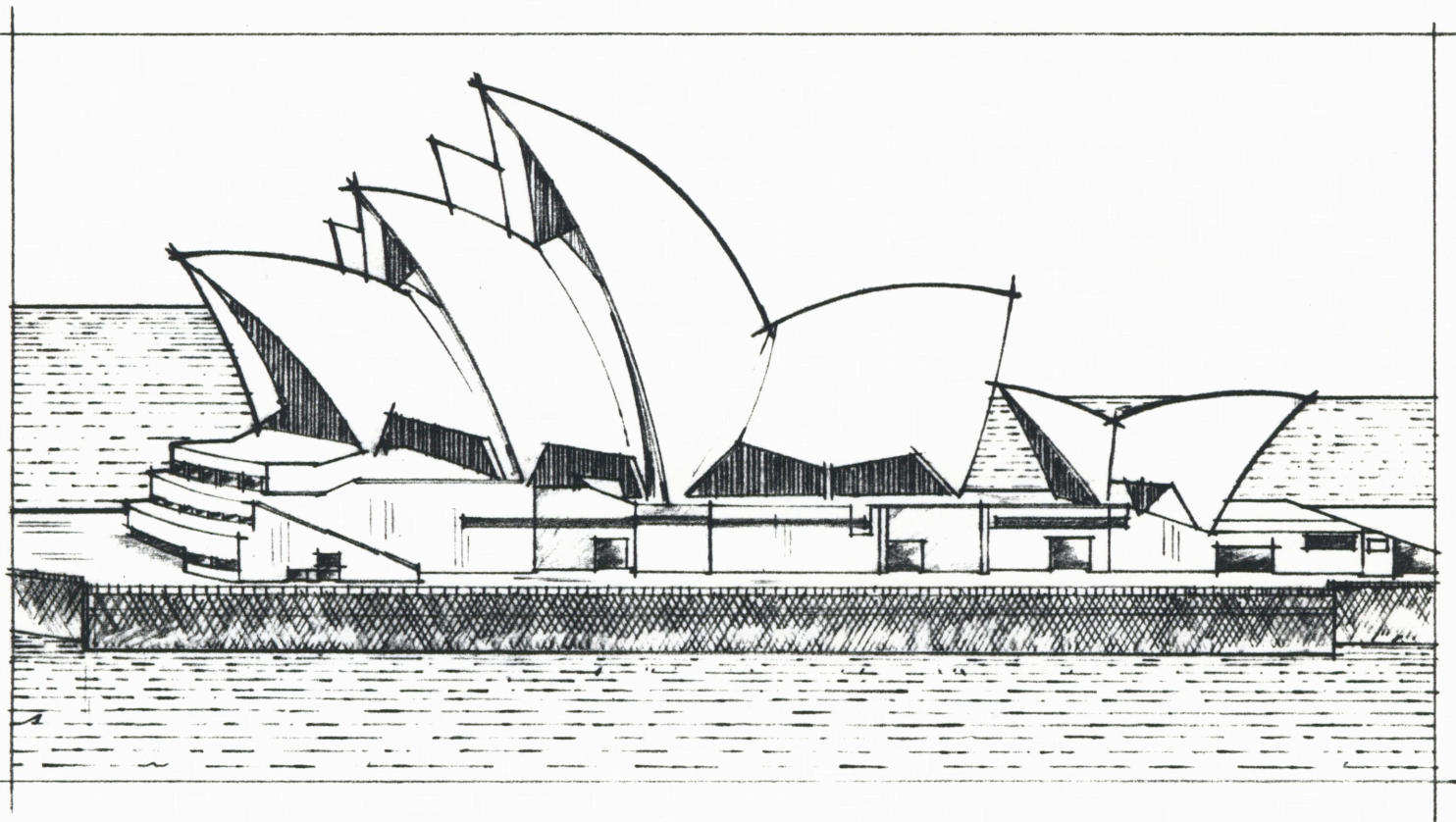
OVER LAPPING OF PLANES



BUILDING MOVES
WITH
NATURE.



NATURE AS
ARCHITECTURE



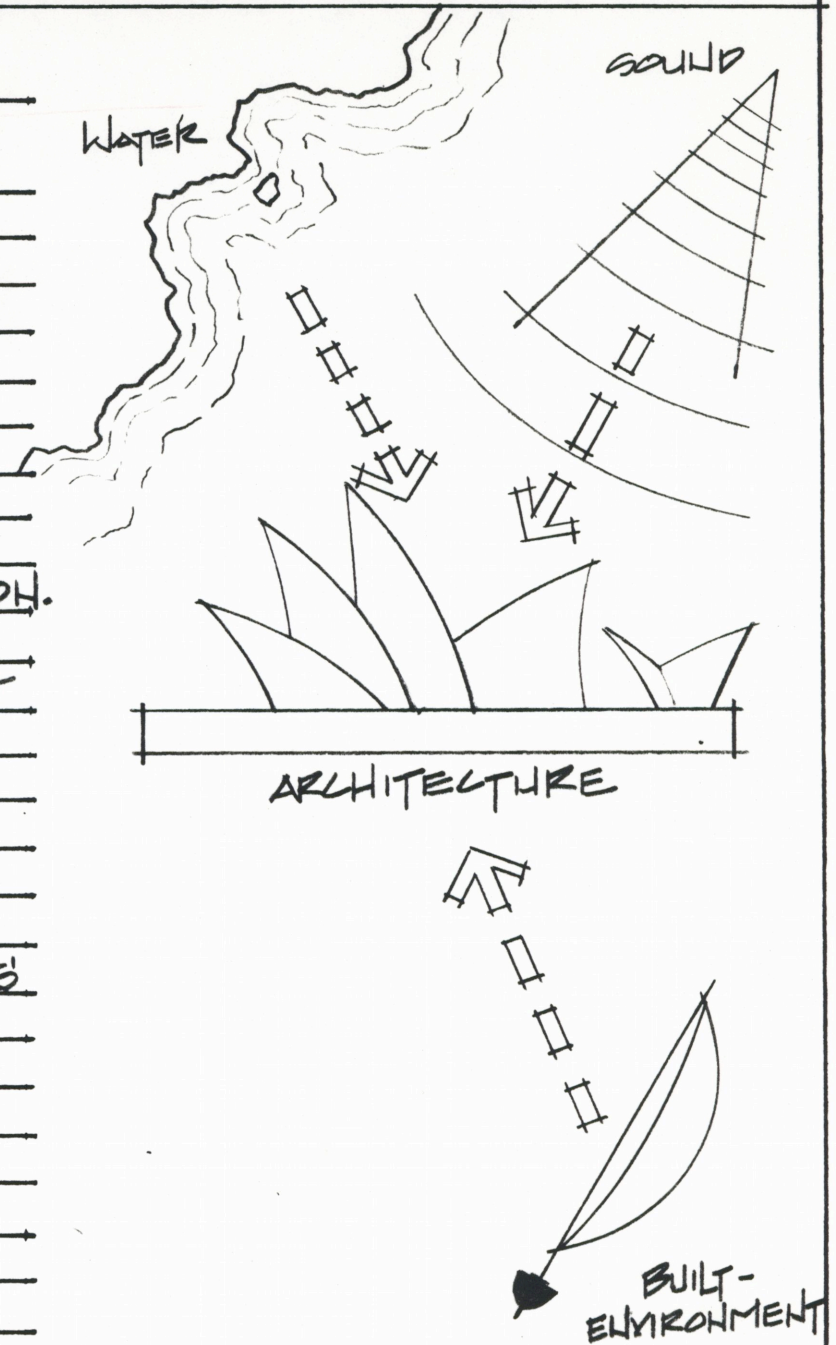
SYDNEY OPERA HOUSE 1957-1973
JORN UTZON

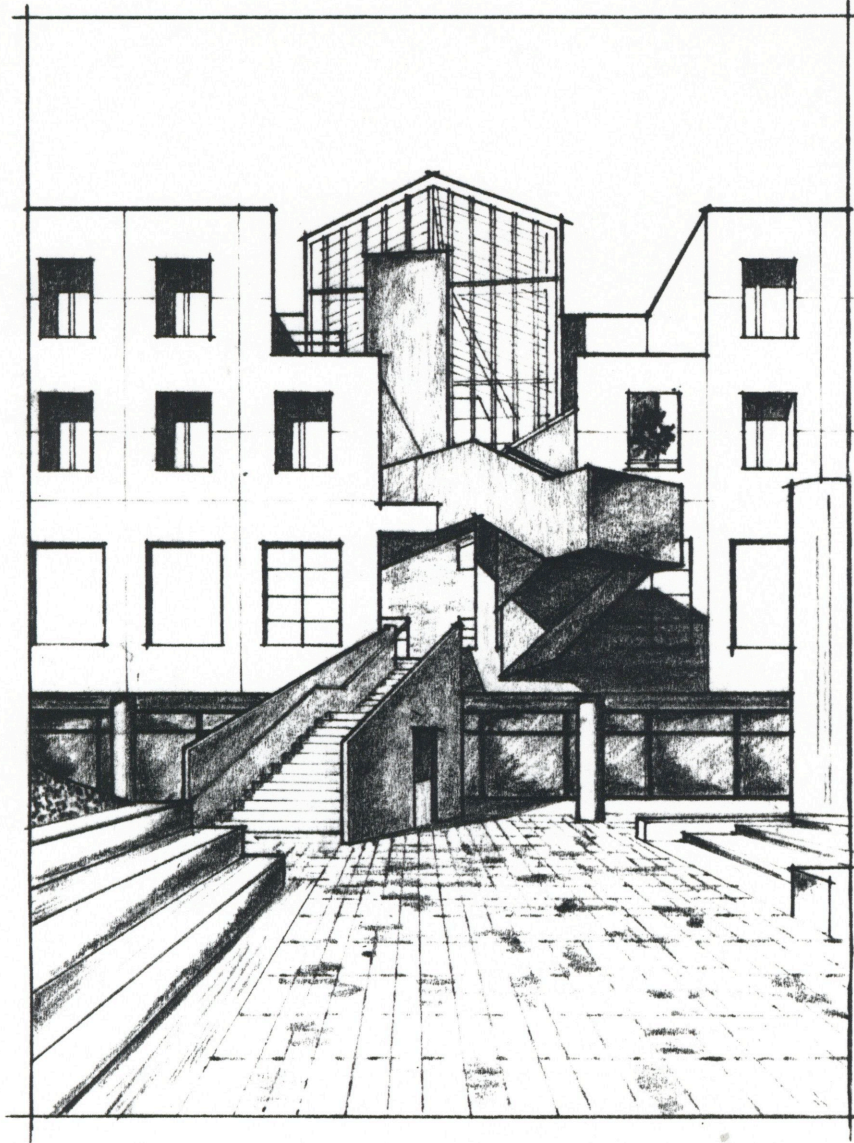
SYDNEY OPERA HOUSE

THIS BUILDING EXPRESSES
STRONG GEOMETRY THAT
RELATES TO ITS HARBOUR
SETTING. THE NATURAL FORMS
TAKE ON A BOAT LIKE
QUALITY.

RELATIONSHIP TO MARINE ENVIRON.
REPETITION TO WAVE-LIKE
VERTICLE TO SPIRIT OF EVENT
BUILT-LANDSCAPE TO "SAILS"

I FEEL LIKE THIS BUILDING
IS A CELEBRATION OF ITS
FUNCTION AS WELL AS ITS
CONTEXT.





- LOYOLA LAW SCHOOL -
- FRANK GEHRY 1981-84

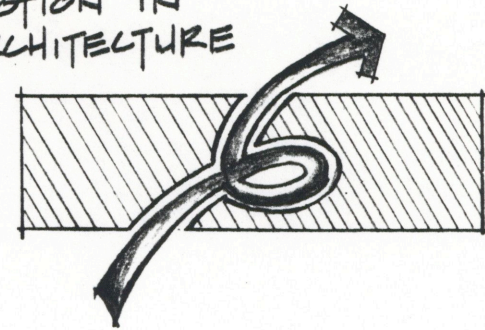
LOYOLA LAW SCHOOL

THIS BUILDING EXPRESSES
MOTION THROUGH THE USE
OF STRONG GEOMETRY. POWER-
FUL PENETRATION REINFORCED
WITH ANGLE. CIRCULATION
USED AS DESIGN ELEMENT.

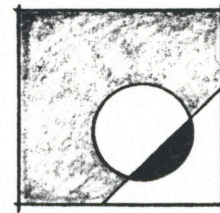
STRONG GEOMETRIC FORMS
MOTION IN GEOMETRY
RISK IN STRUCTURE
FUNCTION USED AS DESIGN ELE.

I LIKE THE WAY THIS BUILDING
OPENS TO ALLOW PENETRATIONS
TO CREATE A HIERARCHY.

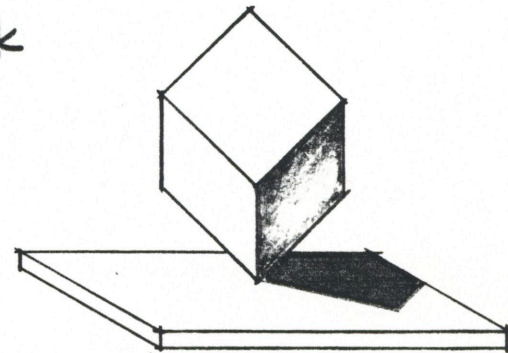
MOTION IN
ARCHITECTURE

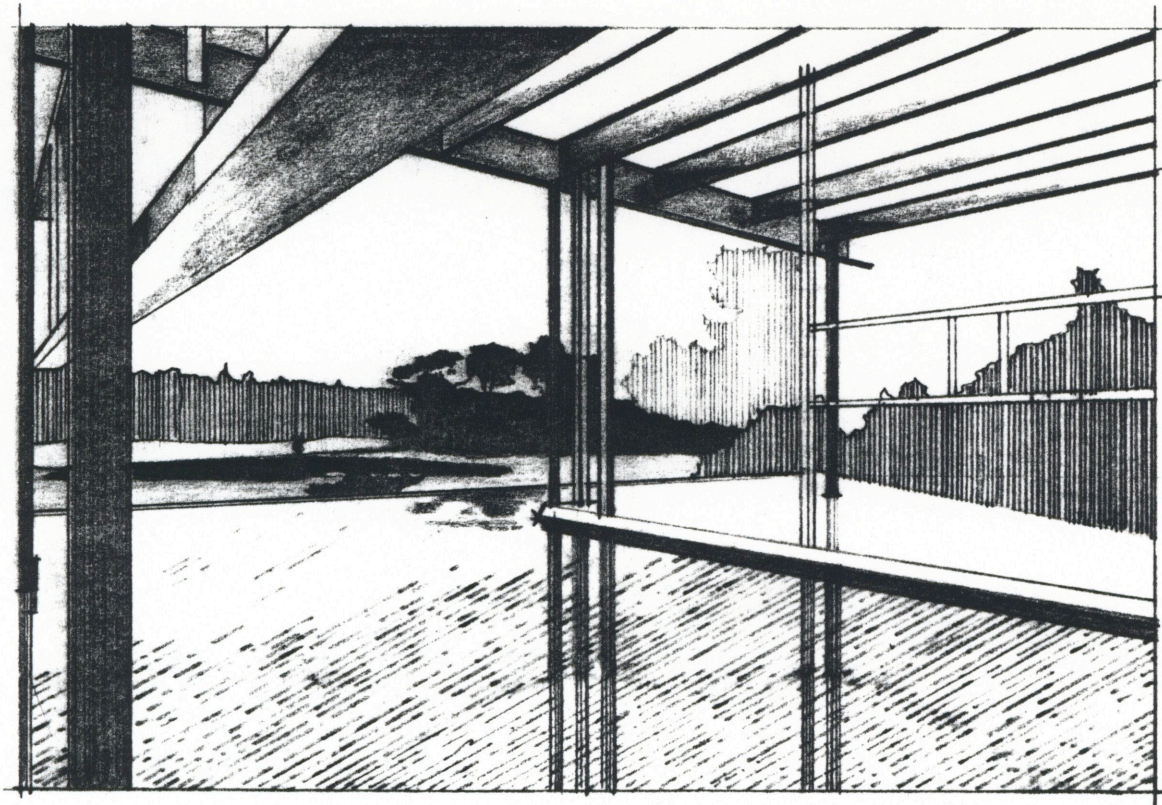


STRONG
GEOMETRY



RISK





NEUTRA INSTITUTE 1930.
RICHARD NEUTRA

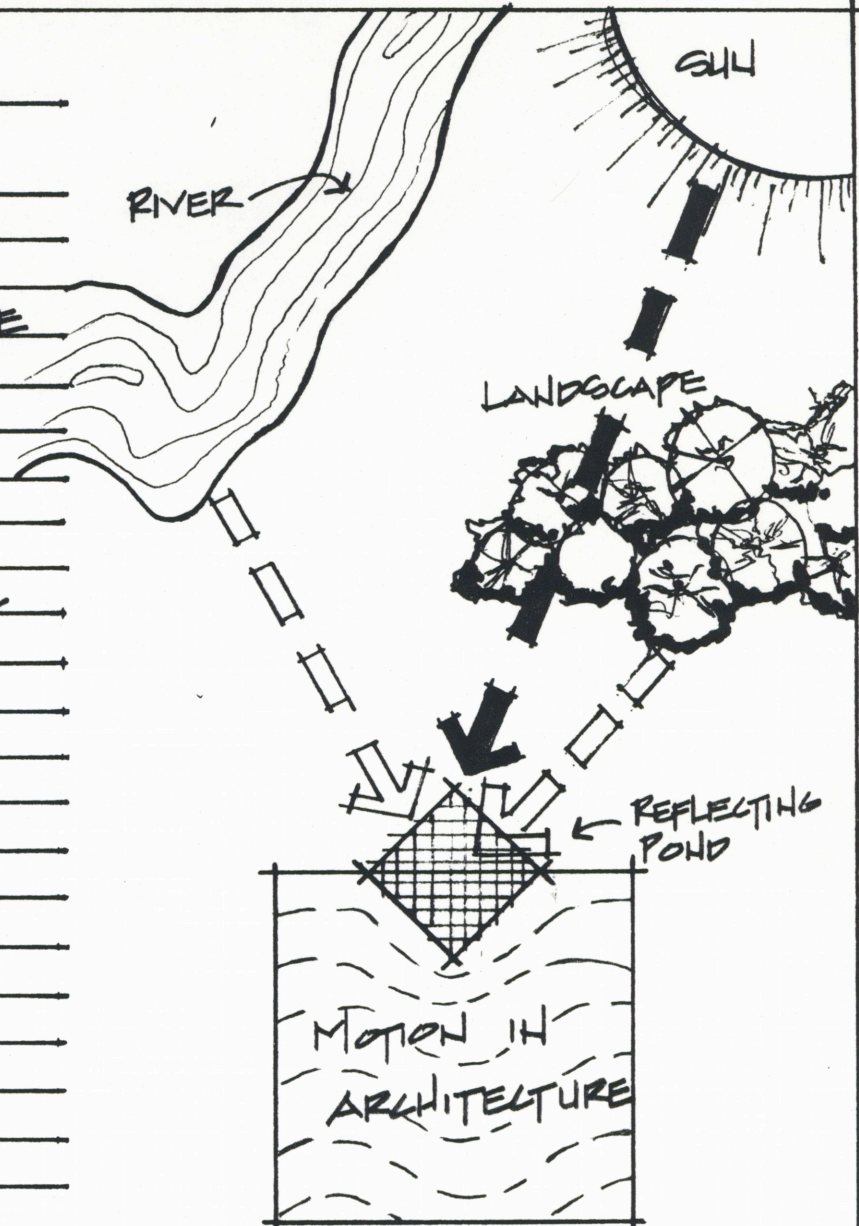
NEUTRA INSTITUTE

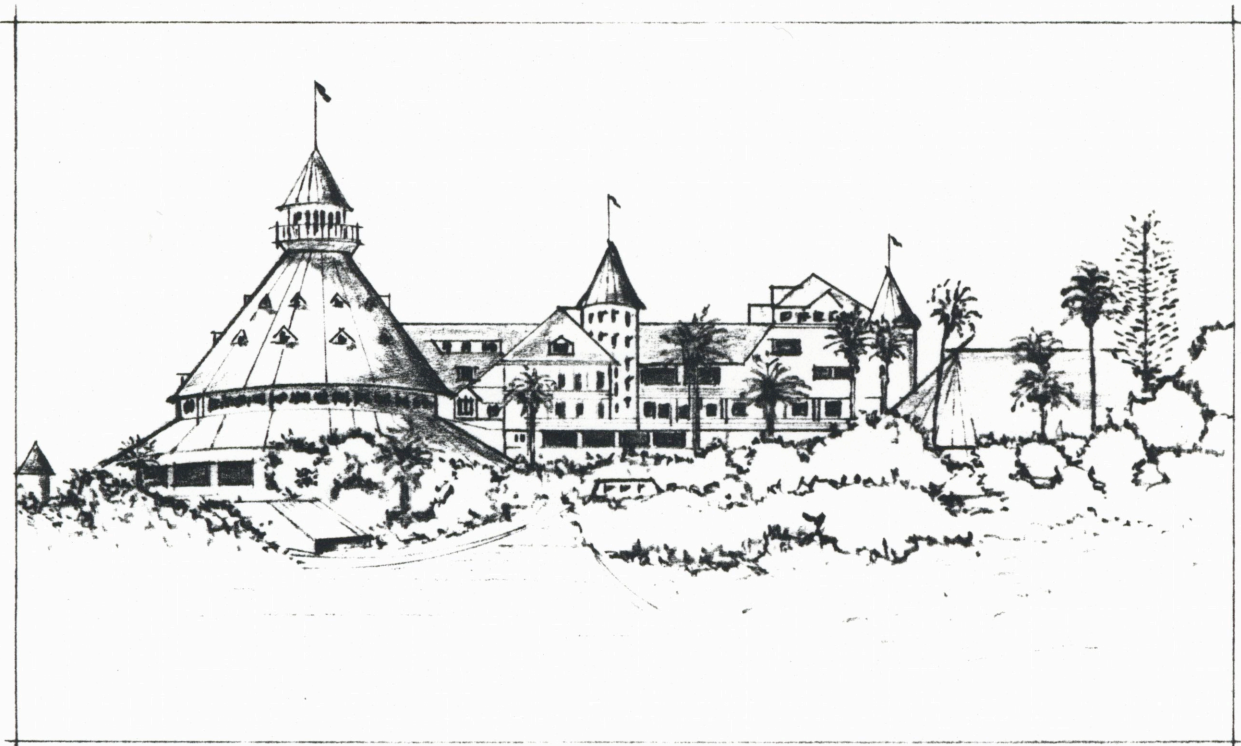
THIS IS AN EXAMPLE OF
ARCHITECTURE CONTROLLING
WATER. THE WATER IN
RETURN ADDS LIFE TO THE
MAN-MADE ENVIRONMENT.

- WATER REFLECTS LIGHT
- WATER REFLECTS LANDSCAPE
- WATER REFLECTS MOTION

MOTION IN ARCHITECTURE

"WATER AS TRANSITION"

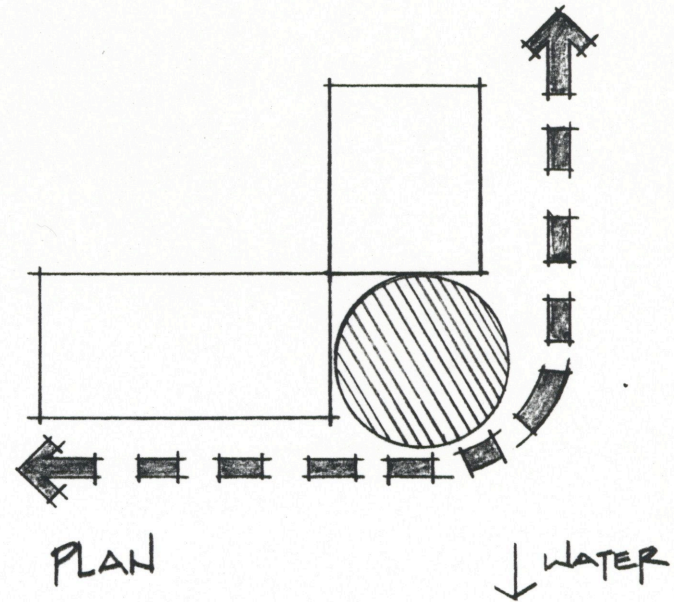




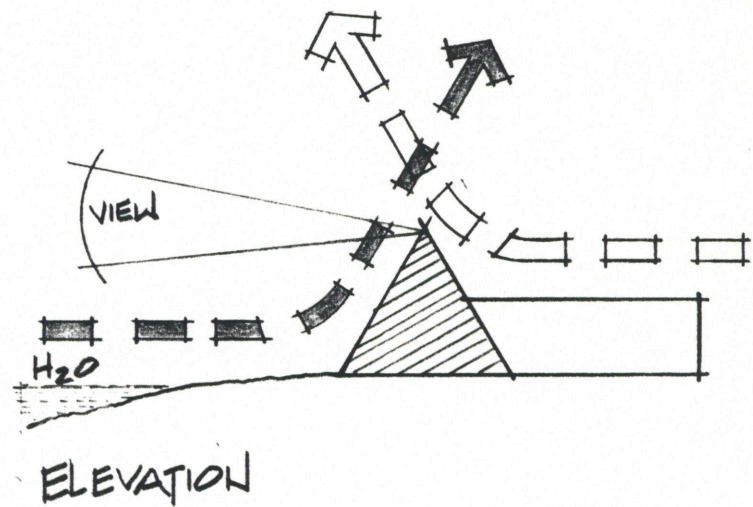
HOTEL DEL
CORONADO, CA.

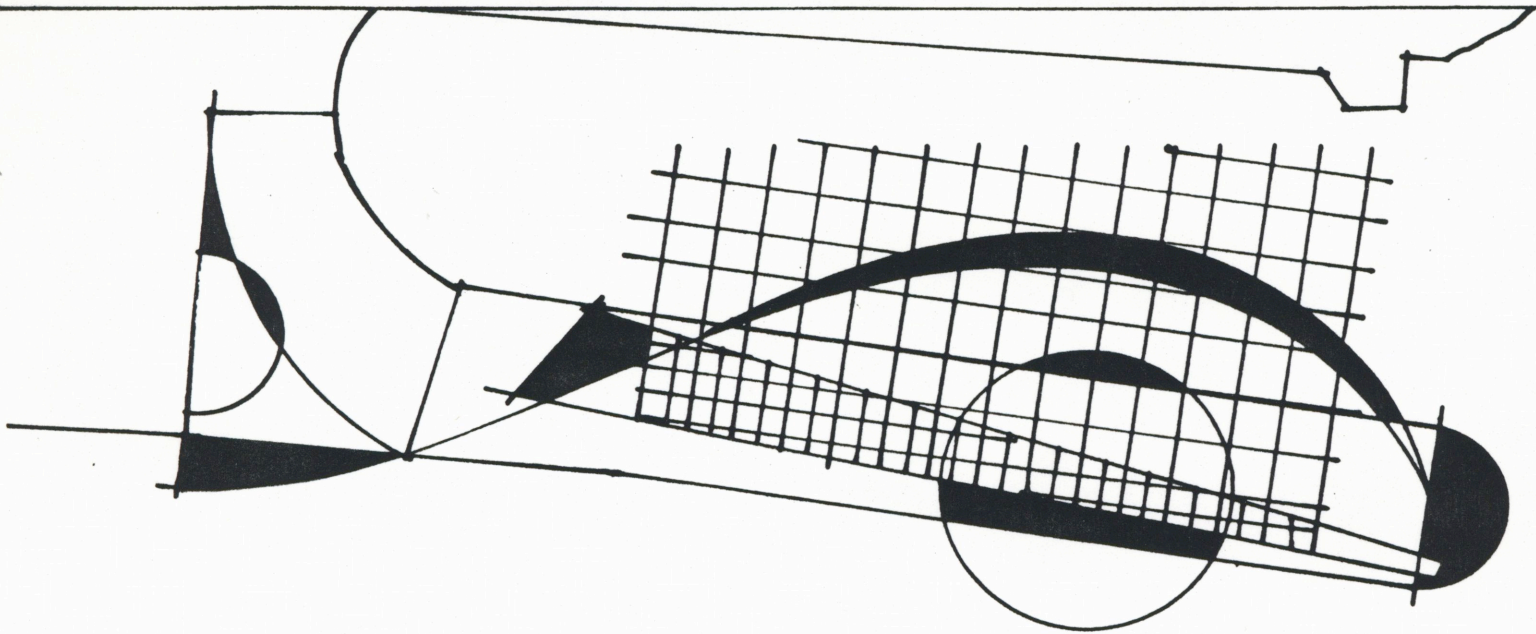
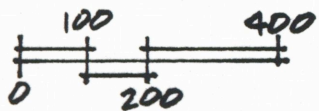
HOTEL DEL

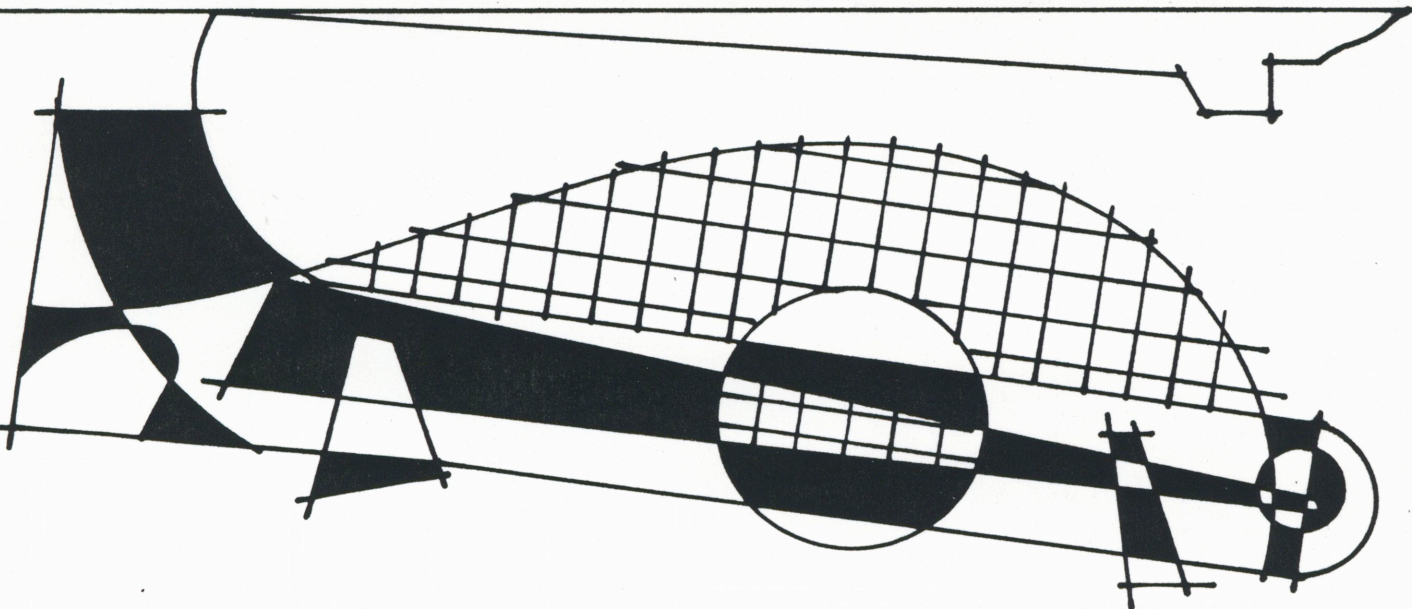
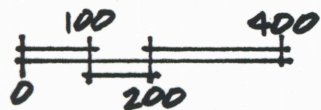
THIS BUILDING REFLECTS
MOTION IN PLAN AND
ELEVATION. THE CIRCULAR
SHAPE HELPS TWO RIGID FORMS
TURN A CORNER. IN ELEVATION
THE VERTICAL FORM PROVIDES
AN END "HIERARCHY" TO THE
HORIZONTALS.



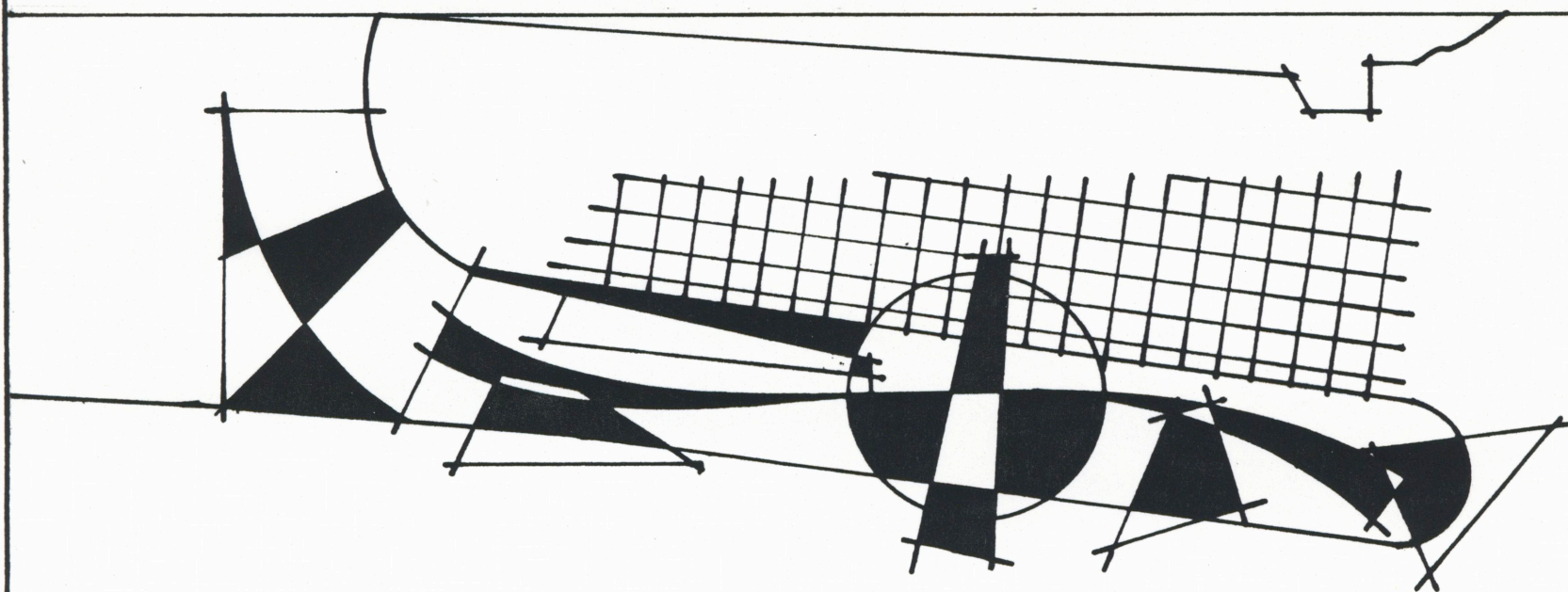
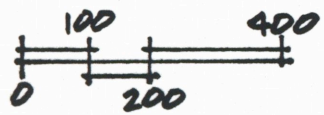
LIGHT-HOUSE CHARACTER
FUNCTION - USED AS NAVAL
TRAINING BASE



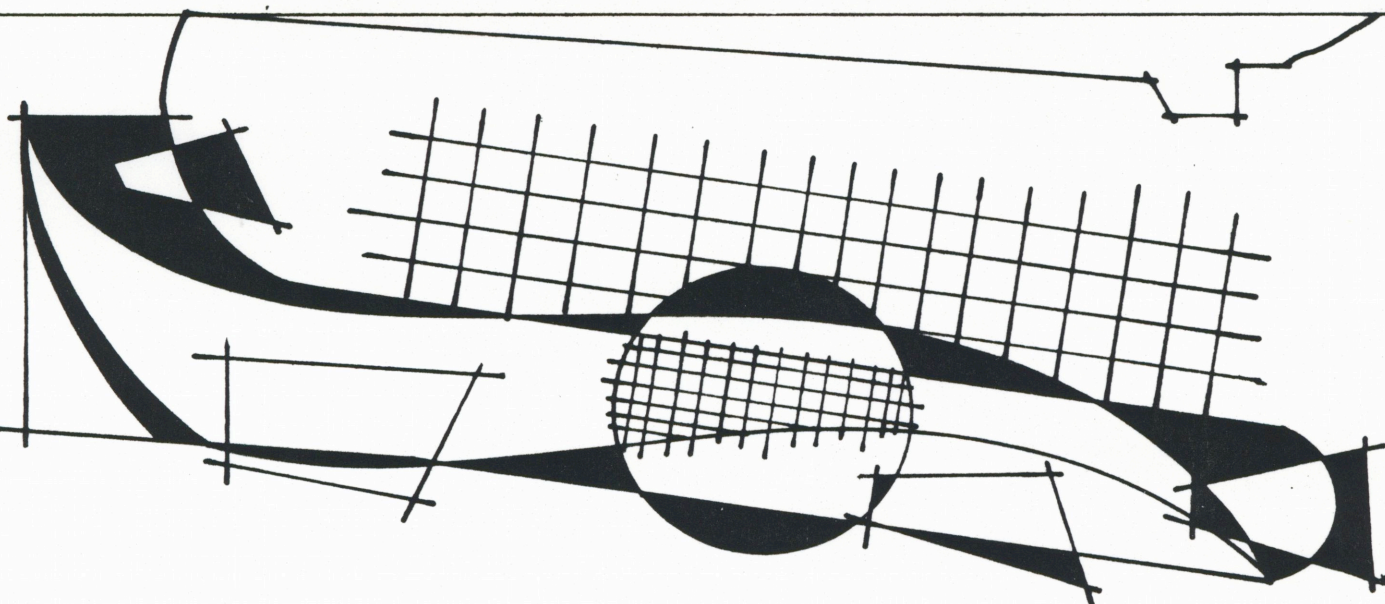
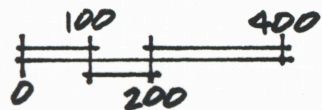




INTUITIVE RESPONSE



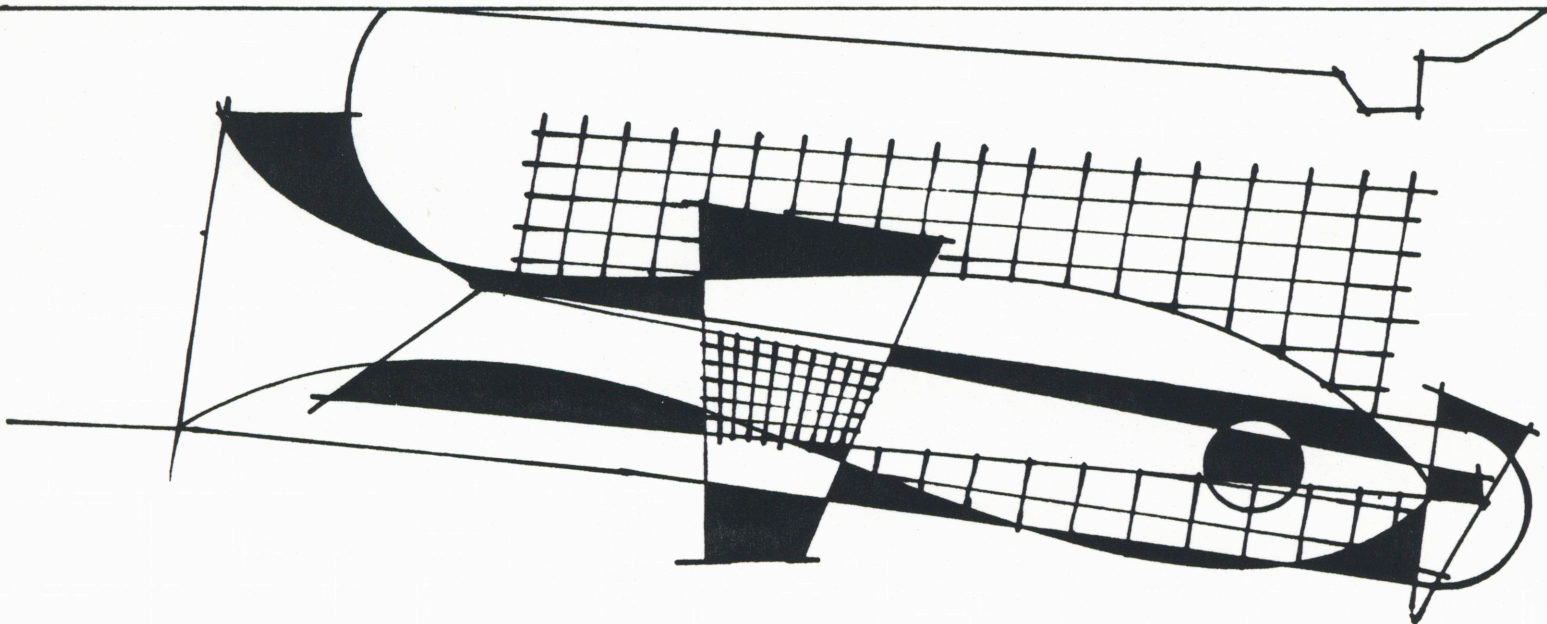
INTUITIVE RESPONSE



INTUITIVE RESPONSE

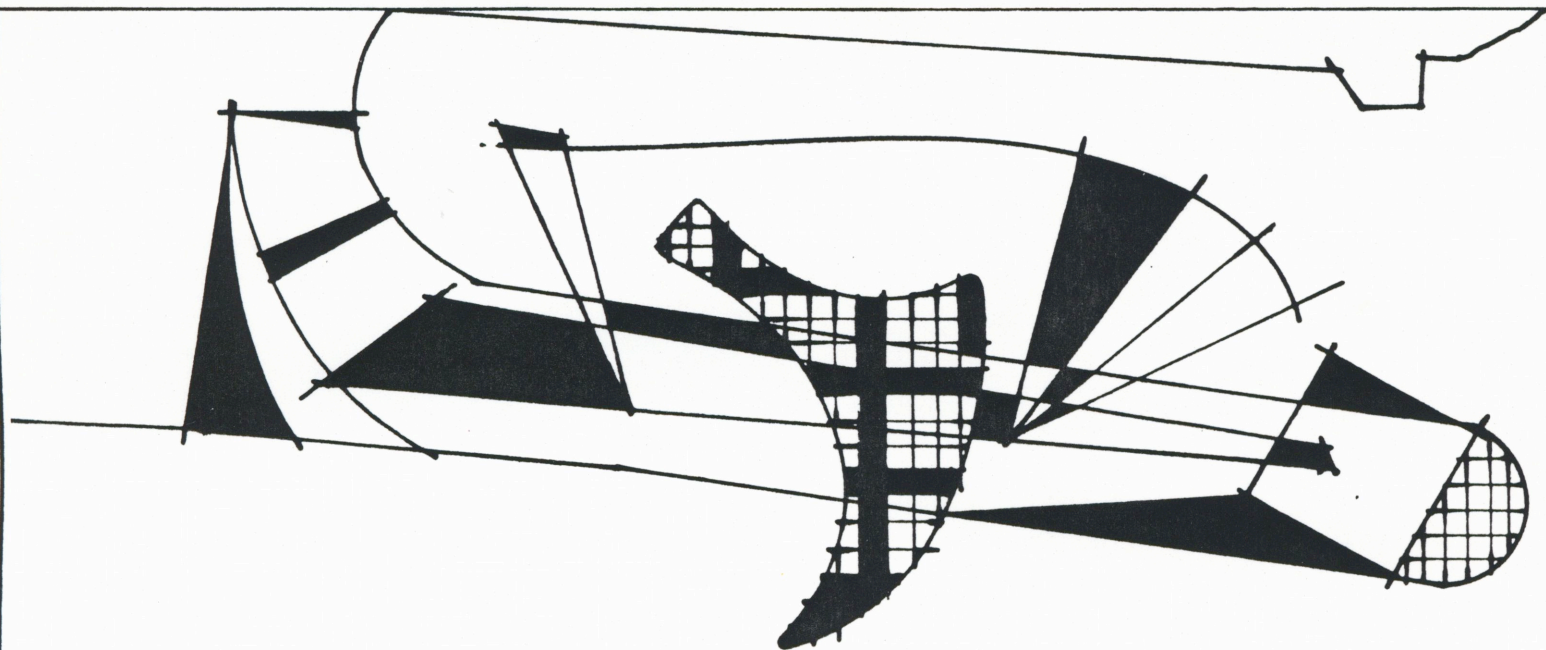
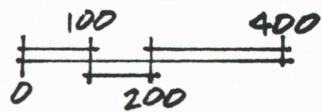
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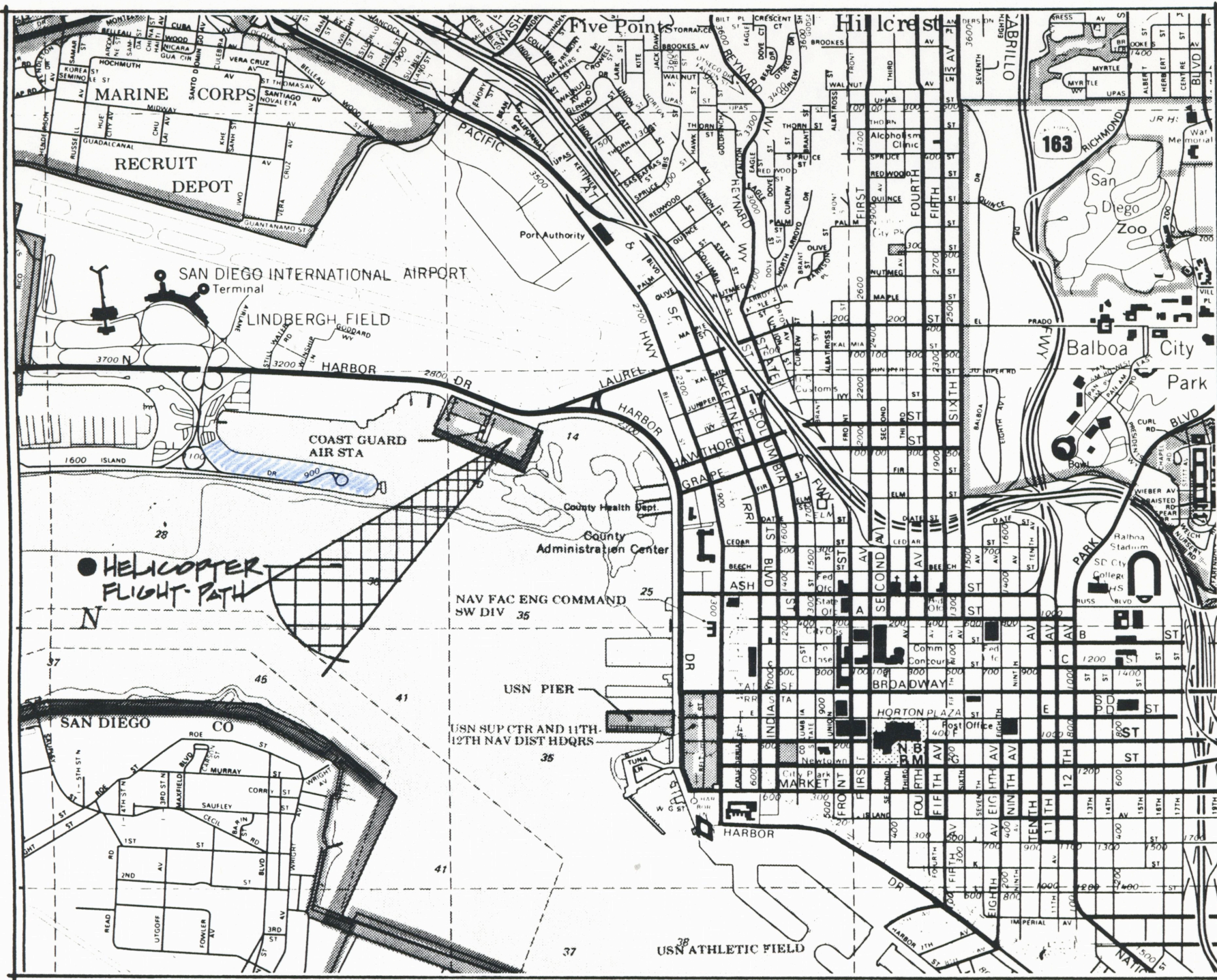
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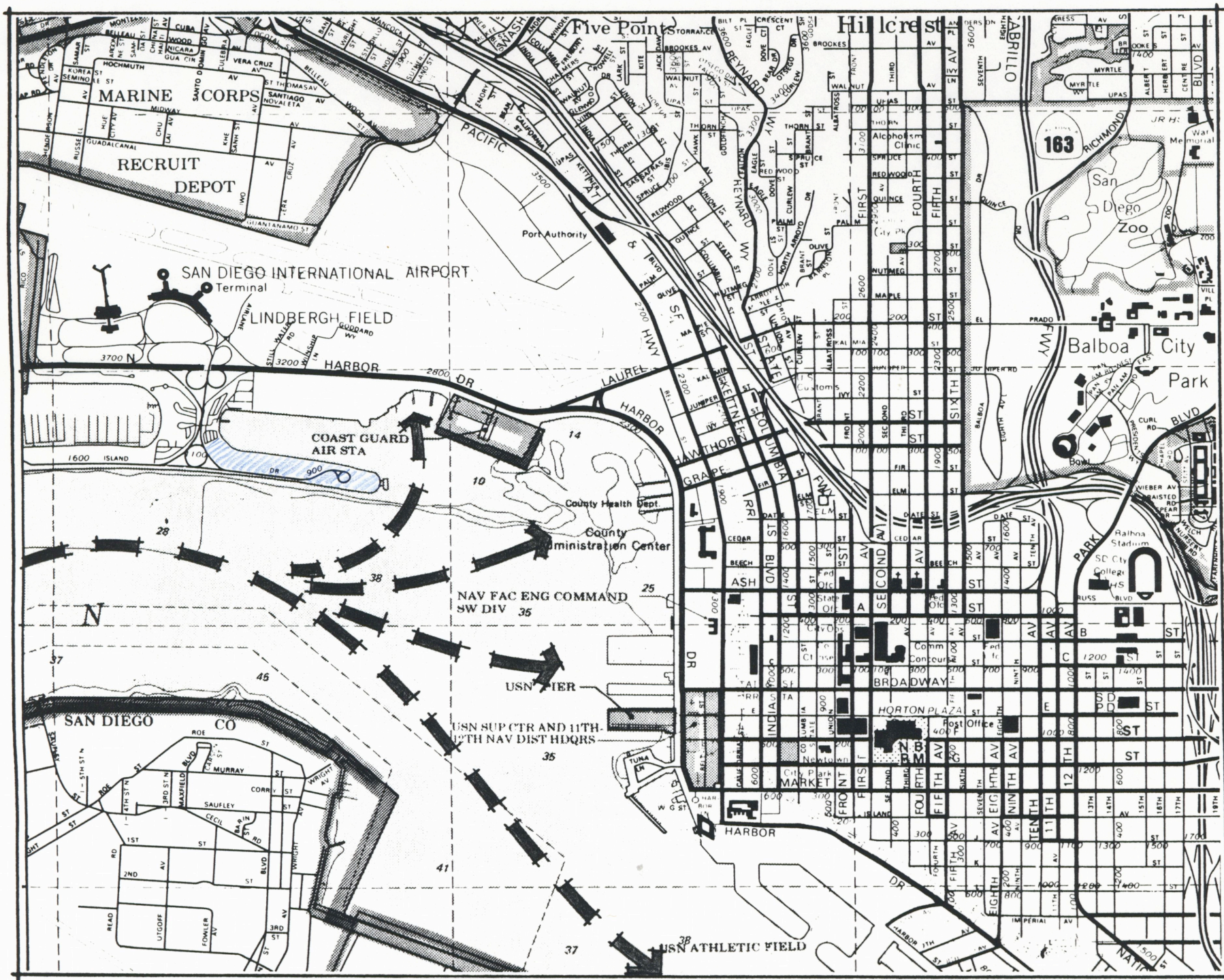
INTUITIVE RESPONSE

26





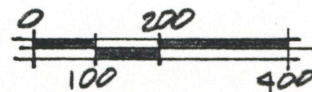
SITE ANALYSIS "AIR TRAFFIC"

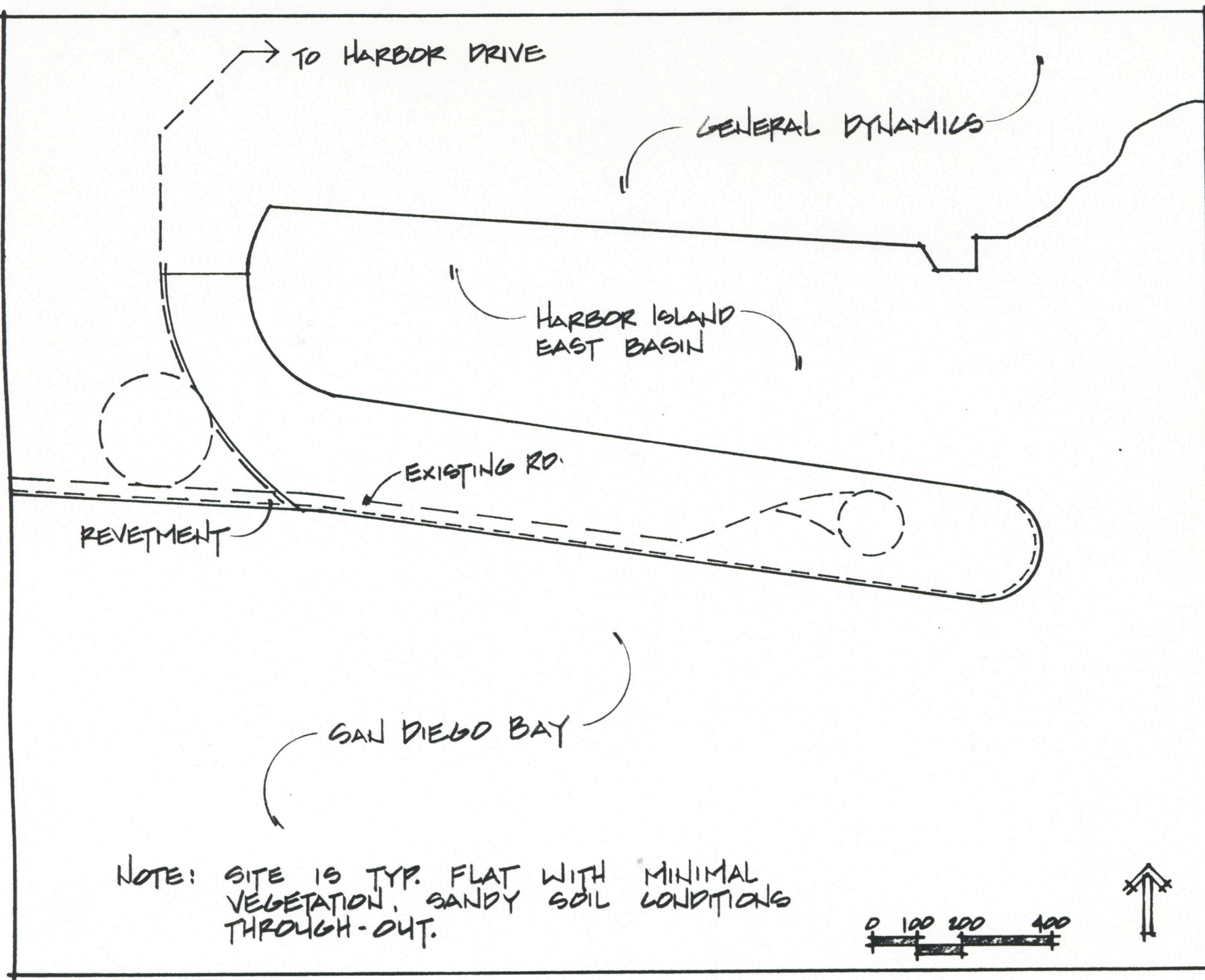


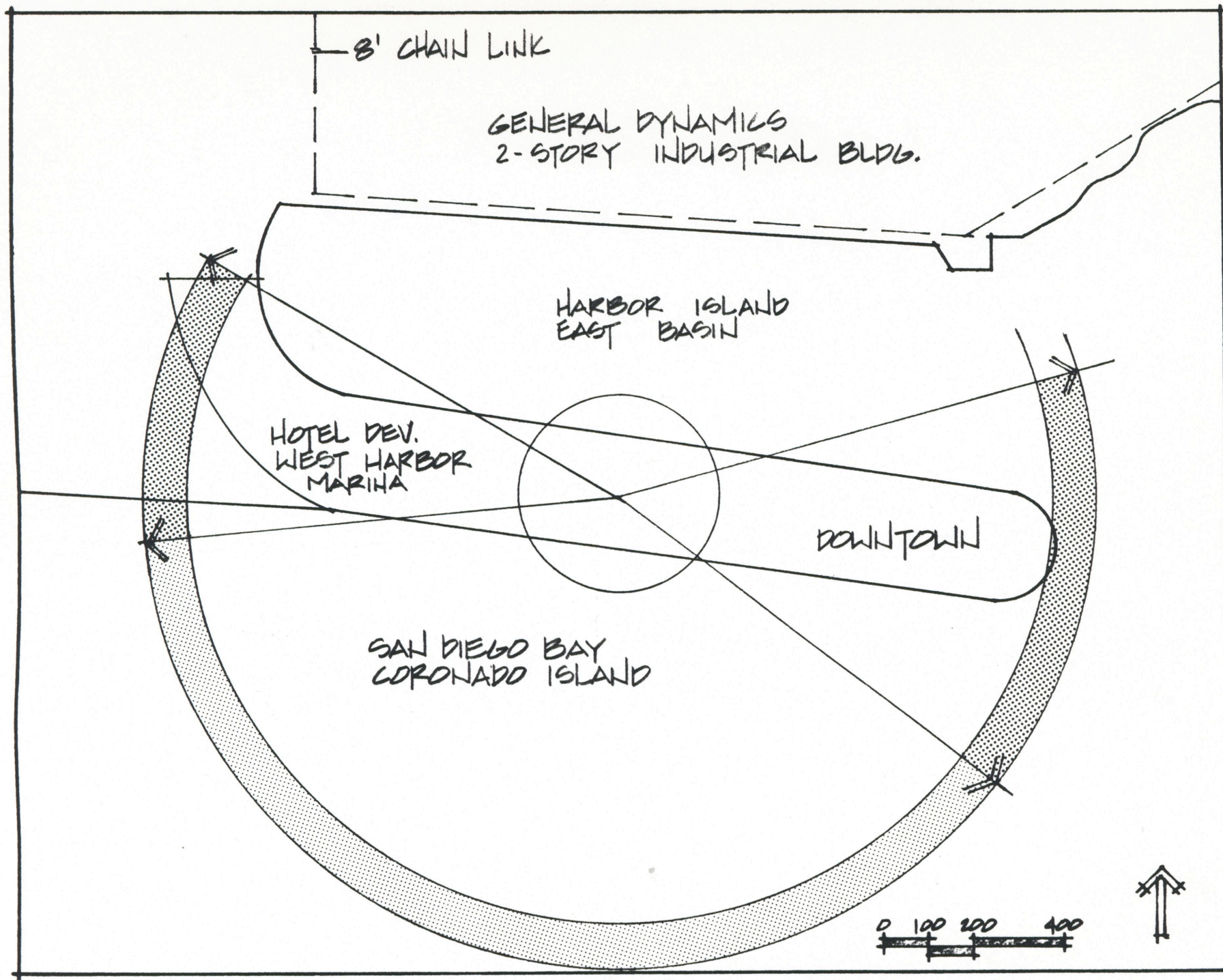
PLAN

HARBOR ISLAND
EAST BASIN

SECTION



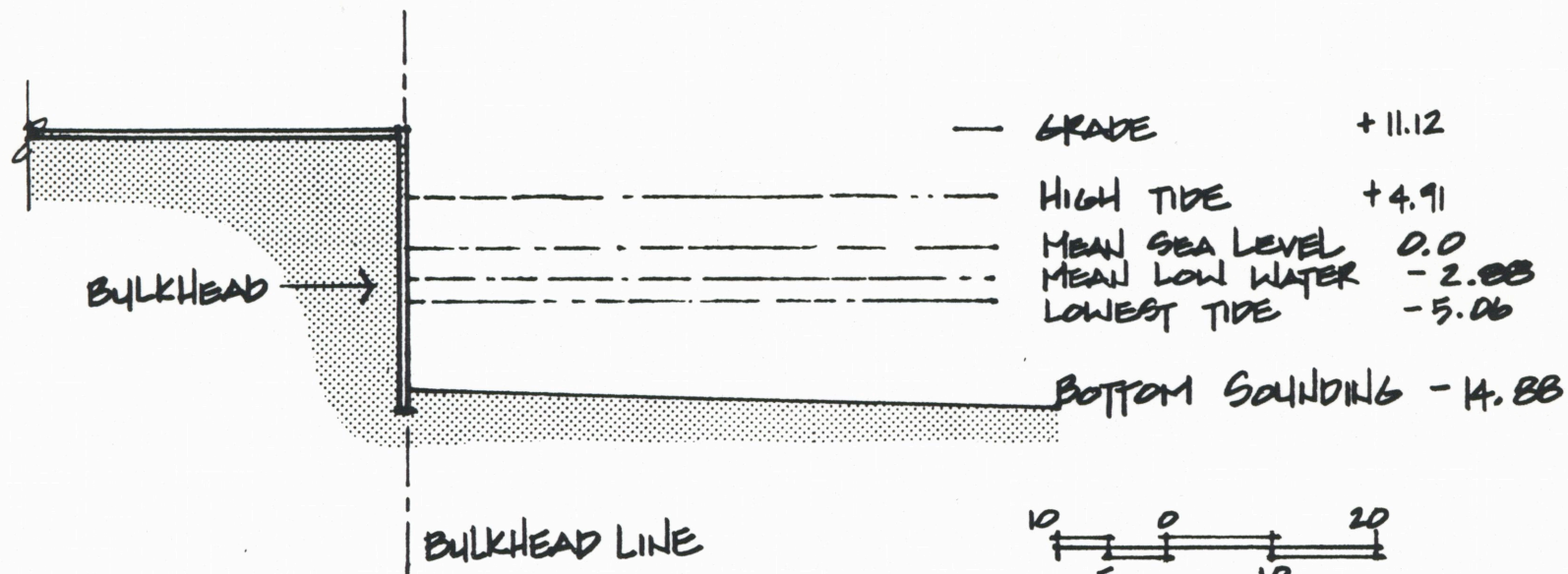




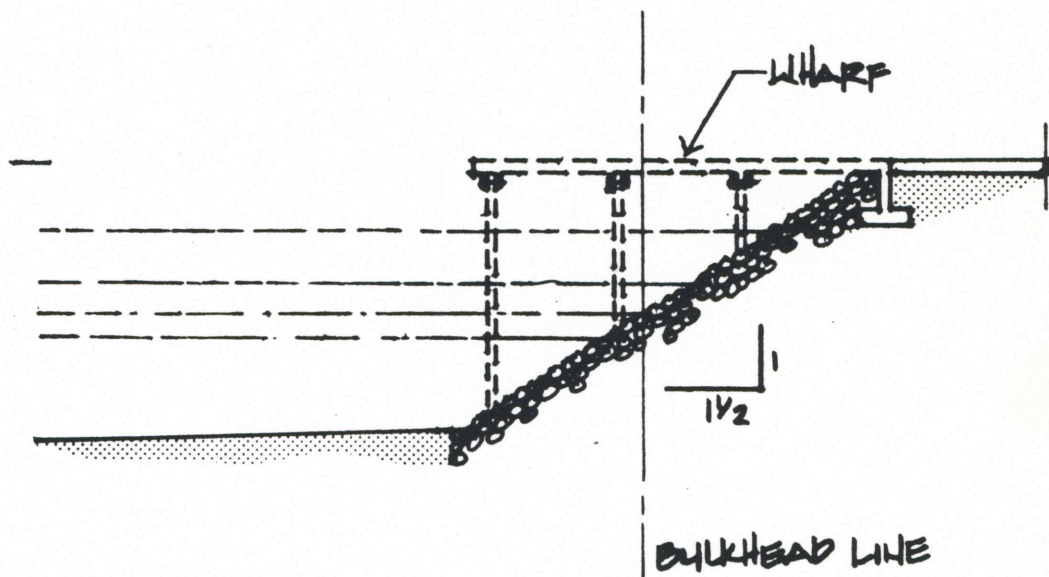
"VIEWS"

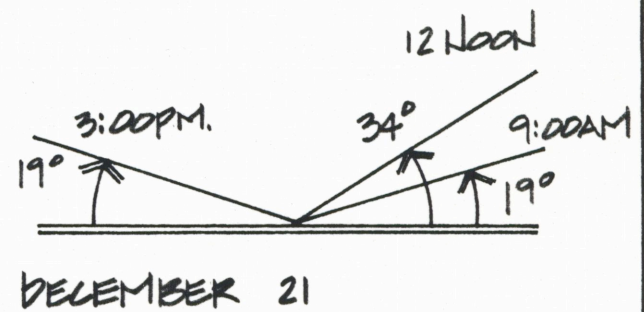
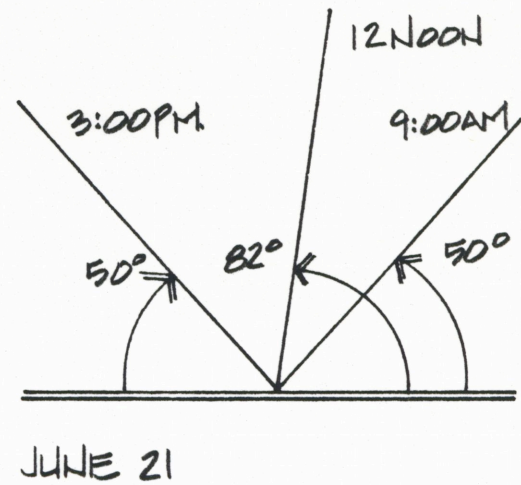
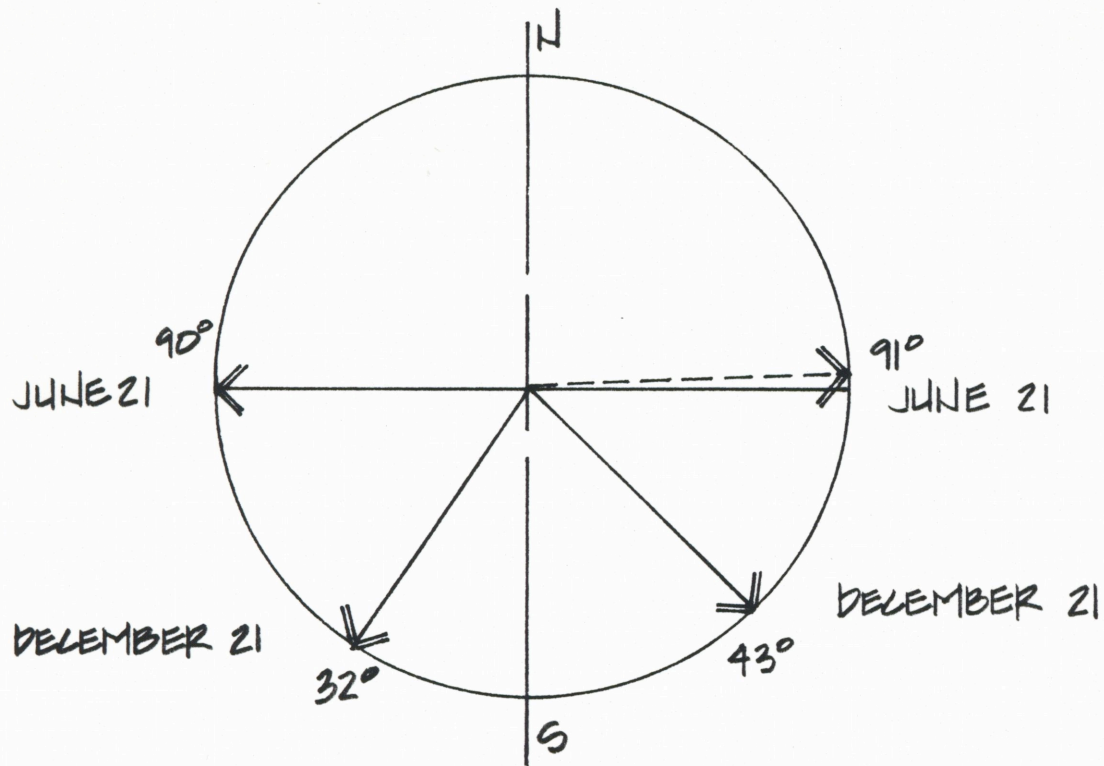
SITE ANALYSIS

33



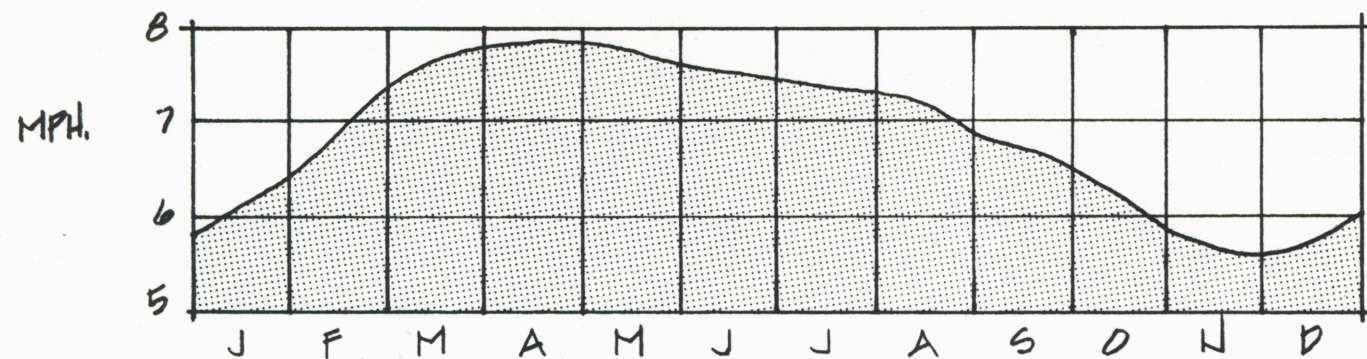
GRADE	+14
HIGH TIDE	+7.79
MEAN SEA LEVEL	+2.88
MEAN LOW WATER	0.0
LOW TIDE	-2.18
BOTTOM SOUNDING	-12.0



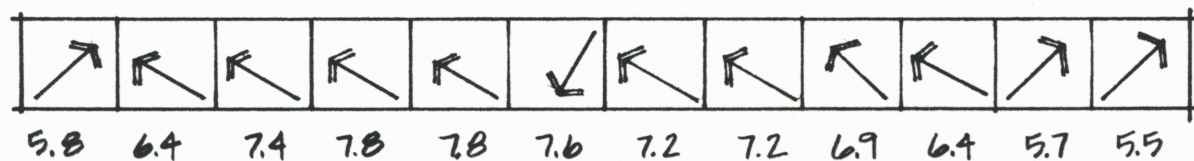


"SUN ANGLES"

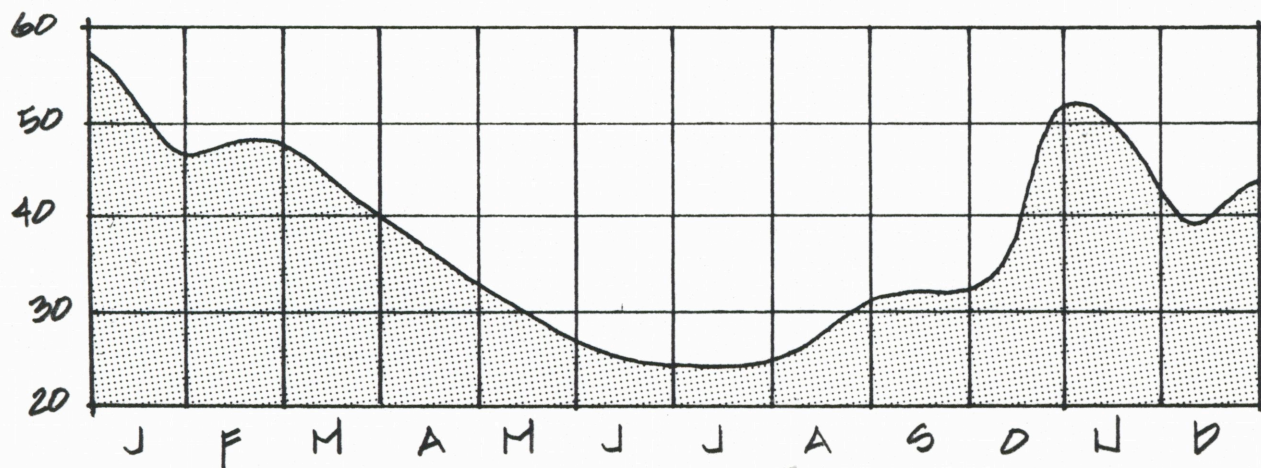
CLIMATE



AVERAGE WINDS



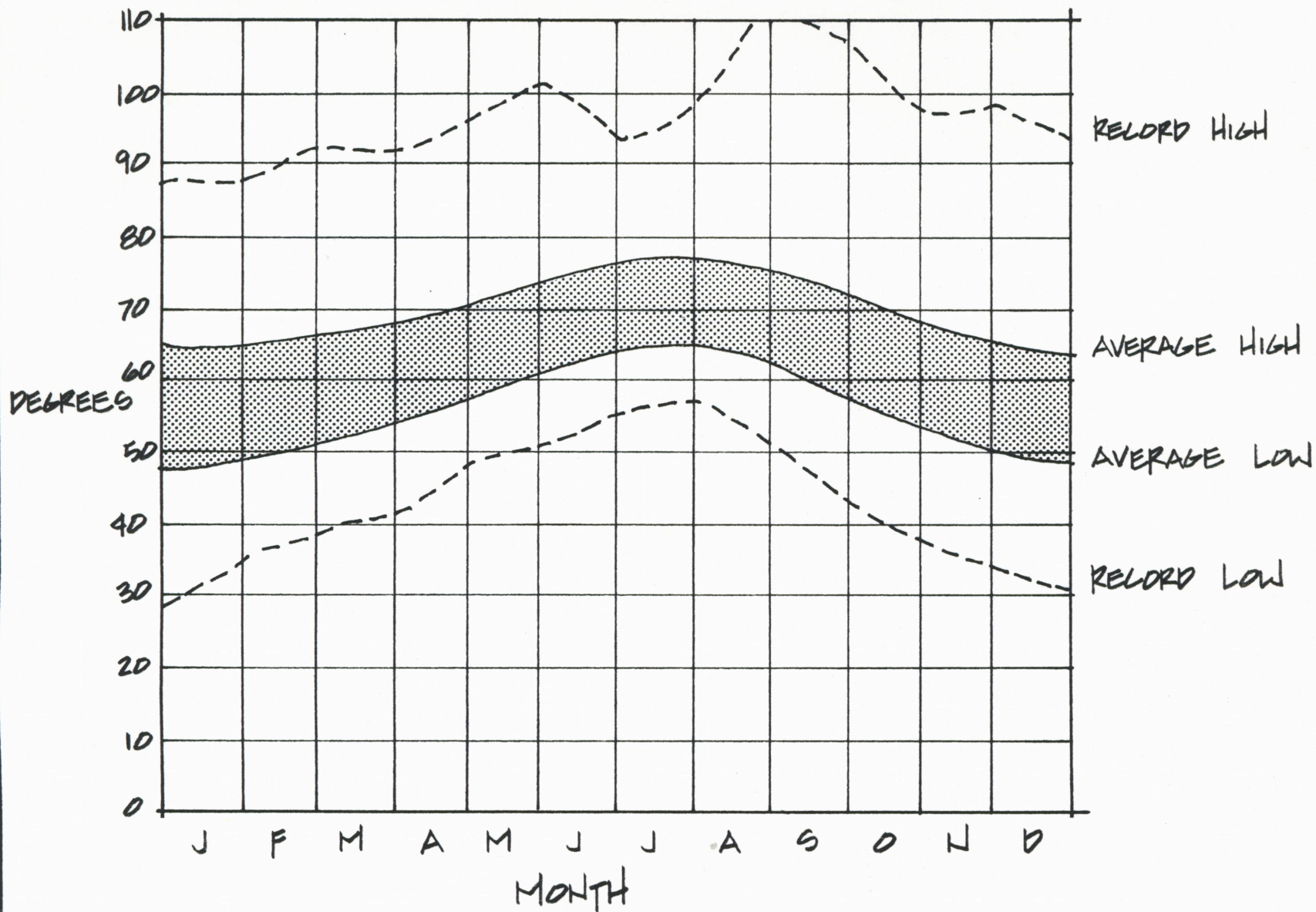
DIRECTION



RECORD WINDS

"WIND SPEEDS"

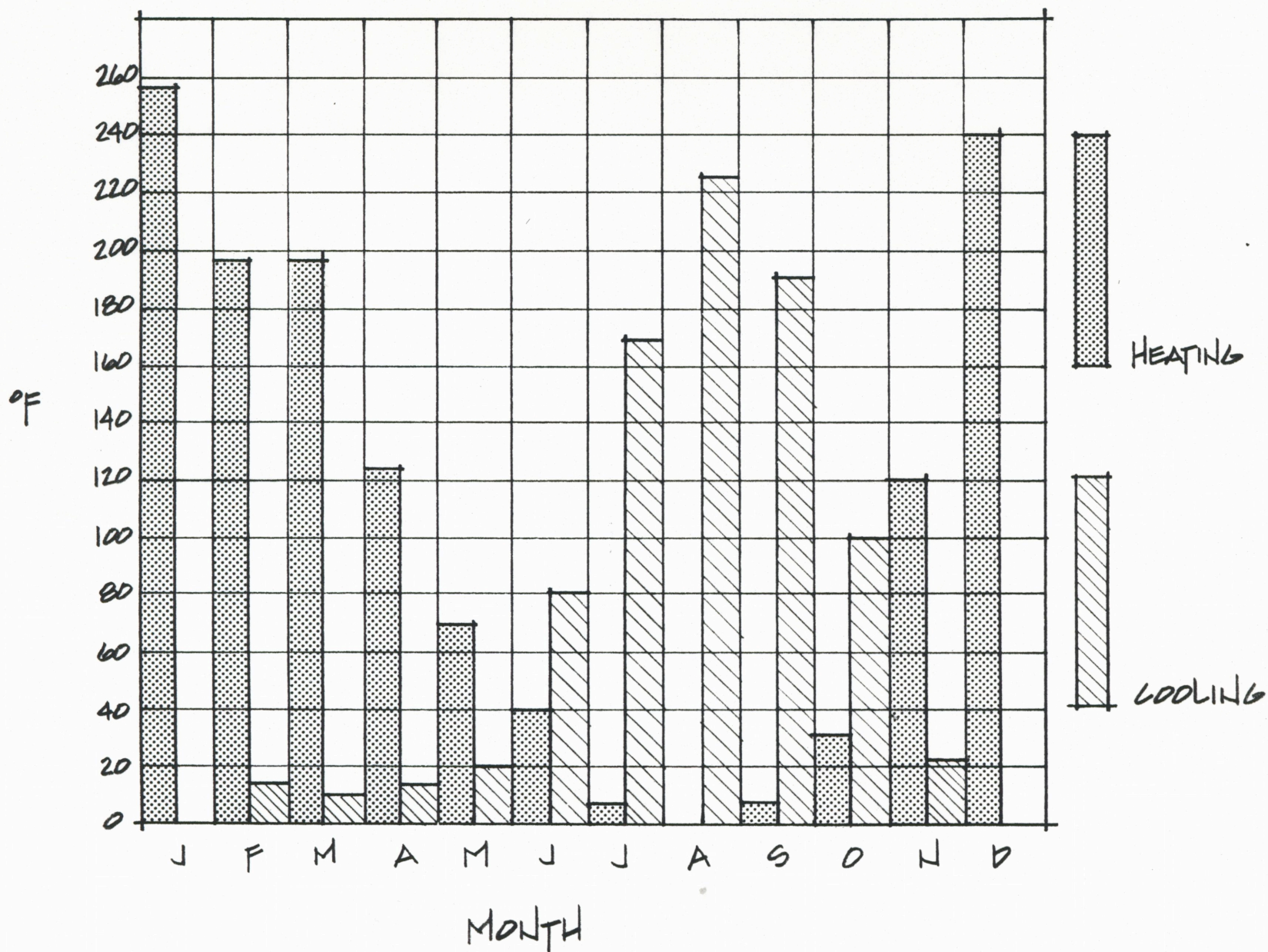
CLIMATE



"TEMPERATURE"

CLIMATE

38



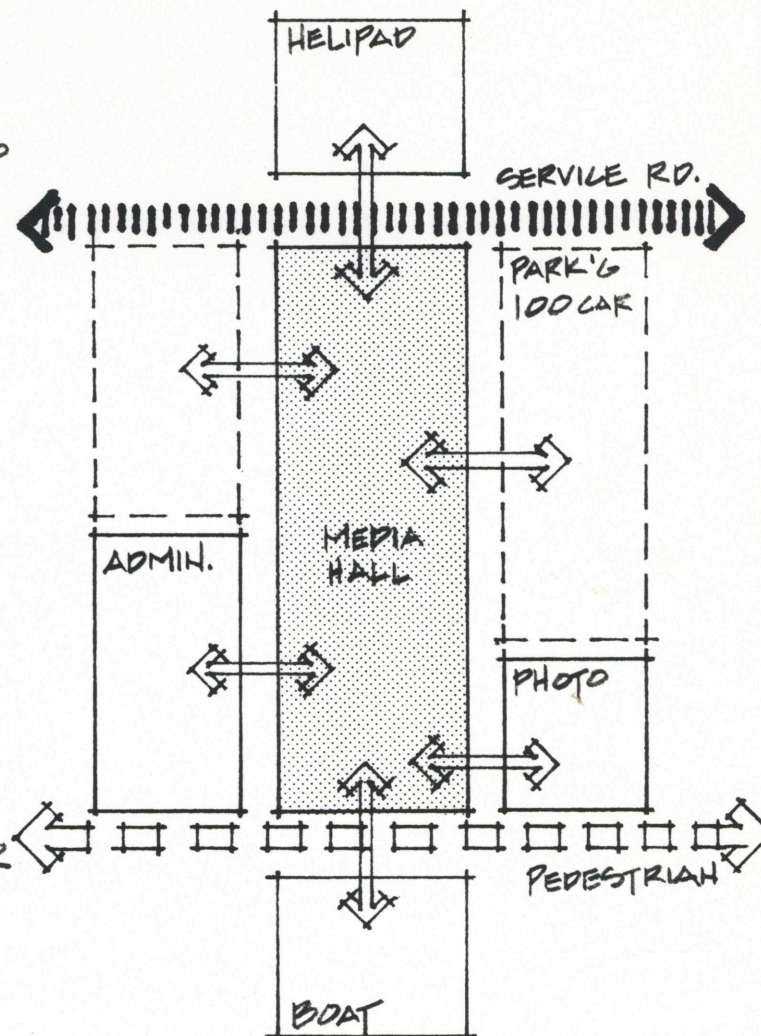
CLIMATE

"DEGREE DAYS"

PROGRAM INTENT

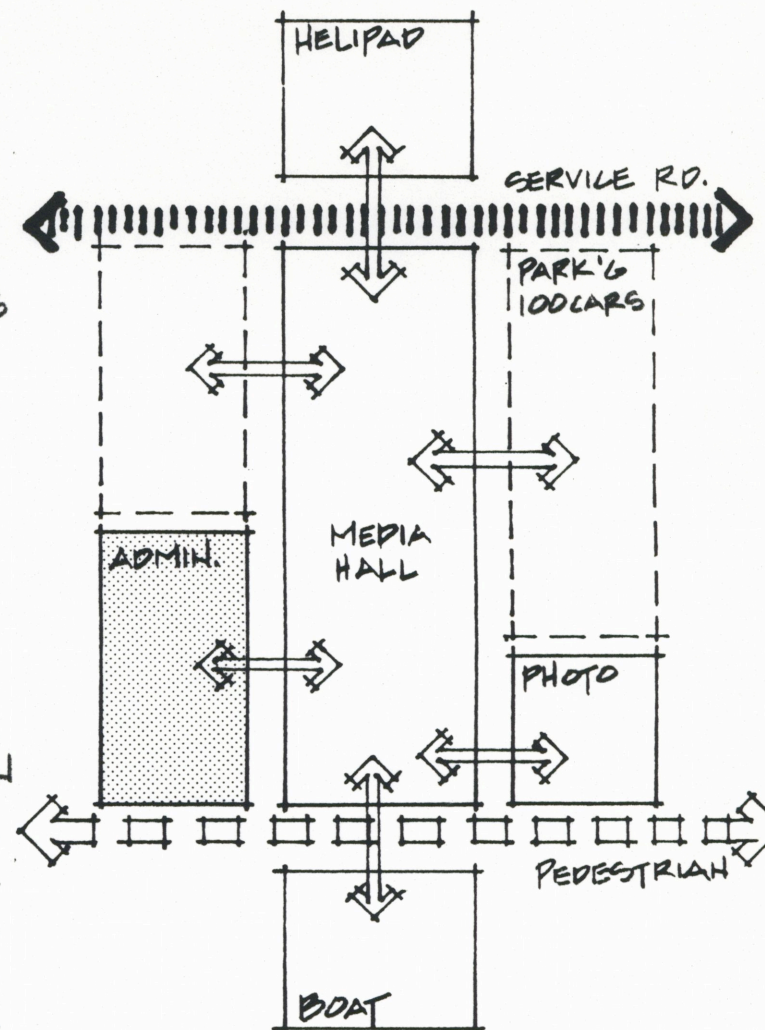
THE INTENT OF THIS PROGRAM IS TO GENERALIZE THE FUNCTIONAL REQUIREMENTS OF THE AMERICA'S CUP FACILITIES. KNOWLEDGE OF ACTIVITIES IS OF UTMOST IMPORTANCE, BUT FUNCTIONAL RELATIONSHIPS ARE HELD TO A MINIMUM WITH-IN THESE ACTIVITIES. BECAUSE OF THE SCOPE OF THIS PROJECT, I FEEL IT IMPORTANT TO GAIN AN OVER-ALL FEEL FOR THE PROJECT AND BUILD ON THAT DURING DESIGN DEVELOPMENT.

ZONE	MEDIA
DESCRIPTION	MEDIA CENTER "HALL"
NO. OF USERS	185 172 WORK STATIONS 13 OFFICES
ACTIVITIES	ALL NEWS SERVICES 24 HR. OPERATION
	CENTER OF MEDIA COVERAGE FOR RACE & ACTIVITIES. 2,000 PRESS PASSES
CONSIDERATIONS	HIGHLY ACTIVE CIRCULATION DIVIDER SEPARATION COMFORTABLE WORK SP. SOUND CONTROL
EQUIPMENT	TELEX TELECOMMUNICATION VIDEO, TELEVISION- SCREENS, WORD PROCESSOR
AREA REQUIRED	12,684 SQ. FT. 1,000 S.F. (RR.-M.W.)
FLEXIBILITY	MULTI-USE
ENVIRONMENTAL	HVAC, LIMITED DAYLIGHT
LEGAL » SAFETY	



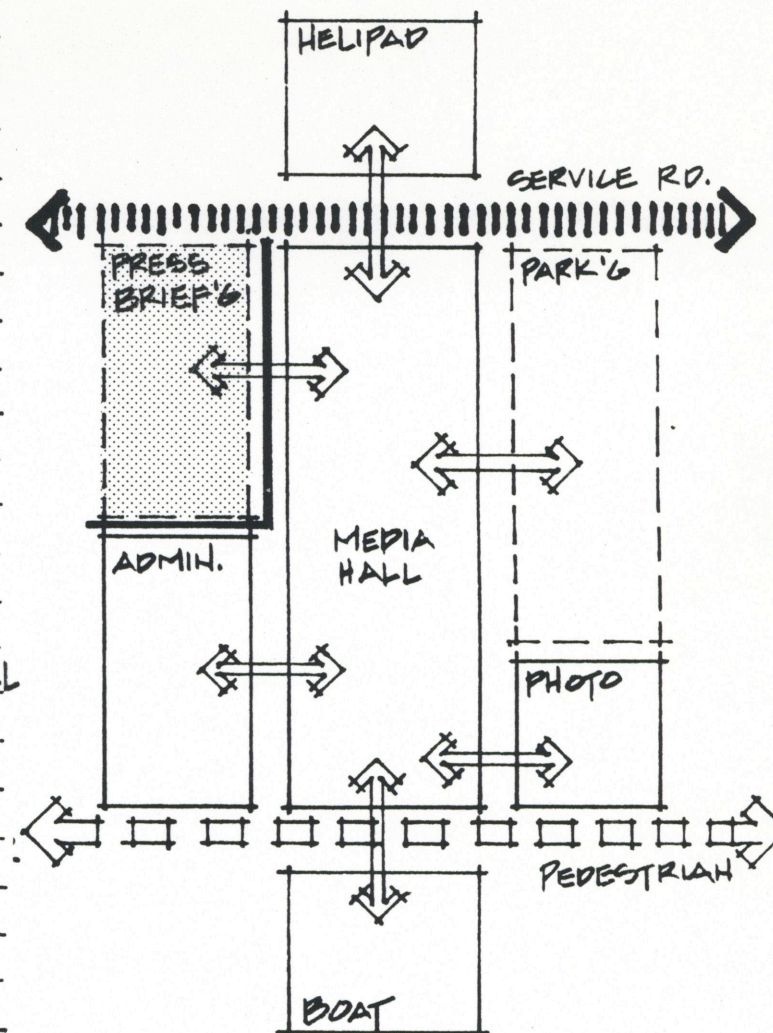
FUNCTIONAL RELATIONSHIPS

ZONE	MEDIA
DESCRIPTION	ADMINISTRATION
NO. OF USERS	40 EMPLOYEES
ACTIVITIES	OFFICE FOR THE ALL- REPUTATION OF JOURNALISTS FIRST AID STATION YACHTING OFFICIALS POLICE & SECURITY PORT AUTHORITY
CONSIDERATIONS	12 PRIVATE OFFICES CENTRAL LOCATION
EQUIPMENT	FAX, SATELLITE COMMUNICATION COPIER
AREA REQUIRED	3500 G.F.
FLEXIBILITY	MULTI-USE
ENVIRONMENTAL	HVAC, DAYLIGHT
LEGAL & SAFETY	



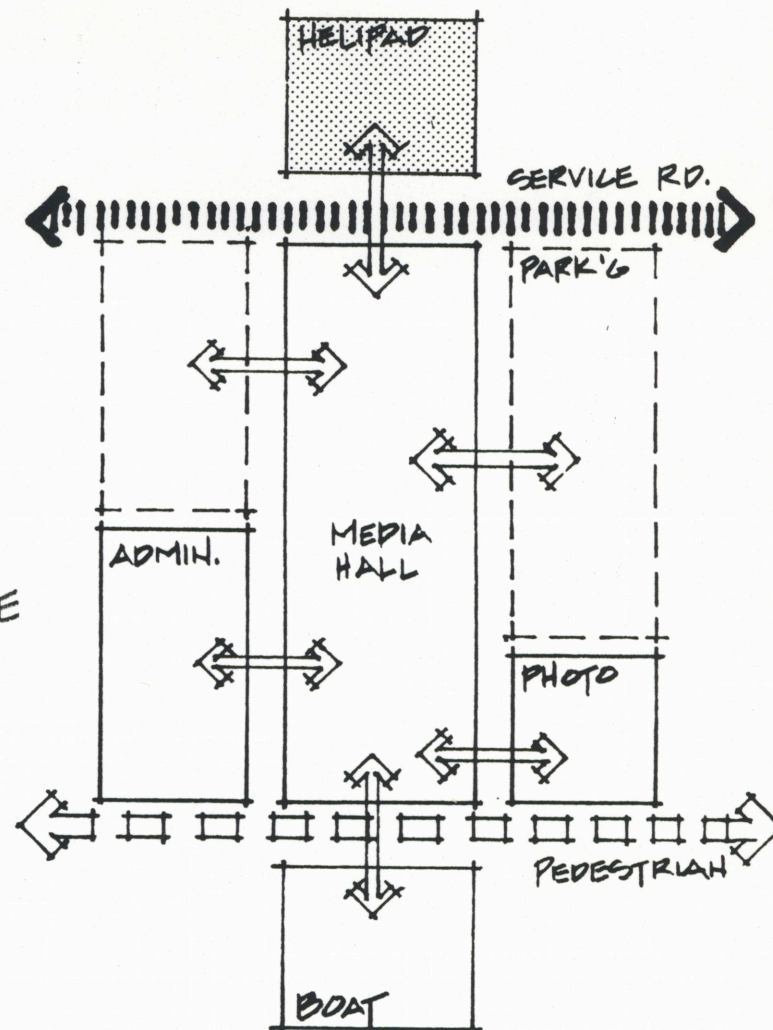
FUNCTIONAL RELATIONSHIPS

ZONE	MEDIA
DESCRIPTION	PRESS BRIEFING CENTER
NO. OF USERS	
ACTIVITIES	PRESS RELEASES AND BRIEFINGS. MAJOR ANNOUNCEMENTS AT CONCLUSION OF EACH RACE SERIES.
CONSIDERATIONS	CROWD CONTROL SECURITY SEPARATE FROM MEDIA HALL AUDITORIUM LIKE
EQUIPMENT	TELEVISION CAMERAS FLOODLIGHTING
AREA REQUIRED	
FLEXIBILITY	MULTI-USE
ENVIRONMENTAL	HVAC, CONTROLLED DAYLIGHT
LEGAL » SAFETY	



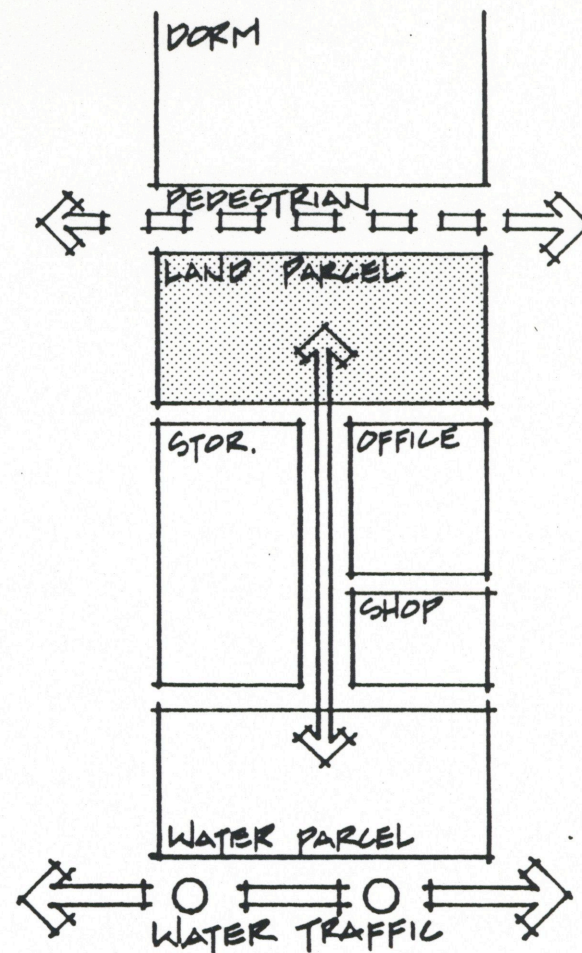
FUNCTIONAL RELATIONSHIPS

ZONE	MEDIA
DESCRIPTION	HELIPAD (2)
NO. OF USERS	2 - HELICOPTERS 5 CREW MEMBERS EA.
ACTIVITIES	REPAIR OVERNIGHT STORAGE FUEL COVERAGE OF RACE V.I.P. TRANSPORT EMERGENCY TRANSPORT
CONSIDERATIONS	CLEAR FROM PUBLIC 10' HIGH SECURITY FENCE CLEAR FLIGHT PATH
EQUIPMENT	FUEL STORAGE & PUMP
AREA REQUIRED	50'x50' 2500 SF.
FLEXIBILITY	MULTI-USE "SURFACE" GRASS
ENVIRONMENTAL	
LEGAL » SAFETY	



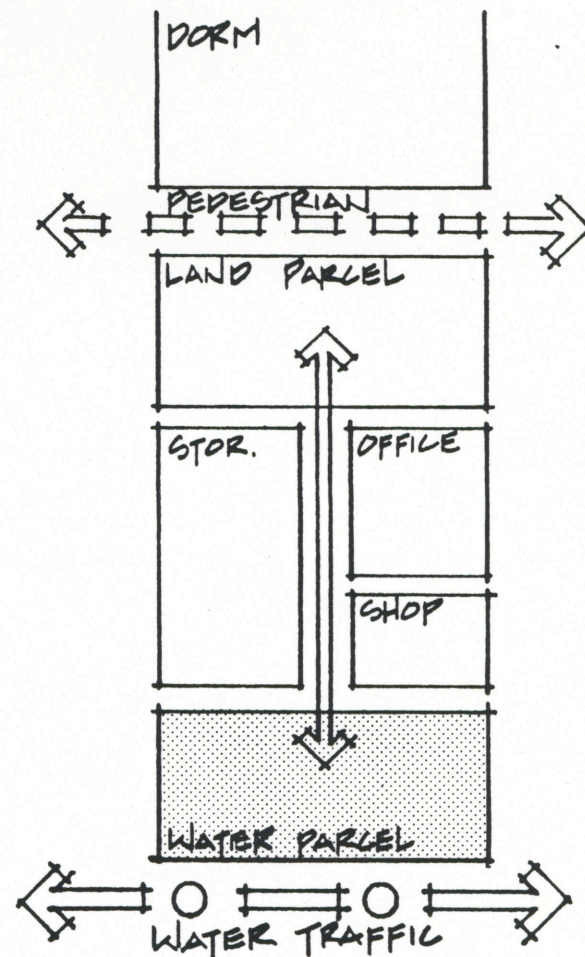
FUNCTIONAL RELATIONSHIPS

ZONE	SYNDICATE
DESCRIPTION	LAND PARCEL
NO. OF USERS	85 - 100 MAX
ACTIVITIES	PREP AREA MAINTENANCE OF EQUIPMENT. STORAGE OF ADDITIONAL CRAFTS. (YACHT, TENDERS)
CONSIDERATIONS	PRIVACY, TOP SECRET ACCESS TO WATER HARD SURFACE
EQUIPMENT	METAL CONTAINERS
AREA REQUIRED	8,000 SF
FLEXIBILITY	MULTI-USE
ENVIRONMENTAL	
LEGAL » SAFETY	



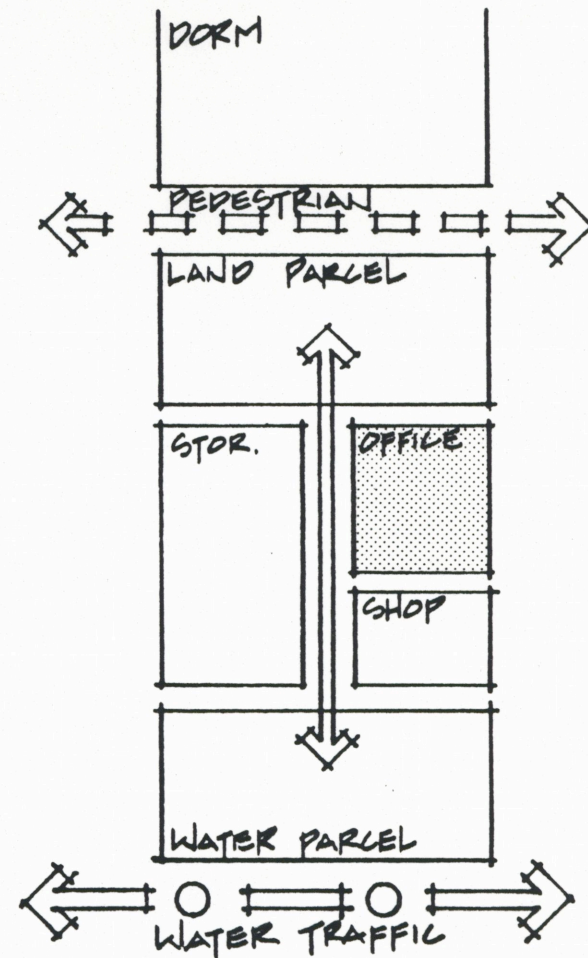
FUNCTIONAL RELATIONSHIPS

ZONE	SYNDICATE
DESCRIPTION	WATER PARCEL
NO. OF USERS	30 - 50
ACTIVITIES	BERTHING AREA CREW PREP LOADING AREA EQUIPMENT TESTING & STORAGE
CONSIDERATIONS	MAX SECURITY 2-4 RENOVATIONS 1- TENDER 52-82 FT.
EQUIPMENT	ELECTIC CRANE 75,000 LBS. WET STORAGE
AREA REQUIRED	2,000 SF. PIER (20' x 98') FINGER PIER (6 1/2' x 164')
FLEXIBILITY	CONVERSION TO TYP. MARINA AFTER RACE.
ENVIRONMENTAL	MARINA QUALITY CONTROL
LEGAL » SAFETY	



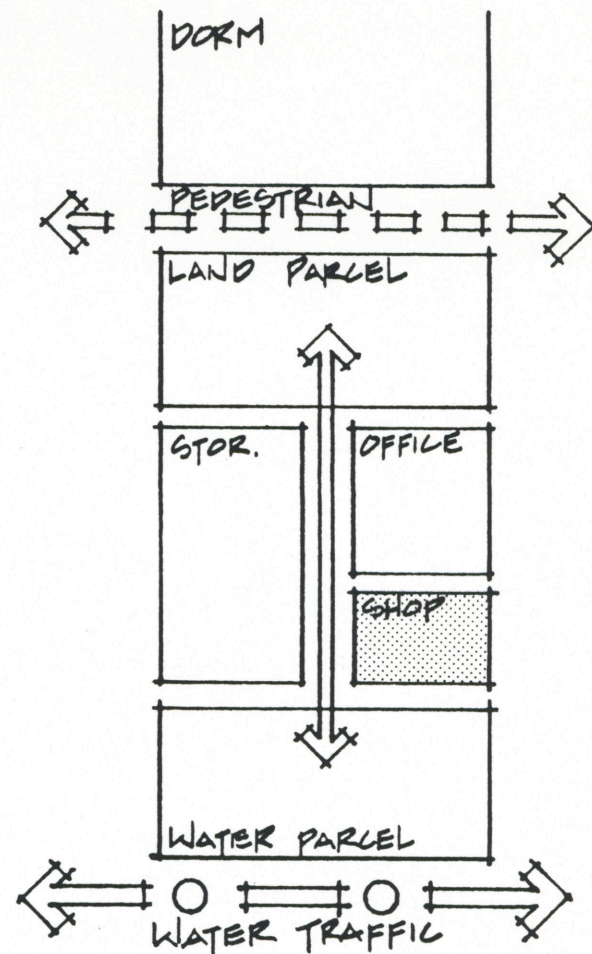
FUNCTIONAL RELATIONSHIPS

ZONE	SYNDICATE
DESCRIPTION	OFFICE
NO. OF USERS	15-20 "SPONSORS" 5-MAX "TEAM OFFICIALS"
ACTIVITIES	SPONSOR ADM. ADVERTISING ACCOUNTING TEAM MEETINGS
CONSIDERATIONS	COMFORTABLE WORK'G CONDITIONS VIEW OF LAND & WATER PARCELS
EQUIPMENT	TELE-COMMUNICATIONS COPIER
AREA REQUIRED	2,000 SF.
FLEXIBILITY	MULTI-USE TEMPORARY
ENVIRONMENTAL	HVAC, DAY LIGHT
LEGAL » SAFETY	



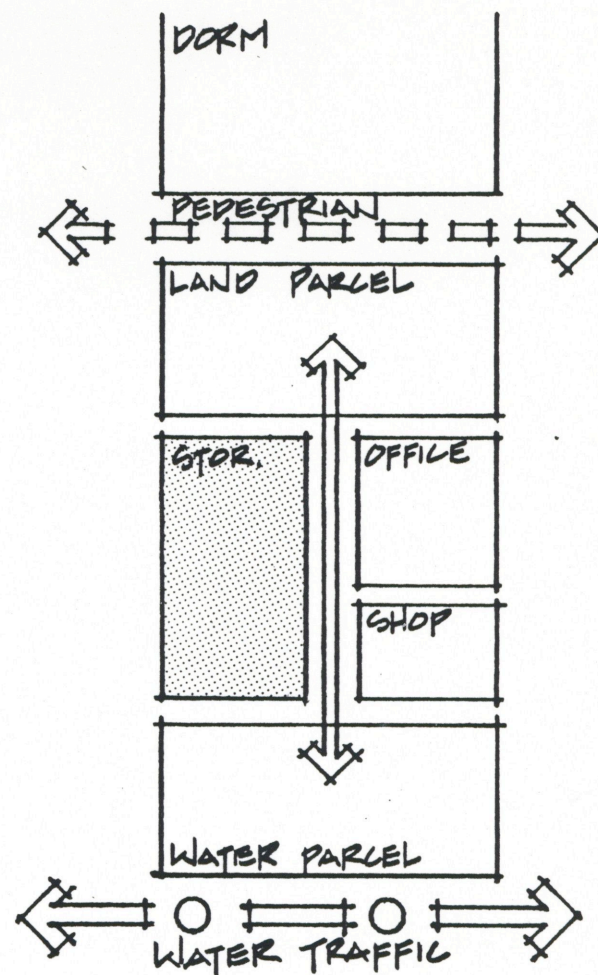
FUNCTIONAL RELATIONSHIPS

ZONE	SYNDICATE
DESCRIPTION	SHOP
NO. OF USERS	10-20 MAX
ACTIVITIES	MAINTENANCE OF SAILS & RELATED HARDWARE SAIL MAKING SAIL LOFTS
CONSIDERATIONS	OPEN SPACE, WITH LARGE DOOR FOR MOVING EQUIPMENT TO BERTH SITE
EQUIPMENT	DRIING FANS
AREA REQUIRED	900 SF.
FLEXIBILITY	MULTI-USE
ENVIRONMENTAL	HEAVY VENTILATION & CLIMATE CONTROL
LEGAL » SAFETY	



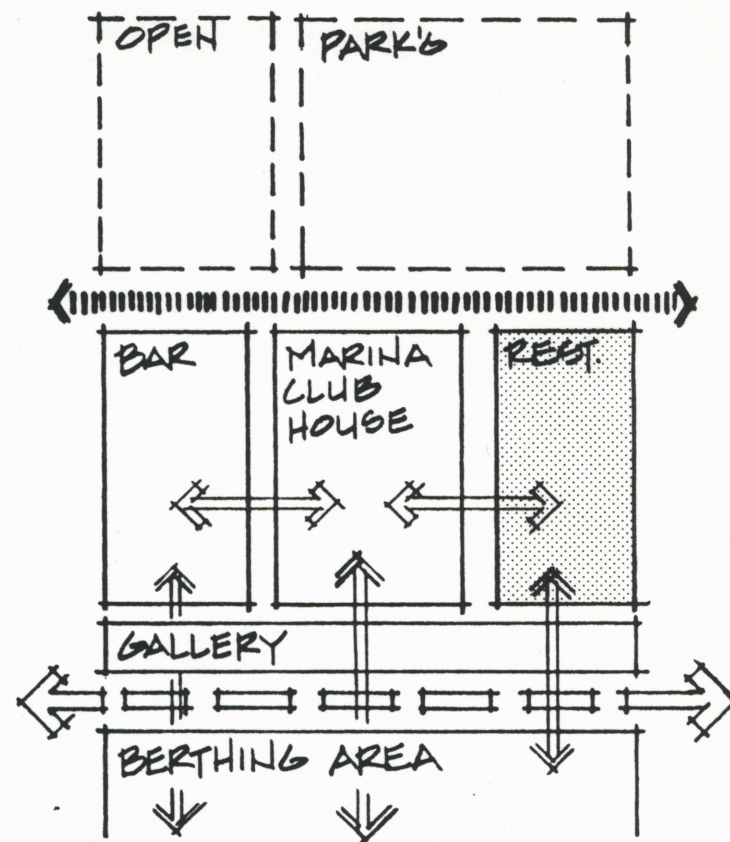
FUNCTIONAL RELATIONSHIPS

ZONE	SYNDICATE
DESCRIPTION	STORAGE
NO. OF USERS	20 - 30 MAX.
ACTIVITIES	GENERAL STORAGE MAST STORAGE STORAGE CONTAINERS WORK AREA
CONSIDERATIONS	10' HIGH SECURITY FENCE CONCRETE PAVEMENT ACCESS TO PIER OPEN CIRCULATION
EQUIPMENT	CONTAINERS & GATES W/LOCKS
AREA REQUIRED	2000 G.F.
FLEXIBILITY	MULTI-USE
ENVIRONMENTAL	
LEGAL » SAFETY	



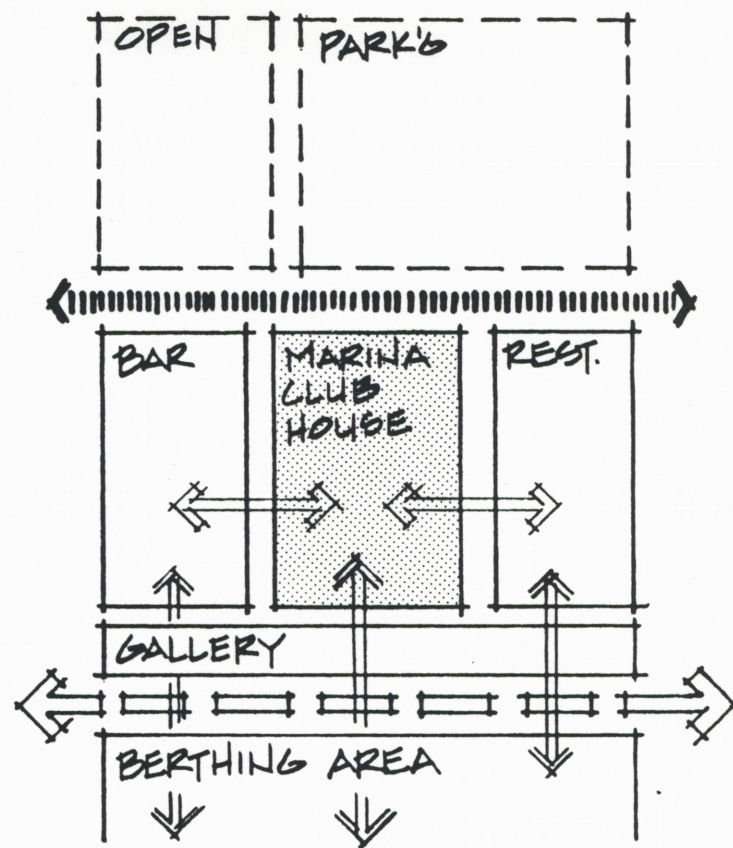
FUNCTIONAL RELATIONSHIPS

ZONE	PUBLIC
DESCRIPTION	RESTAURANT
NO. OF USERS	300
ACTIVITIES	LUNCH DINNER CONVERSATION "SOCIAL"
CONSIDERATIONS	EXTERIOR EATING SPACE, ADJACENT TO LOUNGE
EQUIPMENT	KITCHEN & SERVICE
AREA REQUIRED	4500 - 5000 MAX.
FLEXIBILITY	LARGE CONVENTION LUNCH & DINNER
ENVIRONMENTAL	HYAC, DAYLIGHT,
LEGAL » SAFETY	



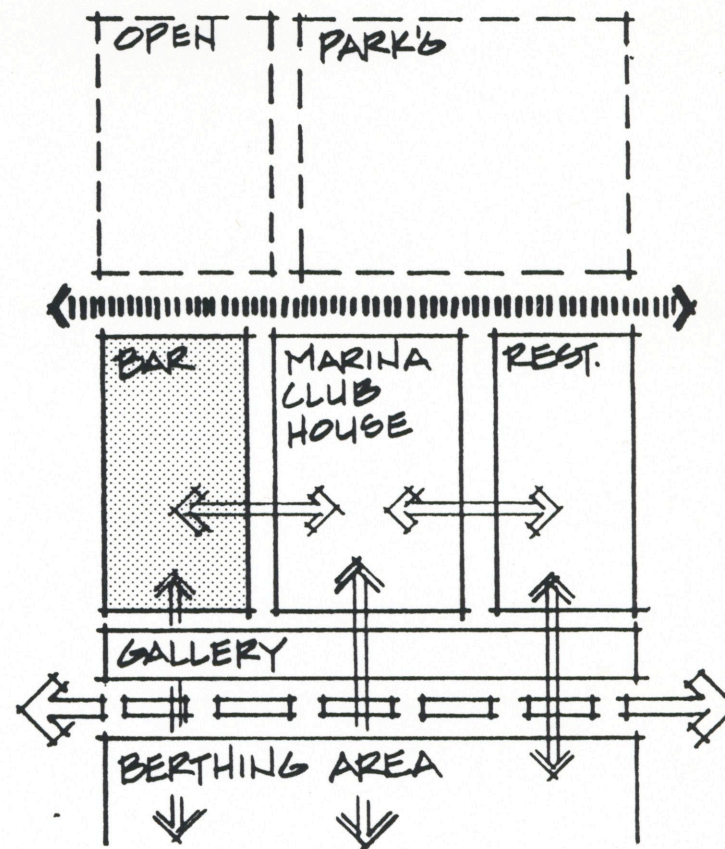
FUNCTIONAL RELATIONSHIPS

<u>ZONE</u>	
<u>DESCRIPTION</u>	MARINA CLUB HOUSE
<u>NO. OF USERS</u>	200 10 OFFICES
<u>ACTIVITIES</u>	EVENT MANAGEMENT SAIL AMERICA SAIL SAN DIEGO RACE COMMITTEE RACE JURY FACILITIES COMMON STORAGE
<u>CONSIDERATIONS</u>	HUB OF ACTIVITIES CIRCULATION SHOULD BE DOMINANT TO SITE LARGE OPEN AREA
<u>EQUIPMENT</u>	TELECOMMUNICATIONS
<u>AREA REQUIRED</u>	2500,- 3000 MAX.
<u>FLEXIBILITY</u>	MULTI-USE
<u>ENVIRONMENTAL</u>	HVAL, DAYLIGHT
<u>LEGAL » SAFETY</u>	



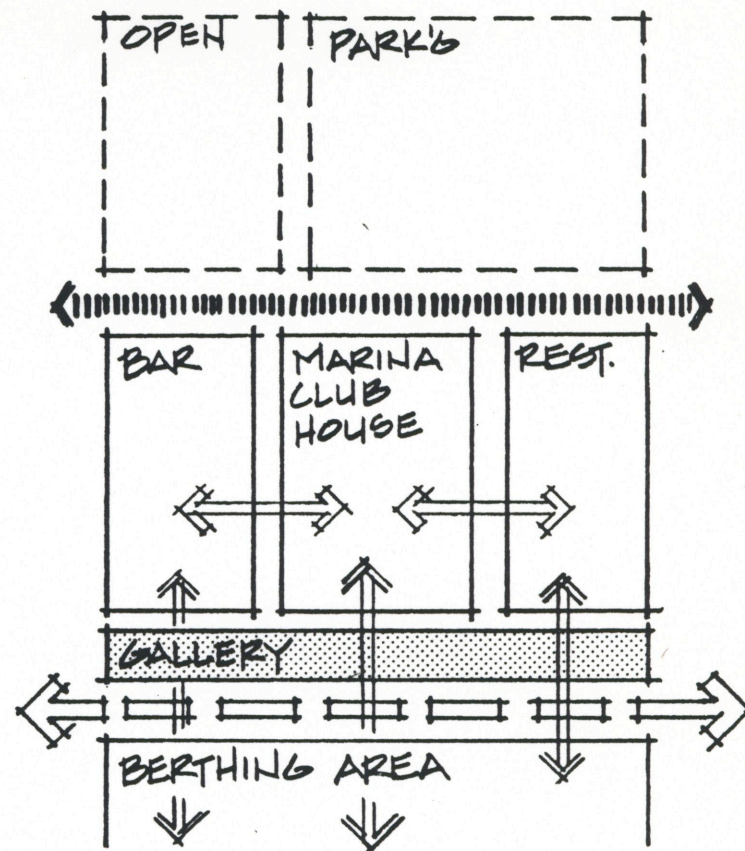
FUNCTIONAL RELATIONSHIPS

ZONE	PUBLIC
DESCRIPTION	BAR "NIGHT CLUB"
NO. OF USERS	200 MAX
ACTIVITIES	DRINKING SOCIAL CONVERSATION SNACK BAR MUSIC "LIVE" PIANO JAZZ
CONSIDERATIONS	EXTERIOR SEATING ROMANTIC VIEW OUTDOORS CONCERTS
EQUIPMENT	EXTERIOR HEATERS TABLES & CHAIRS
AREA REQUIRED	2500 INTERIOR 1500 EXTERIOR
FLEXIBILITY	
ENVIRONMENTAL	
LEGAL • SAFETY	



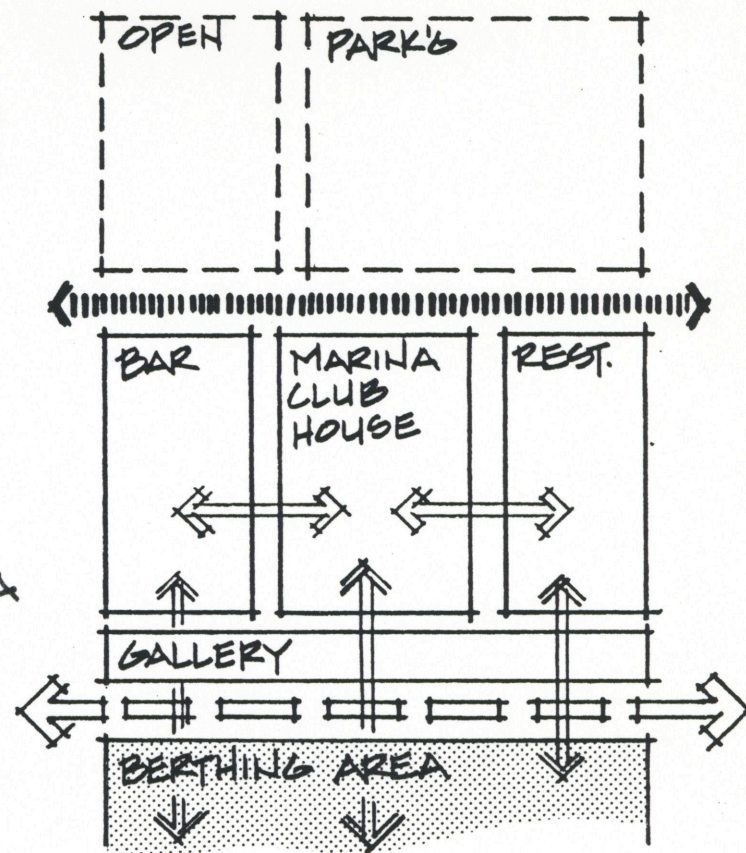
FUNCTIONAL RELATIONSHIPS

ZONE	PUBLIC
DESCRIPTION	GALLERY
NO. OF USERS	NOT KNOWN
ACTIVITIES	TROPHY DISPLAY MUSEUM - HISTORY OF RACE, PEOPLE, AND VESSELS STADIUM "ARENA"
CONSIDERATIONS	THIS SPACE IS HIGHLY ACTIVE & SERVES VARIOUS FUNCTIONS INTERIOR - EXTERIOR USE
EQUIPMENT	TRACK LIGHTING
AREA REQUIRED	UP TO INTERPRETATION
FLEXIBILITY	
ENVIRONMENTAL	HVAC, CONTROL DAY- LIGHT
LEGAL • SAFETY	



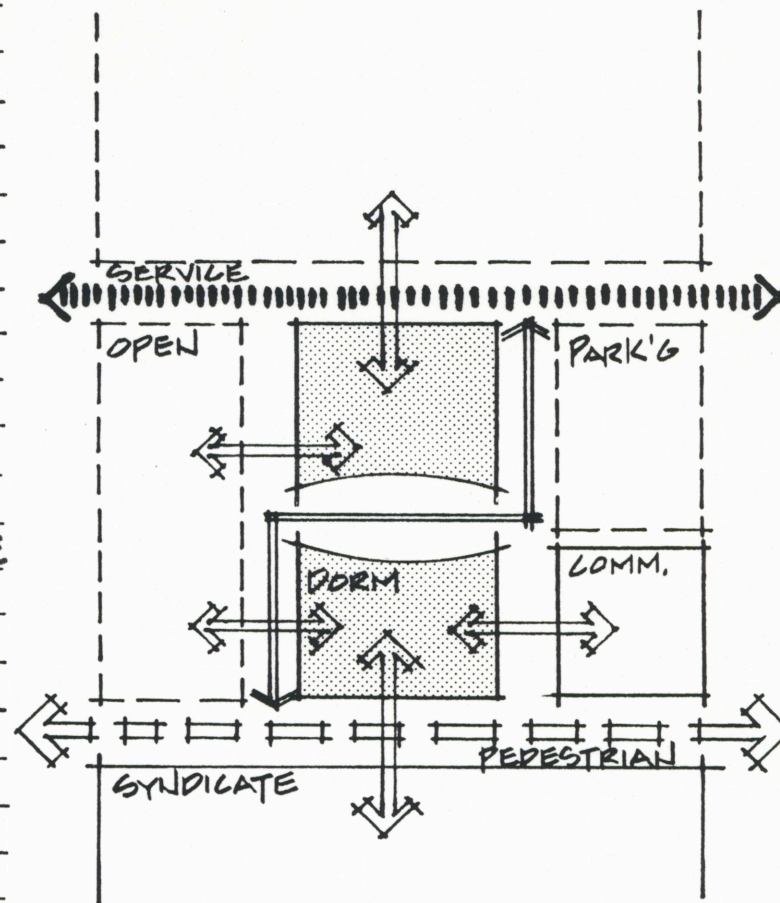
FUNCTIONAL RELATIONSHIPS

ZONE	PUBLIC
DESCRIPTION	BERTHING AREA
NO. OF USERS	NOT KNOWN
ACTIVITIES	JURY DOCKS (ASSUME 2) • TRANSPORT BOATS COMMITTEE DOCKS (3) • SIGNAL BOATS • MARK SETTING • LOGISTIC BOATS FUEL SALES • 1-DOCK
CONSIDERATIONS	CIRCULATION FROM CLUB HOUSE TO DOCKS TO RACE COURSE FUEL ACCESS TO MARINA
EQUIPMENT	FUEL PUMPS LOADING GEAR
AREA REQUIRED	UP TO INTERPRETATION
FLEXIBILITY	
ENVIRONMENTAL	CONTROL OF FUEL STORAGE & TRANSFER
LEGAL • SAFETY	



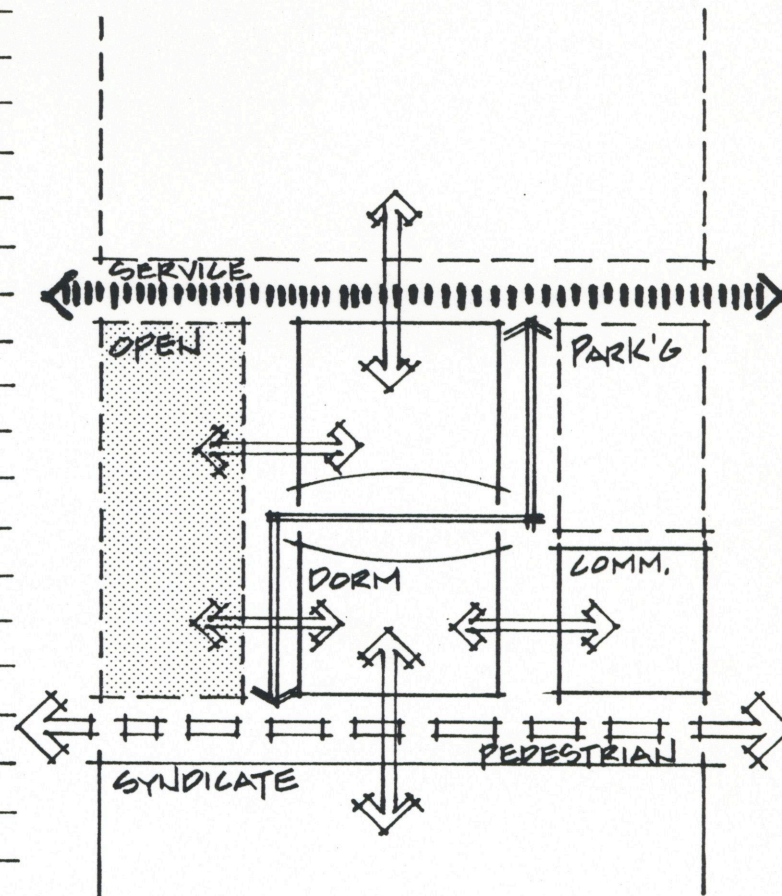
FUNCTIONAL RELATIONSHIPS

ZONE	HOUSING
DESCRIPTION	DORMITORIES
NO. OF USERS	2-4 PER UNIT 100 UNITS
ACTIVITIES	REST GROOMING GROUP GATHERING EAT
CONSIDERATIONS	SPACIOUS PRIVATE & COMFORTABLE APARTMENT LIKE
EQUIPMENT	KITCHEN, UTILITIES FURNISHINGS BATH FACILITIES
AREA REQUIRED	750 SF ±
FLEXIBILITY	USED AS HIGH-END APT'S AFTER RACE
ENVIRONMENTAL	HVAC, DAYLIGHT
LEGAL » SAFETY	



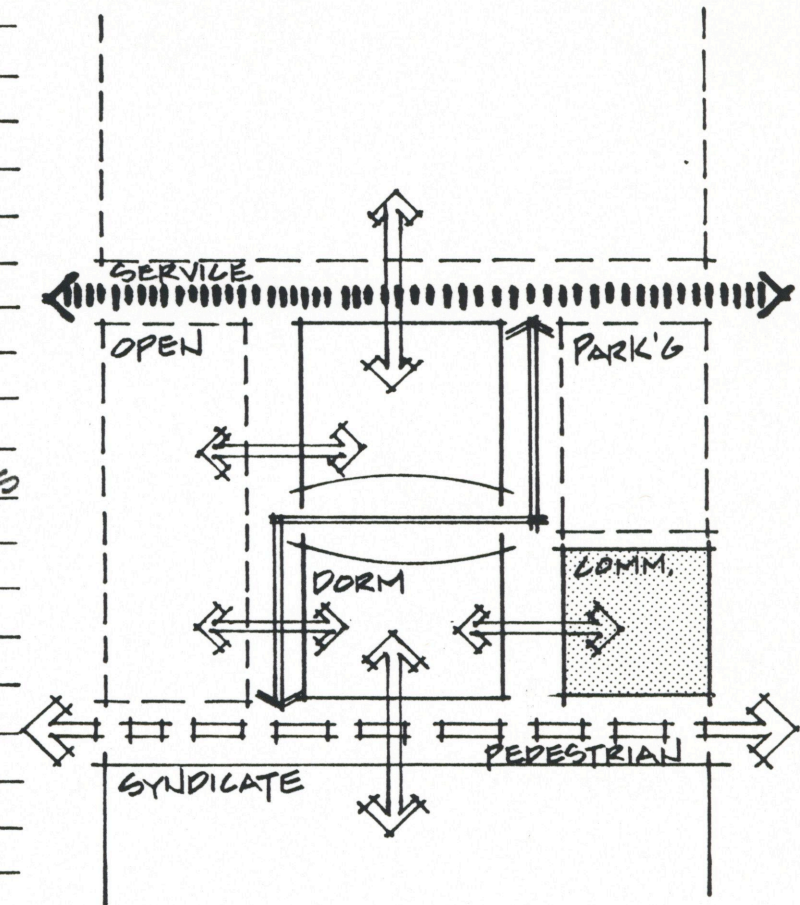
FUNCTIONAL RELATIONSHIPS

ZONE	HOUSING
DESCRIPTION	GREEN BELT "OPEN"
NO. OF USERS	
ACTIVITIES	JOGGING BIKE RIDING PICNIC KITE FLYING FRISBEE
CONSIDERATIONS	LARGE OPEN SPACE HARD & SOFT AREAS
EQUIPMENT	SPRINKLER SYSTEM LIGHTS
AREA REQUIRED	
FLEXIBILITY	
ENVIRONMENTAL	
LEGAL » SAFETY	



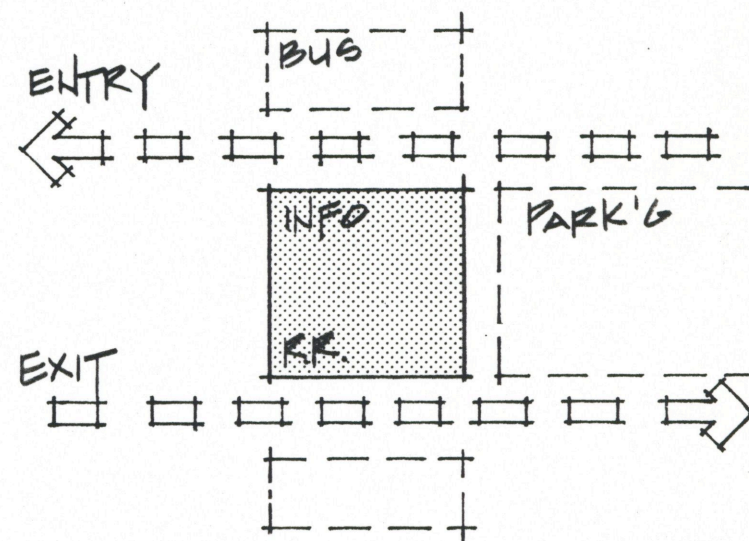
FUNCTIONAL RELATIONSHIPS

ZONE	HOUSING
DESCRIPTION	COMMUNITY
NO. OF USERS	100
ACTIVITIES	SAND VOLLEYBALL SWIMMING TENNIS TOT-LOT
CONSIDERATIONS	ADJACENT TO DORMS SECURE FROM PUBLIC PRIVACY
EQUIPMENT	TABLE & CHAIRS BBQ PIT POOL CLEANING EQ.
AREA REQUIRED	
FLEXIBILITY	
ENVIRONMENTAL	SHADED AREA
LEGAL » SAFETY	



FUNCTIONAL RELATIONSHIPS

ZONE	PUBLIC
DESCRIPTION	INFORMATION CENTER AND PUBLIC RESTROOMS
NO. OF USERS	2-3 MAX.
ACTIVITIES	SITE DIRECTORY CIRCULATION OF INFOR- MATION
CONSIDERATIONS	POINTS OF ENTRY TO SITE, START OF PRO- GRESSION "CIRCULATION"
EQUIPMENT	SOAP DISPENSERS HAND DRYERS MIRROR, PAPER DISP.
AREA REQUIRED	800 SF
FLEXIBILITY	
ENVIRONMENTAL	HYAL, LIMITED DAYLIGHT
LEGAL » SAFETY	

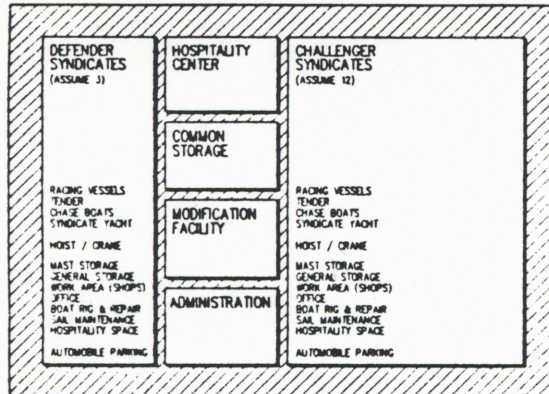


FUNCTIONAL RELATIONSHIPS

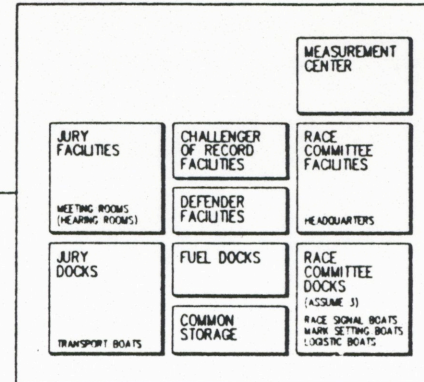
RACE

HOUSING
DISPERSED OR GROUPED
(ASSUME 800 TO 1200 PERSONS)

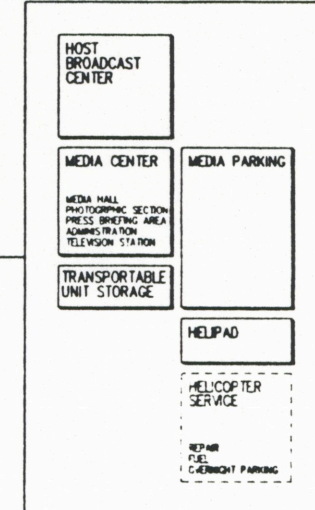
SYNDICATES



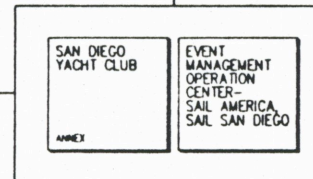
OFFICIALS



MEDIA

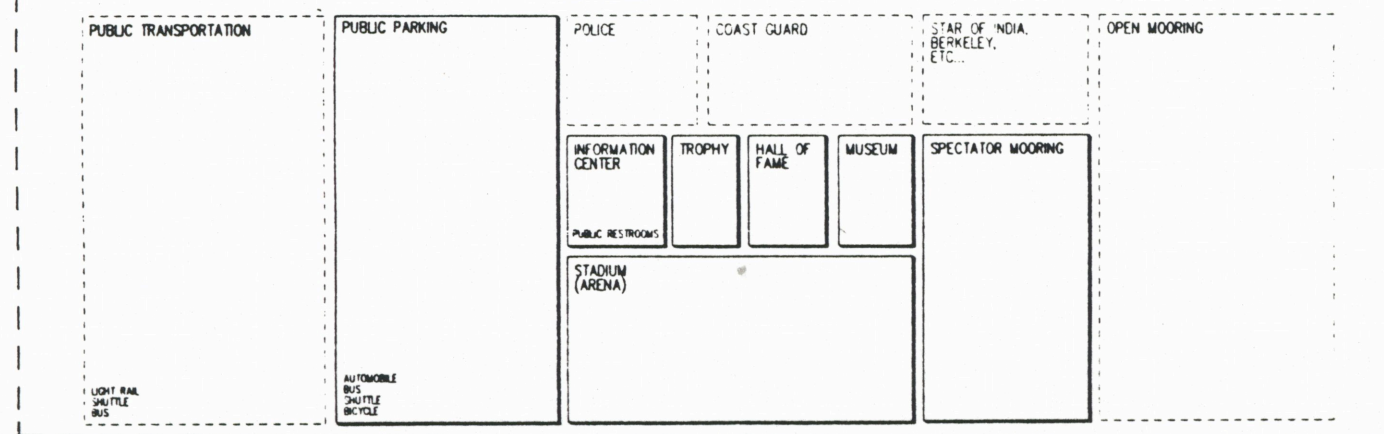


ADMINISTRATION



PUBLIC

ACTIVITIES



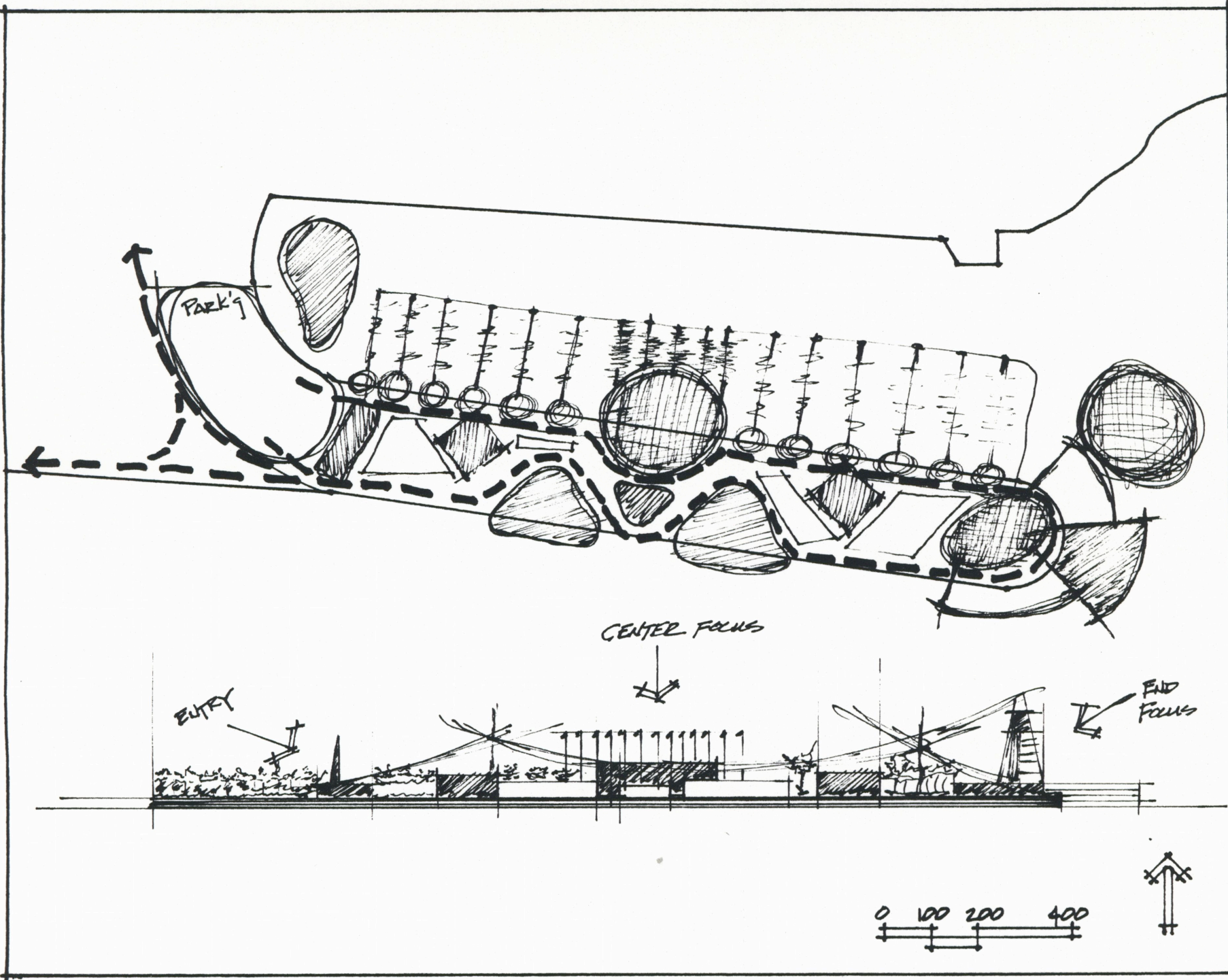
PROGRAM SUMMARY

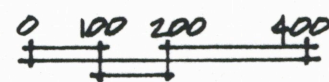
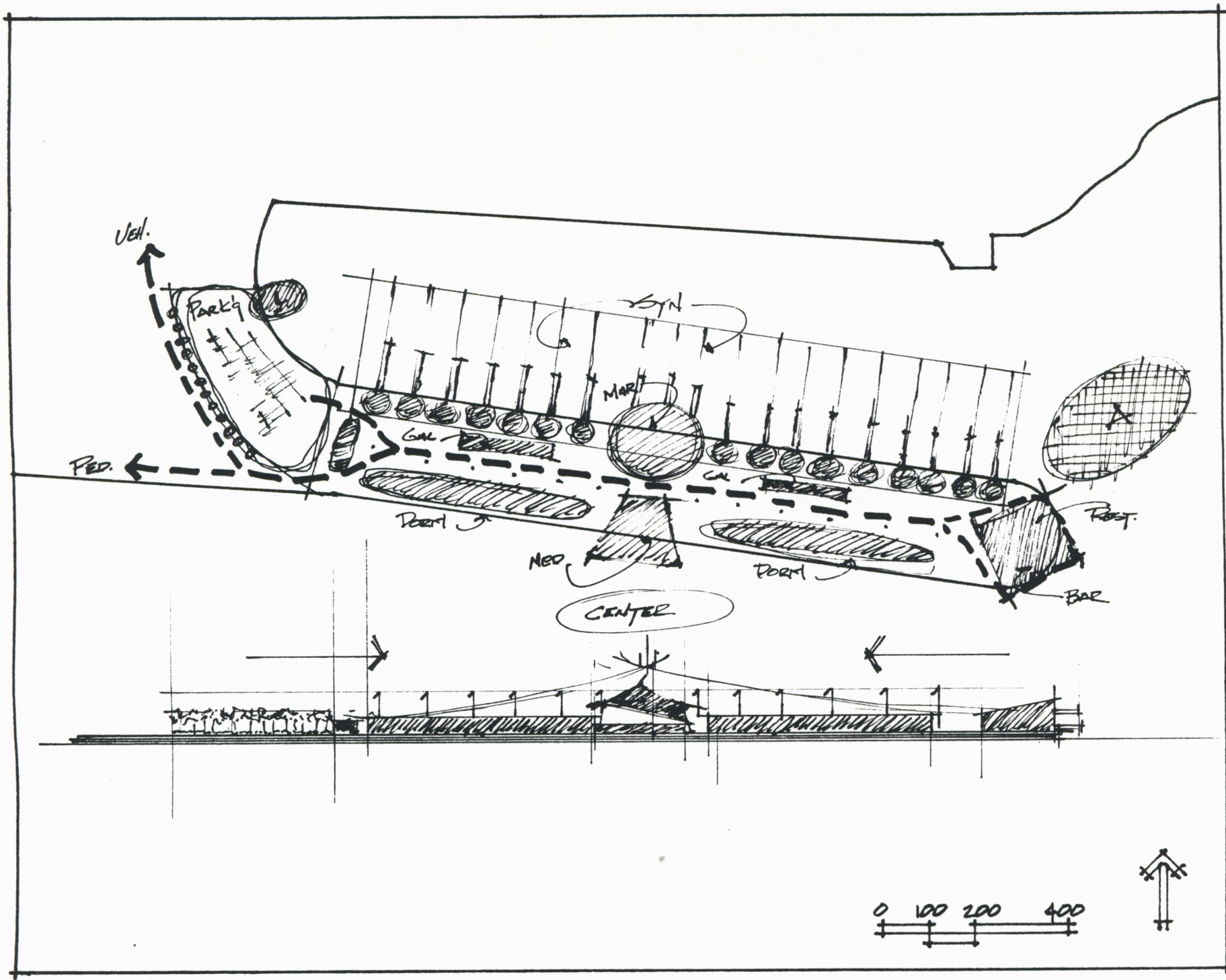
Total #

SITE TOTAL # 784,000
28.2 ACRES

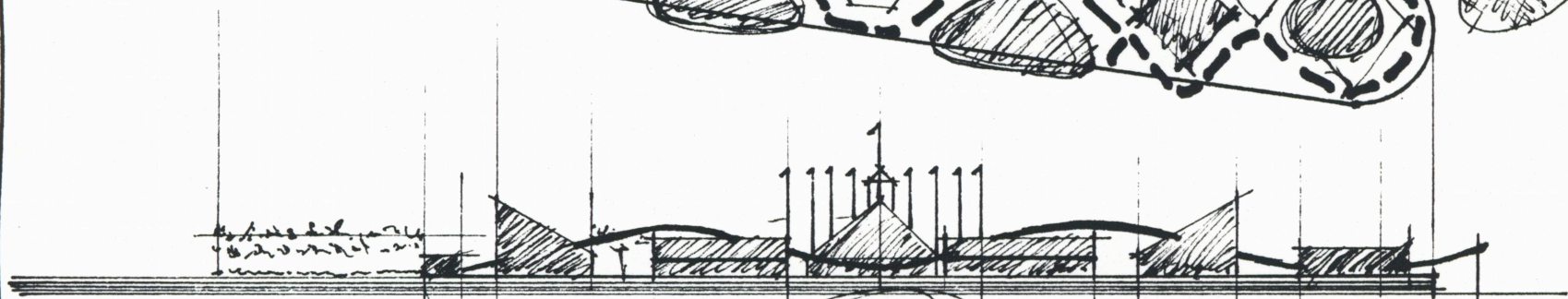
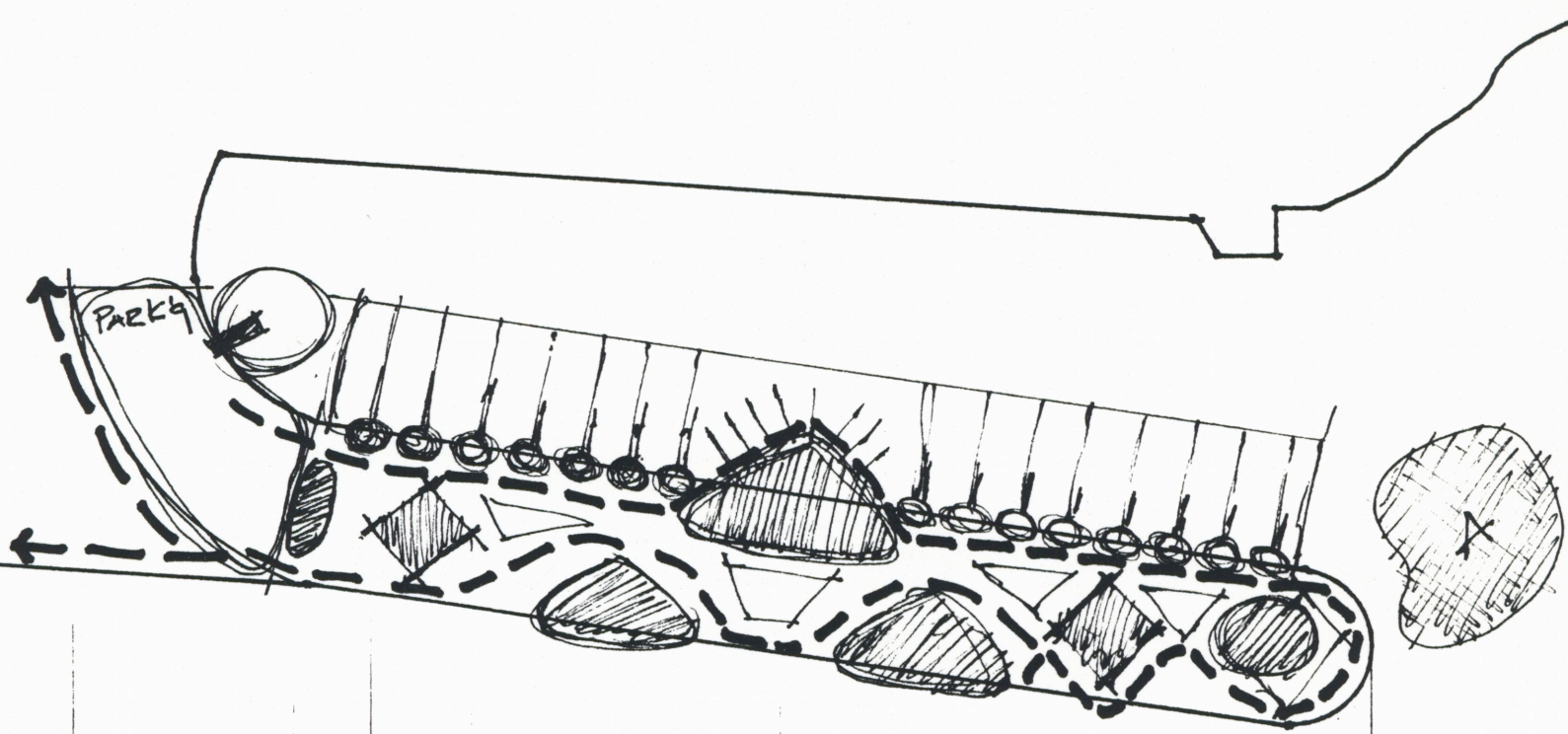
SYNDICATE (17)	357,000
MEDIC CENTER	13,684
PHOTOGRAPHIC CENTER	2,875
ADMINISTRATION	3,500
PRESS BRIEFING CENTER	3,000
HELIPAD (2)	5,000
RESTAURANT	5,000
CLUB HOUSE	3,000
BAR/NIGHT CLUB	3,500
DORMITORIES	100,000
INFORMATION/RESTROOM	1,500
DORM PARKING	45,000
PUBLIC PARKING	150,000
5% SERVICE	249,280
<u>TOTAL</u>	<u>621,039</u>

PROGRAM

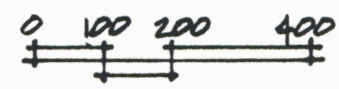


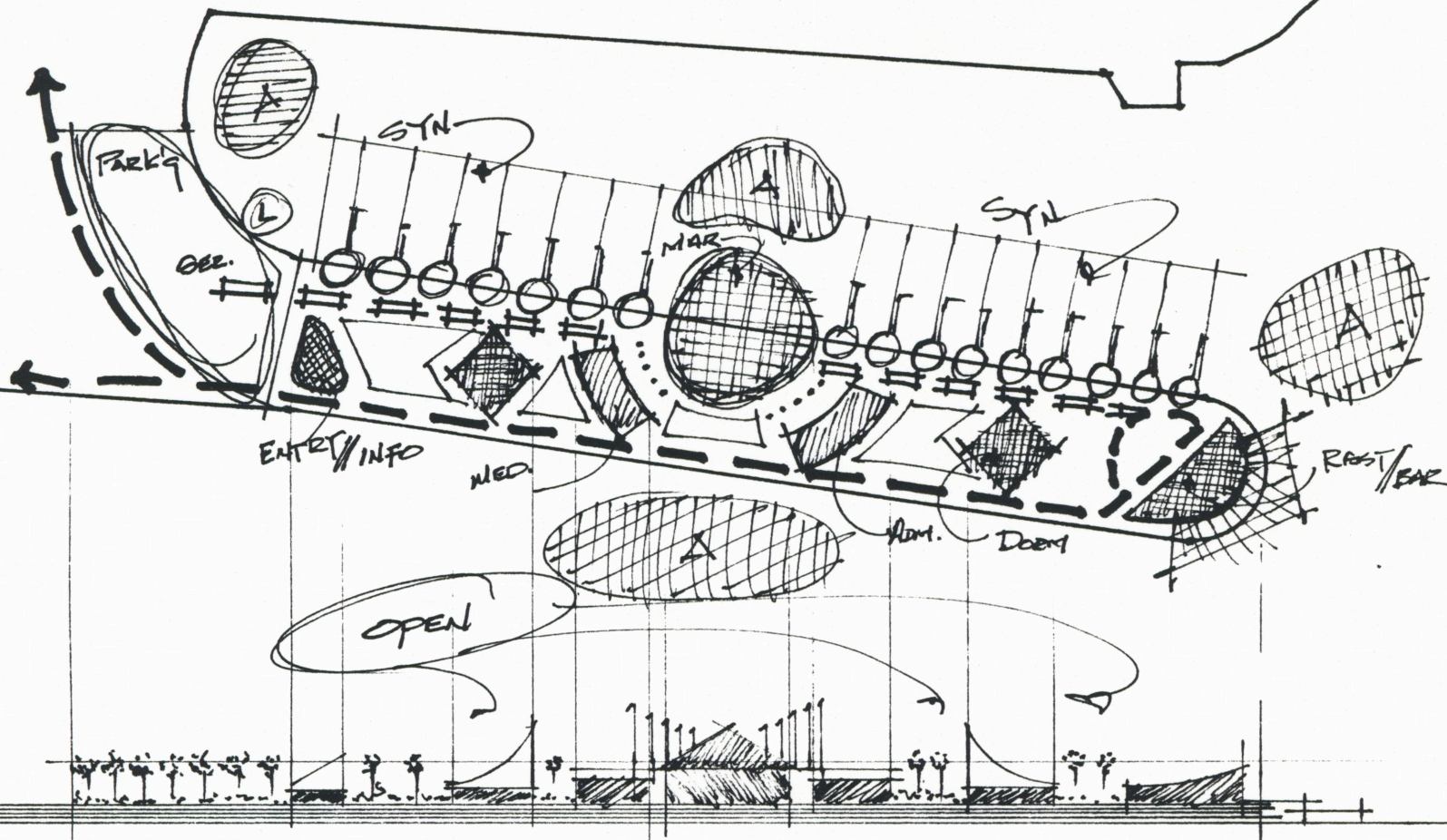


DESIGN



EQUAL
BALANCE.





DESIGN

65

Public Recreation Uses

Land Use Objectives & Criteria

Parks and recreational activities on tidelands should:

- provide a variety of carefully selected active and passive recreational facilities suitable for all age groups throughout all seasons of the year.
- enhance the marine, natural resource, and man-made recreational assets of San Diego Bay and make them available to the public.

Master Plan Interpretation

A growing population, greater discretionary incomes and more leisure time all contribute significantly to the increasing demand for both active and passive outdoor recreational opportunities. The public recreation opportunities developed on tidelands by the Port District along with the commercial recreation opportunities developed by private investment provide a balanced recreation resource for San Diego Bay. When thoughtfully planned, both public recreation developments and commercial recreational developments benefit from each other as off-site improvements, although as a matter of planning policy, commercial activities within public recreation areas will be limited. Recreational areas must be of the appropriate type and size to be efficiently developed, administered and maintained by the Port District at a reasonable cost. This Plan places primary emphasis on the development of public facilities for marine oriented recreational activities for the purposes of fishing, boating, beach use, walking and driving for pleasure, nature observation, picnicking, bicycling and viewing.

Recreation Area/Open Space is a category illustrated on the Land and Water Use Element Map to portray a wide array of active and passive recreational areas allocated around the bay. More specific information on public recreational areas is provided at the Planning District level under the following use categories.



Park is a use category designating landscaped, urban type recreational developments and amenities. Users are generally drawn from the region so that access to the site needs to link with regional and statewide roadways and provide adequate traffic facilities to handle large volumes of traffic and peak use demands. Parks encourage and accommodate public access to the interface zone of land and water. Recreational facilities frequently associated with parks include public fishing piers, boat launching ramps, beaches, historic features, vista areas, scenic roads, bicycle and pedestrian trails.



Promenade indicates the shoreline pedestrian promenade-bicycle route that is to be improved with landscaping, street fixtures and sitting areas. Many short trips, especially recreation related, can involve walking or bicycling rather than motorized transportation.

There are many assumed benefits of walking and bicycling; it is inexpensive, exerts no adverse impact on the environment, contributes to the physical well-being of the individual, and affords an unfettered opportunity to enjoy the amenities of San Diego Bay.

Pedestrian and bicycle facilities located on tidelands should: insure physical access to the water's edge unless safety, security or compatibility reasons negate; be accessible to parking and mass transit facilities; and link appropriate portions of the waterfront for continuous longitudinal access. A variety of route locations is encouraged to extend the pedestrian and bike environment through parks, commercial development and by the working port areas. Special provision for the handicapped shall conform to California State Law.

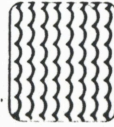


Open Space provides amenities contributing to a more satisfying and stimulating environment. These areas include landscaped traffic interchange and median strips, and isolated narrow and irregular shoreline areas where use and development potential is severely

limited.



Golf Course is used in Planning District 6 to illustrate this 98-acre land allocation. The continuation of this use is anticipated for the duration of the planning period.



Open Bay is a category allocated to water areas adjoining shoreline recreational areas, the boat launching ramp, fishing pier, vista areas and other public recreational facilities where the need for open water is related to the proper function of the shoreline activity. Multiple use of open bay water areas for recreational and for natural habitat purposes is possible under this use category designation.



Boat Launching Ramp, indicated by symbols on the Planning Maps, provides facilities for launching thousands of trailerable pleasure craft throughout the year for purposes of boating, fishing, regattas, and water skiing. The requirements for new or expanded launching ramps need to be carefully considered since boat access areas and parking area for both car and boat trailer consume large land areas. While existing boat launching ramps are to continue operation during the planning period, alternatives other than providing new launching areas should be considered due to the high land consumption involved. Dry stack storage, which accommodates trailerable size boats, is proposed in Planning District 6.



Public Fishing Pier areas include the pier structure, necessary land support area adequate for parking and access, and the surrounding water area. Boating activities near the pier which may interfere with fishing is discouraged. Commercial activities relating to food and beverage, and bait and tackle sales and rental are generally associated with the activity. While pier site selections should be based on a number of criteria, including fish species surveys, fish habitat or artificial reef-like improvements are frequently desirable. Three existing piers are used by fishermen at all hours of the day and night currently. Three more piers are recommended in Planning Districts 2, 3 and 6. Fishing piers are indicated by symbol on the Land and Water Use Maps.



Public Access has been highlighted by symbol on the Plan maps for public recreational areas. The development of these physical access ways is only one of the four access categories established in this Plan and discussed in Section III of this document.



Vista Areas include points of natural visual beauty, photo vantage points, and other panoramas. It is the intent of this Plan to guide the arrangement of development on those sites to preserve and enhance such vista points. Major vista areas are indicated by symbol on the Plan maps.

Public Facilities

Land Use Objectives & Criteria

Public facilities on tidelands should:

- be located so as to not adversely affect adjacent properties and be designed so that the architectural theme is in harmony with the design theme of the Planning District.
- be provided for in advance of need.
- provide efficient and economical locations for emergency services along with up-to-date equipment and well trained personnel adequate to provide protection of life and property.
- contribute to a coordinated system of functional streets necessary for the safe, efficient and economical movement of people and goods within and through the tidelands.

Master Plan Interpretation

Public facilities are provided in response to those community needs that are related to factors of public health, safety and general welfare. As used in the Port Master Plan, the public facilities category includes both services and physical plant developments. The legends of the two Master Plan Maps and the nine Precise Plan Maps contain allocations of land and water, generally indicated by symbols, to portray numerous public facilities.



Harbor Services is a land use category used in the Precise Plan Map that identifies areas devoted to maritime services and harbor regulatory activities of the Port District.



Port Administration is proposed to continue at the present location on Pacific Highway and Sassafras Street. Additional space in the building which is in excess of Port District needs could be utilized by municipal public service agencies having limited public contacts, or for offices and perhaps as a computer center for air-oriented commercial uses. Some Port District management functions will continue at the airport, the marine terminals and on Shelter Island.



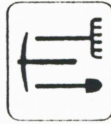
Harbor Police stations, indicated by symbols, are located so as to provide key sites for rendering assistance as required in San Diego Bay and for monitoring the bay entrances, waterborne circulation corridors, anchorages and berthing areas. Harbor Police Officers patrol assigned harbor or tideland areas by boat, vehicle and foot for: the preservation of order; enforcement of laws and ordinances; detection and prevention of crime; fire suppression and the protection of life and property; traffic control and law enforcement support for airport screening procedures; provision of information and assistance to the public; and such other duties as may be assigned. In the course of these duties, the officer is empowered to issue citations, make arrests, and appear in court. The existing station is to remain at the tip of Shelter Island, and a new Harbor Police station is proposed to be located so as to provide an overview of the proposed second entrance and most of the open water areas in the South Bay, if and when such a project is built by the Federal Government. Stations are allocated in Planning Districts 1 and 7.



Fireboat Stations, manned by Harbor Police, provide bases for waterborne fire fighting capabilities and routine police patrols centrally located to provide quick response travel time to the vessels and berthing areas located in San Diego Bay. Station locations are illustrated by symbol on the Master Plan Land and Water Use Map and given more detailed locations in the Precise Plans. Stations are allocated in the northern, middle and southern portions of the bay.



Fire Stations are shown on the maps at their existing locations on tidelands at the airport and in National City. These services are generally administered by local government units other than the Port District. No new use allocations are proposed for tidelands.



Maintenance Yard, an existing Port District facility located near the Tenth Avenue Marine Terminal, is seen as adequate during the planning period.



Comfort Stations are allocated throughout the bay area, located in public use areas primarily consisting of parks, promenades and plazas. In total numbers, comfort stations may be the most frequently built structures for public use on Port District tidelands. Comfort stations call for attention to location and to a design responding to heavy public use and, unfortunately, accompanying vandalism problems. The structures need to be easy to identify, pleasing in appearance, reflect compatibility with surrounding architectural features, safe, well lighted, easy to maintain and keep sanitary. Many comfort stations provide small storage and maintenance-related space to better accommodate grounds keeping and maintenance functions. More precise locations are shown on the Precise Plan Maps.



US Customs and immigration facilities, although not functions administered by the Port District, are shown on the Master Plan Circulation/Navigation Map and on the Precise Plan Maps due to their public service nature and usual association with international transportation terminals. Customs areas are allocated at the air terminal, the general aviation facilities, and at marine terminals for cargo inspection and cruise ship movements. Customs services are available on call at several locations around the bay. It is anticipated that another U. S. Customs facility may be needed in the South Bay if and when a second entrance is completed.



US Coast Guard designate federal activities for three Coast Guard mission areas centered on the U. S. Government owned land at the station on Harbor Drive. Each of which performs different functions in the Port. The U. S. Coast Guard Captain of the Port and Officer-in-Charge of Marine Inspection are co-located at the Marine Safety Office. This branch of the service works closely with many facets of the marine community. The Officer-in-Charge of Inspection is charged with the duties of vessel inspection and certification, documentation, casualty investigation and licensing of marine industry personnel. The Captain of the Port is responsible for assuring overall safety and security in the Port and promoting marine environmental quality, through enforcement of applicable federal laws and regulations. Facilities which handle certain materials designated as dangerous cargoes by federal regulations must meet strict standards enforced by the U. S. Coast Guard and undergo periodic inspections. The U. S. Coast Guard is directly involved in improvement projects relating to navigable waters, particularly as regards aids to navigation, dredging and ocean dumping.

The Coast Guard Group/Air Station is a separate command, located adjacent to the Marine Safety Office. This unit is primarily responsible for the mission areas of Search and Rescue, Enforcement of Laws and Treaties, and Aids to Navigation. The Air Station helicopter pad is restricted to use by government aircraft.

In addition to the three mentioned Coast Guard functions, there is also a Boating Safety Detachment located on land leased from the Port District in Planning District 1.

Circulation and Navigation System

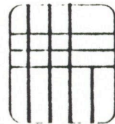
The Circulation/Navigation Element Map graphically indicates the interdependence of three major modes of transportation dealing with movement on land, on water, and in the air. The provision of adequate access to and circulation within the San Diego Bay area is a key element in the success of economic activities, of the viability of public services and amenities, and the preservation of the area's environmental setting. The various modes of transport must be coordinated not only to the various land and water uses they support, but to each other to avoid incompatibilities, congestion, hazardous movements and unnecessary expenditures.

Land-Based Transportation System

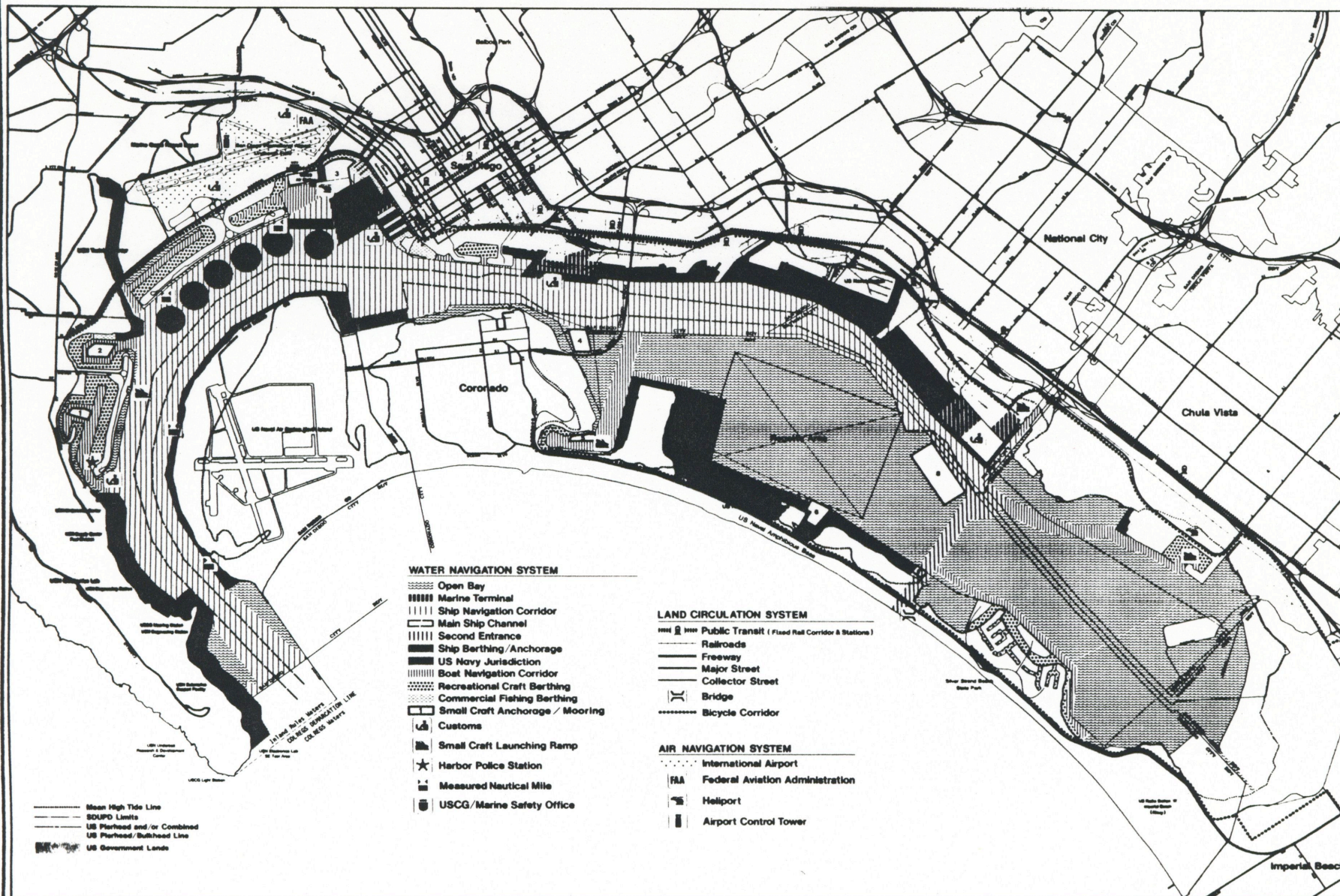
The railroads and the regional highway system provide the land-based transportation network for the movement of people and goods in the region, and to the tidelands. Railroads, freeways, expressways, regionally significant arterials, local streets, and pathways provide travel modes for pedestrians, bicyclists, automobiles, fixed rail transit, bus transit, and the local and interregional trucking industry involved in work and recreation related trips. Current efforts directed toward maintaining the region's air quality and conserving energy promote an efficient movement of people and goods on a safe, complete and uncongested regional highway and rail system. The Circulation and Navigation Element Map illustrates a coordinated land-based transportation system that will continue to involve the Port District, the cities, and the regional transportation planning agency.



Regionally Significant Arterials connect tideland areas with inter-state, state and local transportation networks. The most direct involvement of the Port District in roadway development is in the provision and maintenance of bridges, arterial roads, collector streets, local streets, and the provision of adequate parking facilities to tideland developments. Proposed extension, relocation or modification to regionally significant arterials which are located on tidelands include: the modification of Harbor Drive between Hawthorn and Market and the relocation of Harbor Drive between Market and Fifth Avenue, both in San Diego; and a new entrance to the airport, subject to negotiations with the U. S. Navy, linking Washington Street and the Lindbergh Field terminal. Expenditure of Port District monies is anticipated in the construction of a bridge to extend Tidelands Avenue over the Sweetwater Flood Control Channel at some as yet undetermined future time. The proposed second entrance bridge is the responsibility of the State Highway Department and the U. S. Army Corps of Engineers.



Local Streets and Parking becomes a primary control of land use in the single mode circulation system, such as in the case of the automobile in Southern California. The location, type and amount of parking has a significant effect upon the planning area. Provision



CIRCULATION/NAVIGATION ELEMENT

- 46a -

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ZONING

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must be made to accommodate nighttime storage and daytime space demands appropriate to the size and type of traffic generators, shopping customs, habits of parking, and rate of turnover. Preliminary planning activities dealing with the possible expansion of public facilities or the renewal, extension or modification of private lease agreements are to contain provision for automobile storage.

It is the intent of this Plan to seek a reduction in the total amount of land devoted to under-utilized parking lots. Emphasis is to be placed on the development of additional public parking facilities where there is a current deficiency. When the cyclical nature of an economic activity or a public recreational activity creates peak demands at different times, the joint use of the available leased parking space is encouraged among tenants.

Additional public parking lots within close proximity to the shoreline are to be considered suitable activities for waterside locations only if the use of the site will, in addition to providing needed parking space, (1) assist in maintaining vistas, and (2) will provide public access to the bay in an appropriately landscaped setting. Parking structures are not generally considered appropriate for waterside sites.

Roadway improvements will continue the maintenance of on-street parking standards at an eight-foot width for commercial areas and ten-foot width for industrial streets. Traffic lanes at 12- and 15-foot widths for commercial and industrial streets, respectively, are to be continued. Parking facilities in sufficient quantity and located within close proximity to the activity they serve are stressed. As a guideline, parking ratios of one stall for every three seats for restaurants and other eating and drinking establishments, and five stalls for every 1,000 square feet of general commercial activity is encouraged. Parking needs for multiple use complexes need evaluation on a case-by-case basis.



Railroad service is necessary for port and port related operations and development. Depending on the type of port and industrial operation, there should be ample nearby rail storage facilities, easy access for switching rail cars to and from the marine terminal or industrial area, and suitable rail trackage within the area to interface the movement of cargoes between ship and land carrier.

The port and marine related industrial developments on San Diego Bay are served by a transcontinental rail carrier, the Atchison Topeka and Santa Fe Railway (AT&SF). The AT&SF links San Diego to Los Angeles with freight and AMTRAK passenger service. A line haul carrier, the San Diego and Arizona Eastern Railway (SD&AE), a subsidiary of the Southern Pacific Company, has temporarily stopped service to the east along its line pending repairs to portions of the track damaged by a hurricane associated storm in 1976. The Metropolitan Transit Development Board (MTDB) has recently acquired a portion of the SD&AE rail line, and freight service is to be reinstated by a private operator under contract to MTDB. Reestablishment of this second rail link to the east, and the maintenance and improvement of rail freight service and facilities is essential in providing a well-balanced rail service to the port area.

Rail spurs serving the National City Terminal require expansion in a small area of the container yard. Rail service needs will require monitoring and evaluation in the future. Increased use at the Tenth Avenue Marine Terminal has necessitated that the switching yard adjacent to the bulkloader be expanded, particularly to handle "unit trains" for loading that could reach 40,000 tons per vessel. Consideration in planning transportation should also be given to the continued increased size of railroad cars and truck trailers.



Public Transit, consisting of the proposed bus transit system and the proposed fixed rail transit corridor with station locations, is delineated on the Circulation/Navigation Element Map. In the San Diego region, the planning, construction and operation of the proposed fixed rail line is under the direction of the Metropolitan Transit Development Board (MTDB). The planning and coordination of bus service involves the Comprehensive Planning Organization and bus operations involve North County, San Diego, National City and Chula Vista transit operators. Interregional, frequently scheduled bus service is provided for most of the tideland areas, including buses with bicycle racks for transbay access. It is the intent of this Plan to encourage the provision or extension of the public transit system into the industrial, commercial and public recreational areas of the tidelands; and, where feasible, to encourage public transit service as a substitute for parking at tideland facilities. Joint utilization of the San Diego and Arizona Eastern Railway right-of-way for both public transit and freight service has been endorsed by the Board of Port Commissioners.



Pedestrian and Bicycle Routes are given a high development priority in this Plan. More specific information is provided in the Public Recreation section.

The Bay Bicycle Route, which carries out regional planning policies emphasizing the commuter-work trip, involves the five cities around the bay, the Port District, and CALTRANS. The route is illustrated on the Circulation/Navigation Element Map. It is the intent of the Port District to work with other jurisdictions to complete the perimeter route. Bicycle facilities linking the Bay Route onto tidelands are encouraged to emphasize the recreation-related type trip.

Aviation-Based Transportation System



Lindbergh Field is one of the airport systems incorporated into the aviation element of the Regional Transportation Plan. The Port District is the operator of Lindbergh Field, San Diego's "downtown" international airport, which is convenient, accessible, and has a wide array of commercial and charter flights.

Following an exhaustive study and hearing process by CPD relative to the subject of airport relocation, Lindbergh Field has been designated as the site most

suitable to serve the commercial air transportation needs of the region through 1995. It is anticipated that some minor modifications will be made in the taxiways and parking aprons, lighting systems, rehabilitation to the East Terminal and blast fence, but that the main runway will probably remain substantially unchanged. This Plan proposes the development of improved access to the terminals from the east which involves improvements to the local arterial system, localized improvements to the Interstate highway system, improved access within the airport boundaries, and negotiation for property controlled by the military.



Helicopter designations are indicated on the Circulation/Navigation Element Map; one at the Coast Guard facility and the other in the general vicinity of the Rohr plant in Chula Vista. Additional heliports should be considered in waterfront locations if sufficient public necessity is demonstrated in the future. The heliports require small areas which frequently can benefit from being located close to major work centers. A location on the waterfront can help alleviate some of the noise problems by avoiding developed areas and by using a more desirable approach over the water.

Water-Based Transportation System



Ship Navigation Corridor, illustrated with its functional linkages to anchorages and berthings on the Circulation/Navigation Element Map, provides adequate draft for ship maneuverability, safe transit and access to marine terminals, marine related industrial areas and military bases. Ship corridors must be maintained at adequate widths and depths to eliminate hazardous conditions in the harbor among ships, small craft and structures; to prohibit lost time and delays from groundings and to avoid environmental damage caused by maritime related accidents.

Incompatible aquatic activities, such as to swim, bathe, water ski, or use a surfboard or paddleboard in marked ship and boat channels is prohibited (UPD Code 8.27).

The Harbor and Channel Improvements project first undertaken by the United States in San Diego Harbor was authorized by the River and Harbor Act of 30 August 1852. Subsequent improvements were authorized by a succession of acts dating from March 3, 1875, to October 17, 1940, and March 2, 1945. The Federal project has provided for the protection of the harbor entrance with the 7,500-foot-long rubble mound Zuniga Jetty, a major entrance channel 42 feet deep, a central bay channel to a depth of 40 feet, a South Bay channel depth of 35 feet, and anchorage and turning basins ranging between 42 and 35 feet in depth. Since channel dredging operations require a substantial expenditure of public funds, it is the intent of this Plan to maintain deep draft berthing and marine related industrial sites immediately adjacent to the ship navigation channel. Marine related industrial sites, including marine terminals, are dependent upon this deep water.



Main Ship Channel, recently improved, provides a range of depths and widths for ship movement. The channel provides a depth of 42 feet mean lower low water (M.L.L.W.) and a width varying from 600 feet to 2000 feet, from the entrance to the U. S. Navy Aircraft Carrier Berth; then a 40-foot MLLW depth and varying widths from 600 feet to 1900 feet to the Tenth Avenue Marine Terminal; and continues at a depth of 35 feet and a width varying from 600 feet to 1350 feet down the bay to the National City Marine Terminal. Naval vessels of sizes up to cruisers and Essex class carriers (unloaded) can sail as far south as the Naval Station (NAVSTA) San Diego. The Coronado Bridge has three major spans over the bay, affecting navigation. Two of the spans are over the navigation channel, each with a vertical clearance of 195 feet M.H.W. and a clear width of 600 feet. The last span located at the pierhead line, provides vertical clearance of 175 feet at M.H.W. and a clear width of 500 feet. Only minor maintenance dredging has been needed in the past.

While existing ship channel depths and widths appear adequate for the foreseeable planning period, growing ship size is expected to continue placing greater demand on the need for deeper channels and expanded terminal areas in the long term future. As the draft of vessels using the National City Marine Terminal increases, there may be a requirement to provide a minimum channel depth of 40 feet all the way to the Sweetwater Channel and a renewed interest in a second entrance. Ship channels are navigable waters of national interest, in which improvements generally involve the administrative functions of the U. S. Army Corps of Engineers, Congressional approval and Federal funding.



Second Entrance to San Diego Bay is a project with a long history of public debate and interest, some of which goes back to the 1930's. In 1963 the U. S. Army Corps of Engineers, Los Angeles District, made a reconnaissance study of a second entrance to San Diego Bay. One plan was based on constructing a ship channel from the bay southerly to the Tia Juana River Valley and thence westerly to the ocean. Another plan called for the entrance to be cut through the Silver Strand.

Based on federal criteria, the Tia Juana River Valley route proved to be economically not justified. The Silver Strand alternative, however, appeared to have a more favorable benefit versus cost ratio and warranted further study.

In 1966 further studies for an entrance through the Strand including a model study were authorized. Model tests completed in 1968 at the Waterways Experiment Station showed that flushing characteristics of the bay would be improved with a second entrance. The model was of the fixed-bed type and did not lend itself to the study of littoral sand movement resulting from wave and current action. Again a number of alternate plans were considered, all based on commercial navigation and some Navy requirements. The most favorable turned out to be a 35-foot channel, 400 feet wide, crossed by a four-lane bridge with 154 feet of vertical clearance above Mean High Tide. This plan, however, also did not generate a favorable benefit versus cost ratio based on commercial and Navy benefits, primarily due to the substantial costs involved in the construction of the high bridge and its long approaches.

Subsequently, another alternative was suggested which would provide an entrance with a greatly diminished channel and reduced overhead bridge clearance. It was intended to accommodate principally recreational craft, the smaller Naval vessels, tuna boats and sportfishing vessels. cursory examinations indicated that a favorable benefit versus cost ratio might be developed. Where recreational benefits are considered in a project, local interests are required to pay a correspondingly greater share of the total cost. If the second entrance were totally dependent on recreational benefits, local participation may be anticipated to amount to 50% of the cost of all navigation improvements and possibly all of the bridge costs. Owing to environmental unknowns, this Federal project is quiescent at present.



Ship Anchorage area for ocean-going ships is primarily the area north of "B" Street Pier but does include all the navigable waters of the harbor except designated channels, cable and pipeline areas, the special anchorages, and the Naval Restricted Areas.

Vessels anchoring in portions of the harbor, other than the areas excepted in the above paragraph, shall leave a free passage for other craft and shall not unreasonably obstruct the approaches to the wharves in the harbor.

Vessels are to comply with marine sanitation requirements and when anchored in undesignated anchorage areas, are to observe anchor lighting requirements.

The safety and security of any vessel berthed or at anchor within San Diego Bay is the responsibility of the owner or operator. Every owner or operator of a vessel has a responsibility to apprise themselves of weather conditions and storm warnings, and to take the necessary precautions to insure the safety of their vessel in the event of unusual tide and weather conditions.

(1) **Special Anchorage for US Government Vessels** - Shoreward of a line extending from Ballast Point Light approximately 351°30' to the shore end of the Quarantine Dock. This anchorage is reserved exclusively for vessels of the U. S. Government and for authorized harbor pilot boats. No other vessels may anchor in this area except by special permission obtained in advance from the Commandant, Eleventh Naval District, San Diego, California.

(2) **Nonanchorage Area**- A lane between San Diego and Coronado bounded on the east by a line extending southerly from a point 410 feet west of United States Bulkhead Line Station 458 on the San Diego side of the bay to a point 350 feet west of United States Bulkhead Line Station 522 on the Coronado side of the bay, and on the west by a line extending due north from the intersections of the west side of "E" Avenue with the south side of First Street, Coronado, and a line extending 225° from the intersection of the west side of Pacific Highway with the north side of Harbor Drive, San Diego. This area has submerged pipelines, power and communications cables. Vessels are not permitted to anchor in the area at any time.



Nautical Mile Markers, while occupying little area, are of some importance to the water navigation system and are shown on the Master Plan Circulation/Navigation Element Map. The Navy maintains markers on North Island for its ships. Markers installed and maintained by the Port District are located on Harbor Island.



Boat Navigation Corridors are those water areas delineated by navigational channel markers or by conventional waterborne traffic movements. Boat corridors are designated by their predominant traffic and their general physical characteristics (these channels are usually too shallow and too narrow to accommodate larger ships). Boat channels will be kept clear of encroaching water or land uses which would deter waterborne circulation. These channels serve the navigation system in a manner similar to that provided by streets in a land-based circulation system. Boat corridors in 1978 provided for a fleet of more than 4000 pleasure craft permanently moored on the waters of the bay and provided corridors from the public launching ramps that launched thousands of pleasure craft out of almost 33,000 registered boats in San Diego County. New boat navigation corridors will be required to serve new marina developments. Maintenance dredging and improvements to existing channels, as required, is to be conducted.



Small Craft Mooring and Anchorage Areas have been planned to facilitate the retention and orderly management and development of a variety of functional, aesthetically pleasing facilities in carefully selected sites. The intent of the plan is to prohibit long term permanent or semipermanent indiscriminate anchoring throughout the Bay in a manner so as not to interfere with short term uses of the bay for fishing, sailing, and other social and recreational activity, including the rafting of vessels. Long term anchoring and mooring shall be limited to eight designated anchorages under local control of the jurisdictional authority of the Port District, U. S. Navy, and State Department of Parks and Recreation. Long term users are encouraged to use marinas where there are secure moorings and shoreside support facilities which have been provided by private investors. Changes to Federal regulations pertaining to anchorages can be accomplished by complying with the established procedure which permits the new regulations to go into effect after publication in the Federal Register.

The use or development of the proposed anchorages shall be at the discretion of the U. S. Navy (A-6), the State Department of Parks and Recreation (A-7), and the Port district (A-1 to A-5 and A-8). In the Port District's anchorages, the actual operation of the anchorage shall be conducted by the Port District or under a lease agreement to other governmental agency or to a private operator. Port funds or possibly private development monies are to be expended for the planning, construction and regulation of anchorages and moorings for use by vessels which are solely or primarily used for commerce, navigation, fisheries and recreation. The use of bay water areas for residential use, involving living aboard vessels as a primary place of residence, is discouraged as a matter of policy in accordance with state law.

Improvements and the level of service in anchorages are functional but greatly reduced from those provided in marinas. Anchorages are not as secure as marinas for keeping vessels at mooring station, require more water area per vessel stored,

and do not have dockside utilities and access. Shoreside facilities for anchorages range widely, from natural shoreline to dinghy float, and may or may not include: dock and ramp; night lighting; potable water supply; disposal stations for trash, petroleum products and sewage; public telephone; limited automobile parking, and restrooms. The safety and security of vessels at anchor remain the responsibility of the vessel owner or operator who must keep apprised of weather conditions and storm warnings and take the necessary precautions to insure the safety of their vessels, other craft, and harbor improvements. The lower level of service and facilities in anchorages is frequently reflected in lower user fees and sometimes public subsidies.

In the Port District's jurisdiction, the primary basis for the management and regulation of intensively used anchorages will be by the establishment of a lease relationship with user fees and permits which specify duration of stay. Anchorages are to be made available to seaworthy, self-propelled vessels which are subject to periodic inspection that insures proper moorings, adequate fire fighting equipment, approved marine sanitation devices, and registration or documentation of vessel ownership. The management of anchorages is also to be conducted so as to maintain a program of flotsam and debris clean-up, regularly monitored water quality, and controls on overboard discharges.

The general locations of eight planned small craft anchorages are illustrated on the Circulation/Navigation Element Map and are identified in the following.

Anchorage A-1, the Shelter Island Yacht Basin Anchorage, contains about nine acres of water area. Approximately 20 vessels at single point anchoring can be accommodated. Use is by permit of Harbor Police for a period of less than 72 hours, within any seven day period, for vessels participating in marine events. No shore landing is proposed for this low intensity of use anchorage. Additional information about this anchorage is presented in Section IV, the Shelter Island Planning District.

Anchorage A-2, the Shelter Island Commercial Basin Anchorage, is proposed to be redeveloped with fore and aft moorings to provide for about 170 vessels in the 15 acre area. The redevelopment effort will strive to accommodate in A-2 all existing vessels there that meet the anchorage regulations. New shoreside support facilities of about 34,000 square feet are planned on the northeastern side of the shoreline. Section IV, Shelter Island Planning District, contains more information on this anchorage.

Anchorage A-3, Laurel Street Roadstead, discussed in more detail in Section IV, Centre City Embarcadero Planning District, provides about 20 acres of water area for 50 vessels at anchor on single mooring buoys. Shoreside support facilities are provided by the floats, ramps, and restrooms at the Embarcadero Crescent.

Anchorage A-4, Bay Bridge Roadstead Anchorage, contains two 24 acre water areas to provide for phased development. At completion, single point mooring buoys will provide space for about 70 vessels. The anchorage landing is to be developed as part of the Tidelands Park project. More information on the proposed anchorage is found in Section IV, Coronado Bayfront Planning District.

Anchorage A-5, Glorietta Bay, is a 3.8 acre federally designated anchorage. With fore and aft anchoring by vessels ground tackle, about 20 vessels can be accommodated. All of the moorings in the anchorage are reserved for short term use by cruising vessels. Anchorage use is by permit of Harbor Police for a period of time

up to 72 hours, within any seven day period. Section IV, Coronado Bayfront Planning District, contains more information about this anchorage.

Anchorage A-6, the Naval Amphibious Base (NAB) Anchorage, is proposed for an eight acre water area adjoining the NAB Marina. The Commanding Officer, NAB, Coronado, through his authorized representative, the NAB Marina Manager, shall have sole authority to assign, control and limit use of the area. Only small craft belonging to U. S. Navy personnel on active duty and retired service members shall be authorized to use the area. The landing site is at NAB Marina.

Anchorage A-7, Crown Cove Anchorage, is a 4.4 acre water area proposed to be developed with fore and aft moorings for approximately 30 vessels. Control over this anchorage and adjacent park area will be exercised by the California Department of Parks and Recreation under a lease agreement with the U. S. Navy and the Unified Port District, as a normal part of the Department's administration of Silver Strand State Beach. A dinghy landing site will be designated on the adjacent state beach and will have those shoreside facilities provided by the State Beach.

Anchorage A-8, Sweetwater Anchorage, contains 200 acres of water area and can provide for about 250 vessels, depending on size, at single swing point anchorage with vessels ground tackle. Anchoring use, however, shall be incremental, the first phase to provide for up to 100 vessels, with any additional 100 vessel increments to be subject to further public hearings and consultation with District member cities. The landing and shoreside support services for the anchorage will be at the existing National City Small Craft Launch Ramp. Section IV, National City Bayfront Precise Plan, contains more information about this anchorage.



Derelict Craft Storage provides space for holding abandoned or drifting small craft that become hazards to navigation in the bay. Disposal of impounded vessels is governed by State Law. Sites are provided within close proximity to berthing concentrations for the north bay and proposed as part of a potential boating development in the south portion of the bay.

Pollution Contingency Plans

The Federal Water Pollution Control Act (section 311[c][2]) provides for the preparation, publication, revision and amendment of a National Contingency Plan to protect the environment from the unplanned, sudden and usually accidental discharge of oil or hazardous substances that pose a threat to the public health or welfare. The National Plan calls for the establishment of a nationwide net of regional contingency plans within its framework. The San Diego Bay area is provided for in the O.S.C. Area Contingency Plan prepared and maintained by the U. S. Coast Guard, Office of the Captain of the Port, San Diego. This area includes the geographic area of San Diego County, San Clemente Island, and their coastal waters.

The main objective of the National Plan is to provide for a coordinated federal response capability at the scene of the discharge. The plan provides for a pattern of coordinated and integrated responses by departments and agencies of the Federal Government, promotes the coordination and direction of Federal and State response systems, and encourages the development of local governmental and private capabilities to handle such discharges. The State Operating Authority for oil spill cleanup is the California Department of Fish and Game, which is to have a spill contingency plan intended to aid the Federal O.S.C. in cleanup operations. Although Federal law has preempted State or local jurisdiction in some areas of pollution, State and local coordination and involvement in cleanup operations is encouraged by the Area Contingency Plan.

The Environmental Protection Agency has designated San Diego Bay waters less than 30 feet deep at mean low water as "no discharge" areas for sanitary waste. Discharge in areas with a depth greater than 30 feet is authorized only after treatment by an approved marine sanitation device.

While not part of the Federal plan, the Port of San Diego is involved in harbor maintenance, and removing navigation hazards and floating debris. The Port maintenance program includes the operation of a trash recovery vessel, nicknamed the "Alligator", which skims up floating debris from the harbor; and boat and car patrols by Harbor Police.

HARBOR ISLAND/LINDBERGH FIELD : Planning District 2

Precise Plan Concept

Planning District 2 embraces two different activities — the transportation hub of San Diego International Airport (Lindbergh Field) with its ancillary commercial and industrial activities, and Harbor Island with its public parks and tourist commercial orientation. Each serves an important function in the regional economy and, in some ways, they are associated together. Both have been intensely developed and are recognized as being stabilized for the future envisioned in the Master Plan.

Lindbergh Field is included in the Comprehensive Planning Organization's Regional Transportation Plan with the statement that it is "the site most suitable for serving the commercial air transportation needs of the San Diego region through 1995." The Master Plan retains Lindbergh Field in its present configuration, adding to the passenger terminal and making improvements in parking and access. Aviation related industries and commerce will also be retained.

Development on Harbor Island is expected to be completed with the expansion of an existing hotel, and the construction of the hotel and marina complex on the east basin. Only minor other changes are anticipated along Harbor Drive. From Harbor Island to the Coast Guard facility, planning concepts focus on providing a sense of entry into San Diego for travelers coming via Lindbergh Field and Harbor Drive, with activities and landscaped features that strengthen the image of San Diego as a pleasant place to visit. Considerable attention must be paid to long term improvements in general appearance of existing industrial uses, and the planned expansion of these uses.

Land and Water Use Allocations

The Harbor Island/Lindbergh Field Planning District contains an approximate total of 944 acres, consisting of about 764 acres of tidelands and 180 acres of submerged tidelands. Table 8 summarizes the land and water use allocations proposed in the Precise Plan. As in the Shelter Island Planning District, a significant portion of the area is already developed and is under long term lease commitment. The east end of the Harbor Island peninsula is vacant and thus offers development potential uncomplicated by the presence of structures or lease interest. A balanced allocation of use activities is provided within the major use categories of commercial, industrial, public recreation, and public facilities. The use allocation table, the Precise Plan Map, and the following text supplement the general plan guideline presented in the preceding part of this document.

HARBOR ISLAND/LINDBERGH FIELD: PLANNING DISTRICT 2

LAND	WATER		TOTAL ACRES	% OF TOTAL
COMMERCIAL				
Commercial Recreation	51.5	Recreational Boat Berthing	107.5	21
Airport Related Commercial	42.5			
INDUSTRIAL				
International Airport	409.1			62
Aviation Related	130.1			
Industrial Business Park	34.3	Specialized Berthing	12.1	
PUBLIC RECREATION				
Park	16.4	Open Bay	45.0	8
Promenade	2.3			
Open Space	7.5			
PUBLIC FACILITIES				
Harbor Services	1.2	Harbor Master Berthing	1.8	9
Streets	68.7	Boat Navigation Corridor	13.6	
TOTAL LAND	763.6	TOTAL WATER	180.0	
TOTAL LAND AND WATER				
			943.6	100

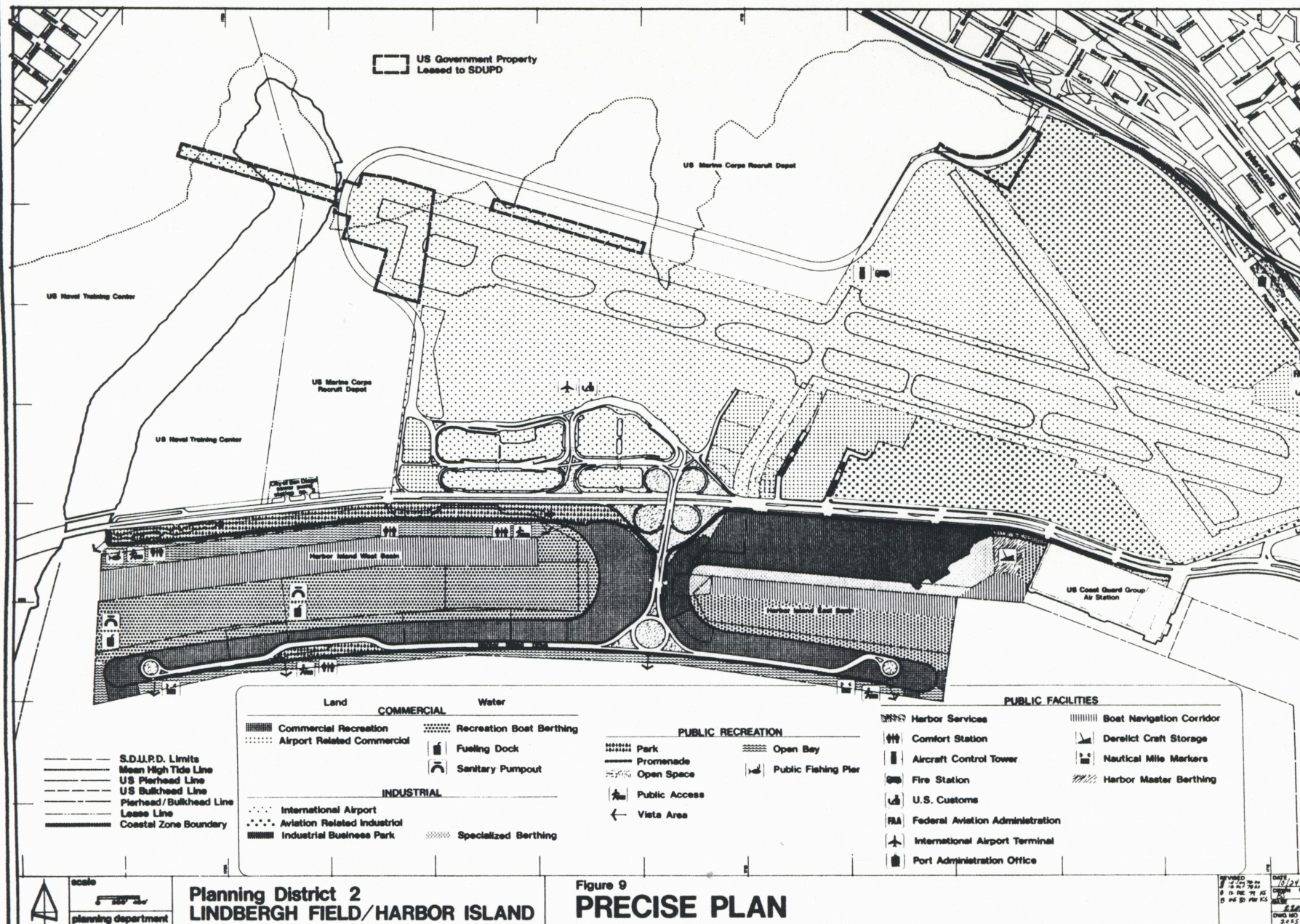
NOTE: Does not include:

- Leased Federal Land 22.5 Acres
- State Submerged Tidelands 32.1 Acres
- Leased Uplands 4.1 Acres

TABLE 8

scale	PRECISE PLAN	Date 11-10-78			
planning department	LAND AND WATER USE ALLOCATION	City	State	Base	No





Harbor Island/Lindbergh Field Planning Subareas

Planning District 2 has been divided into nine subareas to provide a more specific explanation of the intent of the Plan.

Spanish Landing Park

Spanish Landing Park, subarea 21, extends along the north bank of the Harbor Island West Basin and occupies 11.2 acres of land. Another 1.3 acres is designated for promenade in the form of a bicycle and pedestrian path. This area is completely developed except for the possibility of a fishing pier near the west end. Approximately one mile of public access to the shore is provided by this park. A historic marker located in the park commemorates Juan Rodriguez Cabrillo's discovery of San Diego Bay in 1542.

West Harbor Island

West Harbor Island, subarea 22, has been completely developed with commercial recreation uses such as hotels, restaurants, marinas, and marine related commercial business. No changes to this 37.7-acre commercial recreation area are anticipated.

East Harbor Island

Joining the existing restaurants which now occupy 4.2 acres of land and water at the east end of Harbor Island, subarea 23, will be two new hotels totaling 600 rooms, two restaurants, and two coffee shops on a currently vacant 9.5-acre site. The hotels are proposed as two towers with lower level ancillary structures, situated to afford maximum views and to allow views through to the water. The areas between the structures will be developed into a series of landscaped gardens and terraces. A marina of approximately 400 berths is recommended for the 23-acre Harbor Island basin directly adjacent to the hotel complex. Rock revetment shoreline protection is needed on approximately 2,500 linear feet of exposed bank to prevent additional bank erosion and to avoid a buildup of material within the dredged boat basin. The proposed shoreline alignment will follow the existing top-of-bank except where abrupt changes in existing alignment will require a smoother transition.

Park, promenade and open space are reserved for the bay side of Harbor Island and the large traffic circles on Harbor Island Drive. A 1-1/3 mile pedestrian/bicycle path provides excellent coastal access along the island, and a small park (two acres) with leisure facilities and restrooms is located at the west end. Total area of the park, promenade and open space land is 11.8 acres (includes open space north of Harbor Drive).

East Basin Industrial

East of Harbor Island, subarea 24, is a tract of land leased by General Dynamics Corporation and Lockheed Ocean Laboratory for aerospace and oceanographic

research and development. These sites are recommended for eventual redevelopment into a light, marine related industrial/business park to include such activities as scientific laboratories, office space, marine oriented businesses and light manufacturing plants, with some ancillary storage and warehousing where necessary to the conduct of primary industrial activities.

The bicycle path extends along Harbor Drive north of the industrial site for about one mile, where it connects with the Embarcadero path. A small half-acre land parcel between General Dynamics and the U. S. Coast Guard Station will be divided between a Sea Scout Facility (shown as Commercial Recreation) and derelict craft storage space (shown as Harbor Services). Berthing or water area is allocated for all the above uses.

Aviation Related Industrial

Subareas 25 and 28 have long-term commitments to the existing aviation related industrial uses. Land leased by General Dynamics Convair on Pacific Highway, by Teledyne Ryan Aeronautical, and by Solar Turbines constitute the aviation related industrial areas of Planning District 2. Convair and Ryan manufacture and assemble aircraft components; Solar uses the strip of land along Laurel Street for employee parking. These uses will be continued.

Lindbergh Field

The Lindbergh Field subareas, 26 and 27, include the airport, runways, taxiways, aircraft parking aprons, control tower, passenger terminal, and public parking. It has been designated International Airport in the Master Plan and the primary uses would include the aforementioned. In addition, the uses typically included inside the terminal such as ticket sales, car rentals, air taxi, restaurants, and gift shop, would be permitted.

The proposed change in Lindbergh Field is the renovation of a portion of the East Terminal. Reconfiguration of the parking area is included in the Precise Plan. It is anticipated that no additions will be made to the land area of the airport.

The Master Plan proposes a new access road be constructed from Washington Street, along the north periphery of the airport, to the west side of the new West Terminal. Most of the road is located on land occupied by the U. S. Marine Corps Recruit Depot; however, the exact location, design and ownership will be decided at a later date, and is subject to negotiation with the U. S. Navy. It is not intended to serve as a shortcut or bypass between Point Loma and Hillcrest, so it has been narrowed as it enters Harbor Drive.

Airport Related Commercial

Commercial uses associated with the airport have been delineated on the Precise Plan. They include the car rental parking areas at the west end of the terminal, and a cluster of uses along Pacific Highway near Laurel Street. While individual leases may change from time to time, it is intended to continue these existing areas in airport related commercial use. Other uses included are car rental, offices, private general aviation services, restaurants, government offices, service stations, flight food preparation, aircraft maintenance, and similar uses. The total area now shown in this category is 39.2 acres.

The existing Port District Administration Building at Sassafras Street will continue to serve the District.

Project List

A listing of projects and appealable classifications is shown in Table 9.

HARBOR ISLAND/LINDBERGH FIELD: PLANNING DISTRICT 2		SUBAREA	DEVELOPER	APPEALABLE	FISCAL YEAR
1. HOTEL COMPLEX: 600 rooms, 2 restaurants, 2 coffee shops; landscape; pave		23	T	Y	1985-86
2. MARINA: 400 slips; construct buildings and slips; landscape; pave		23	T	Y	1985-86
3. BLAST FENCE: Replace blast fence at east end of Runway 27		27	P	N	1979-80
4. HARBOR DRIVE: Landscape, airport interchange to Laurel		24	P	N	1981-82
5. SMALL AQUATIC CENTER: Developed by Sea Scouts; dredge to remove silt discharged from City storm drain; install floats; construct buildings; landscape		24	T	Y	1981-82
6. EAST TERMINAL RENOVATION: Construct 2nd story buildings and loading ramps; enclose rotundas; rehabilitate building; construct service building		26	P	N	1980-81
7. RUNWAY OVERLAY: Overlay asphalt on runway; install lights		27	P	N	1980-81
8. PORT ADMINISTRATION BUILDING RENOVATION: Renovate building; construct parking structure; install landscaping		29	P	N	1981-82
9. AIRPORT ACCESS ROAD: Construct		27	P	Y	1982-83
10. RUNWAY RENOVATION: Rebuild portion of Runway 13-31; pave portion of area between runways		27	P	N	1983-84
11. BLAST FENCE: Install 14 feet high blast deflector fence at beginning of Runway 9-27		27	P	N	1981-82
P - Port District T - Tenant N - No Y - Yes					

Scale	TABLE 9 PROJECT LIST	Date Drn Cha Base No
planning department		

1. ALUNA ARMANDO , "BACK TO THE DRAWING BOARD FOR '91 CUP", LOS ANGELES TIMES , SEPT. 11, 88.
2. BRENNER R.B. , "AMERICA'S CUP TRIMS ITS SAILS FOR 1991", THE SAN DIEGO UNION SEPT. 18, 88.
3. BURNS JIM , "BUILDING BY THE SEA: CAL.", ARCHITECTURE , JUNE 85 pp. 76-85.
4. "CROSS CURRENTS OF AMERICAN ARCHITECTURE" ARCHITECTURAL DESIGN , ST. MARTIN'S PRESS, NEW YORK , 1985.
5. DREXLER ARTHUR , TRANSFORMATIONS IN MODERN ARCHITECTURE , THE MUSEUM OF MODERN ART, NEW YORK 1979.
6. GOSSELIN LISA , "THE RACING YACHTSMAN", YACHTING , TIMES MIRROR MAGAZINE, INC. , NEW YORK , JAN 89.
7. JENCKS CHARLES , "ABSTRACT REPRESENTATION", ARCHITECTURE DESIGN , ST. MARTIN'S PRESS, NEW YORK , 1983.

8. JONES A. H. "STARS & STRIPES MAKES NO FRIENDS AT CORONADO", HOOKUP, SPORTS WORLD INTERNATIONAL, SAN DIEGO, CA; SEPT 1988.
9. KAHN I. LOUIS, LIGHT IS THE THEME, KIMBALL ART FOUNDATION, FORT WORTH, TEXAS, 1975.
10. KAUFMANN EDGAR JR. FALLINGWATER ABBEVILLE PRESS PUBLISHERS, NEW YORK 1986.
11. NEUTRA RICHARD, BUILDING WITH NATURE, UNIVERSE BOOKS, NEW YORK, 1971.
12. "MICHAEL FAY THE MAN", SANTANA, SANTANA PUBLICATIONS, INC.; HUNTINGTON BEACH, CA. SEPT. 1988.
13. PORT MASTER PLAN, SAN DIEGO UNIFIED PORT DISTRICT 1987.
14. "RACE FOR THE CUP 88", SAN DIEGO LOG, AUGUST 26, 1988.
15. "A REPORT ON THE FACILITIES OF AMERICA'S CUP 1987 IN FREMANTLE AUSTRALIA", SAN DIEGO UNIFIED PORT DISTRICT, MARCH 87.

16. UTZON JØRN, ARCHITECTURE IN AN AGE
OF SCEPTICISM, LASDUN DENYS, OXFORD
UNIVERSITY PRESS, NEW YORK 1984.
17. WYLSON ANTHONY, ARCHITECTURE VAN
NOSTRAND REINHOLD COMPANY, NEW YORK
1986.
- 18.

THESIS I

THE RESULTS OF MY FIRST CRITIQUE BROUGHT BACK ISSUES THAT I HAD THOUGHT ABOUT EARLY IN THE PROJECT. ONE ISSUE THAT WAS STRESSED - WAS THE PERMANENCE OF SUCH A FACILITY. BECAUSE I PERSONALLY WANT TO DEAL WITH ARCHITECTURE ON A PERMANENT BASIS, I FELT THE PROJECT SHOULD HAVE LASTING QUALITY TO IT. ANOTHER PROBLEM WAS THE PROPOSED HOUSING. WORKING TO CREATE A TOTAL COMPLEX, I FELT A NEED FOR DORMITORIES ON THE SITE. THIS I FELT WOULD ALLOW PEOPLE TO WORK, LIVE AND ENJOY THE TOTAL EXPERIENCE OF SUCH A EVENT. DUE TO TIME HOWEVER, I HAVE DIVIDED THE PROJECT INTO TWO PHASES OF DEVELOPMENT. HOUSING WOULD THEN BECOME A PROPOSED OPTION BUT NOT A FULL-SCALE DESIGN SOLUTION.

THESIS I (CONT.)

DUE TO THE ISSUES OF CONTRA-
VERSY I HAVE ADDED AN
APPENDIX PROGRAM. THIS PROGRAM
WILL TAKE A BACK-SEAT TO THE
FUNCTIONAL PROGRAM OF THE
AMERICA'S CUP. IT HOWEVER
WILL HELP IN MAKING LONG TERM
DESIGN DECISIONS. ALTERNATIVE
ACTIVITIES WILL BE SUGGESTED FOR
EACH BUILDING, BUT SHOULD
BE THOUGHT OF AS SECONDARY
DESIGN SOLUTIONS.

PROGRAM INTENT

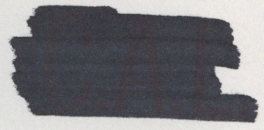
THE INTENTIONS OF THIS PROGRAM IS TO PROVIDE ADDITIONAL ACTIVITIES AND FUNCTIONS TO THE AMERICA'S CUP FACILITIES. THE LOGG OF THE CUP AS WELL AS THE TIME EXPANDED BETWEEN RACES FORCED ME TO PROVIDE ECONOMIC ALTERNATIVES TO THE SITE.

BECAUSE THIS WAS NOT THE FOCUS OF MY PROJECT, IT SHOULD BE UNDERSTOOD THAT THESE ARE SUGGESTIONS TO THE FLEXABILITY OF THE DESIGN SOLUTION.

THE AMERICA'S CUP IS A SPECIAL EVENT AND THE REALITY OF A ALL-IN-ONE FACILITY LIKE I'VE CREATED IS UNLIKELY. THE BENEFITS OF SUCH A SOLUTION ARE HIGH, BUT THE COSTS ARE TOO.

ZONE	(SYNDICATE BUILDINGS
DESCRIPTION	» SPECIALTY SHOPS// OFFICES
NO. OF USERS	VARIABLES
ACTIVITIES	BOAT & SAIL DISTRIBUTION SPORT CLOTHES YACHTING INFORMATION HOBBIE & CRAFT FAST FOOD FISHING RENTALS WATER TAXI
CONSIDERATIONS	THESE BLD'GS WORK AS MARINA FAIR. RENTED OFFICE SPACE SALE & EXHIBATE AREAS
EQUIPMENT	
AREA REQUIRED	VARIABLES
FLEXIBILITY	MULTI-USE
ENVIRONMENTAL	HVAC, DAYLIGHT EXTERIOR SHADE
LEGAL » SAFETY	

FUNCTIONAL RELATIONSHIPS



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