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THE SKYWARD

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The Skyward:
Public Spaces Aboard a Cruiseship

by
Ramona Baldwin

Montana State University
Bozeman, Montana
June 1988

Programming analysis submitted in partial fulfillment of the Requirements for the Degree
of
Bachelor of Arts
in
Interior Design

Approved:

Pamela J. Bancroft, Adviser

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Date June 10, 1988

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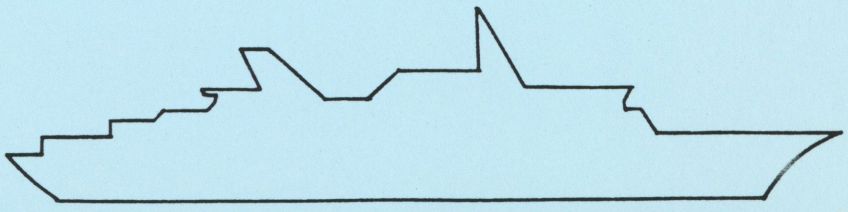
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INTRODUCTION

About The Industry

The maritime passenger industry has changed tremendously over the past century and a half. Today marketing is aimed at the vacationing and leisure crowd, of which practically none existed in the eras preceeding the turn of the century. At that time the passenger trade was one of necessity: it was the only option to cross from one continent to another.

The first superliners were used by all the sea-traveling public with a choice of first, second, third or steerage class passengers. Typically the steerage passengers, the most profitable to these Atlantic passenger ships, had the least space and comfort. Composed almost entirely of immigrants who paid their $10-25 one way fares, the steerage passengers usually made up a considerable portion of the ships passengers. In fact between 1910-1915, 12.5 million immigrants crossed the Atlantic to the U.S., 90% of them in third class or steerage. Passage for first and second class passengers was (at that time) considered elaborate and elegant. There were smoking rooms, lounges, beautiful restaurants, and accommodations that spurred the name "Floating Palaces".[1]

The first world war certainly changed these ships. Many of the superliners were used exclusively to transport troops, and many ships were lost during the war. Following the war immigrant passengers were practically nonexistent. Ships began to cater more to the first and second class passengers, promoting tours to Europe and lengthy stays on board.

Passenger shipping from that time up into the fifties ran a course similar to the first world war scenario. Ships again were used for troop transport with the returning and remaining ones refurbished for passenger trade. Most of these ships were now used by wealthy people who could afford lengthy vacations.

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[1]William Miller, Famous Ocean Liners. (london: Patrick Stevens Limited, 1987) p.27

In the late 1950s the great oceanliners were rivaled by a new quite different competitor: the passenger jet. This new mode of transportation changed the travel industry dramatically. Passenger travel time across the Atlantic was accelerated from six days to six hours. By then the airline industry had secured 63% of the Atlantic passenger trade.

Many famous liners ran with full crews and a skeleton passenger list in hopes that "Real Travelers" would return to the liners and their luxurious form of travel. Unfortunately for the maritime industry this did not happen. John Malcolm Brinnin described the once heavily booked 'Queens'

> As their final decade drew towards its end , the Queens, more often than not , were ghost ships of the Great Circle. It was then possible for a single solitaire passenger to turn up for tea in the dim depths of the Grand Saloon and sit magnificently, while a dozen white jacketed stewards stood about like sentries, alert to his command. As he chose his sandwiches, scones and cakes from portable caddies, as all the pyramidal napkins on all the white tables in the gloaming, multiplied his sense of isolation, he might that a shadowy figure at the furthest end of the room was seating himself at the Wurlitzer. Then as the great ship creaked and groaned, the intruder would sliver the air with selections from "Rose Marie" and "Desert Song". Not even the dining room in Citizen Kane was emptier.[2]

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[2]John Malcolm Brinnin, The Sway of the Grand Saloon. (New York: Delacorte Press, 1971) pp.545

Great liners of this type suffered severe financial losses, and by 1966 most transatlantic companies were slipping farther and farther into the red. As the company eserves drained, Caribbean cruises to help boost income became more and more popular. Many of these superliners, though, were not equipped for humid climates, shallow depths, and inadequate moorings. Attempts were made to upgrade the aging ships but many were dark colors which absorbed the heat, without adequate ventilation or outdoor facilities, and were decorated tastelessly. Many of these once-great liners were left in port until auctioned to scrapyards or to entrepreneurs who planned to moor them permanently and renovate them into tourist attractions, restaurants, hotels, or convention centers.

The NCL

In the late 1960s the Norwegian Caribbean cruiselines introduced a new line of cruise ships. They had up to this time not owned a passenger ship and were gambling along with other newly established cruiseship companies.

These white and blue cruise ships were designed exclusively for warm weather cruising. The Sunward, Southward, Starward, Skyward, and the renovated Norway (formerly the infamous France) specialized in Caribbean cruises. The Norway became the most luxurious and largest liner to sail. More then three times longer than a football field, the Norway weighs 70,200 tons, and is equipped with 2000 berths, and three swimming pools.

The Norwegian Caribbean Line is well known for its fitness and exercise programs, offers a nationwide air/sea program, provides cruises, and owns its own island.[4]

The NCL is a good example of just one company from a long list of forty-three (each with their own fleet) who are enjoying the financial rewards of this relatively new and booming leisure/time industry. By the mid 1980s the cruise industry reached an impressive $4 billion level almost entirely from the United States.

At this point one may wonder where the industry is headed. Can this boom continue, and is it possible that the cruise industry is in danger of getting itself into a classic situation of overcapacity with too many berths chasing available passengers?[5]

This industry is one spurred by demand, an important element in the answer to these questions. Demand currently exists for an increasing number of ships into revolutionary new maritime leisure experiences. Ships that contain floating marinas and landing stages for dinghies, ships with the possible addition of small scale passenger submarines, and recently the development of a smaller modern cruise vessel with sails are examples of some future trends.

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[4]Voyages. (Miami, Florida: Norwegian Caribbean Lines, 1988) p. 21

[5]Nicholas Blenkey, "Can The Cruise Lines Keep Booming?) Marine Log vol 93 (February 1988) p. 23-32

Many observers of the ship building industry believe the demand will dwindle and the industry will suffer. Current statistics indicate otherwise. Between 1981-86, compound annual North American passenger demand for cruise vacations grew 10.0%[6]

The increase in marketing by the cruise industry coupled with a society who spends their rising disposable income on recreational activities make for a happy marriage of vacationers and vacation providers.

Ships have become destinations in themselves providing a variety of dining and recreation experiences. On-board shopping, personal care areas, libraries, childcare services, conference facilities, a wide range of entertainment, and twice a day maid service to pamper the vacationer are just a few of the types of services now being offered.

Cruising on one of these beautiful ships is a wonderful vacation, with exotic ports of call, the warm tropical sun, exquisite dining and shopping and first class accommodations for all passengers. The spacious open lounges, clubs, and shops with views of the magnificent ocean and tropical constellations are enhanced by ocean scented breezes. All this adds to the ambience, mystery and romance that make a cruise an unforgettable experience and a return adventure so undeniably inviting.

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[6]ibid. p. 27

Problem Statement

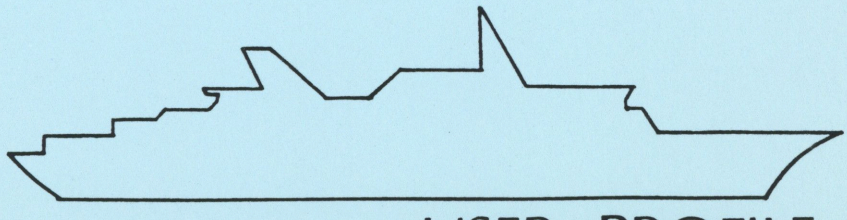
The intent of this project is to design a number of the public spaces aboard the cruise ship **Skyward.** The size of the ship in conjunction with stringent maintenance and safety codes provides the basis of a creative challenge.

The **Skyward** was chosen not only because of the NCL's reputation of entertainment, luxury, and fitness areas, but also because of the Caribbean route she cruises and her size. The ship is considered midsize and carries at the maximum 790 passengers. Characterized by her all white exterior she resembles her other three sister ships owned by the NCL. All are designed for their Miami to the Caribbean routes and sail year round.

The Norwegian Caribbean Lines promote the atmosphere of elegance and leisure by providing a variety of spaces to enhance one's shipboard experience. This project will address these issues through the development of unique public spaces.

The **Skyward** was recently refurbished in 1985 and does not require repair or clean up. The ship has been well maintained.

Because of the large scope of this project there are aspects and areas that will be acknowledged but not specifically addressed. Areas such as storage, passenger lodging, crew facilities, the galley, pantries and laundry facilities will be addressed only in terms of adjacency and space requirements. The issue of environmental control systems is an important one, due to the warm and humid climate of the area traveled, and will be considered and allotted for spatially. It is beyond the scope of this project, however, to deal with these systems in detail.



USER PROFILE

Who Cruises?

Until the early to mid 1970's cruises were largely composed of high income, older individuals, some of whom were repeat customers. Typically cruises were for those who could afford to spend luxurious and lengthy vacations to exotic locations. Today the market has changed tremendously. The '80's customer base consists of individuals with an annual income of $25,000. and up, over one third of which are less than 35 years old. This broad market creates the potential for a large pool of repeat customers as these individuals grow older.[7] Cruise lines are also beginning to target advertising toward the family market. Many ships include activities and areas specifically for this future generation of travelers. Children are more than welcome to join their parents and be pampered along with them.

Cruises are also an ideal vacation for a disabled person or one recovering from an illness or surgery.[8] The relaxed environment is generally therapeutic. There is plenty of social contact through organized activities and entertainment, providing the individual is self-sufficient and traveling with another passenger who takes responsibility for any needed assistance.

An increasing number of single people are becoming cruise customers. Discounts are often given to singles who travel together in small groups, or are willing to share rooms. NCL offers the Guaranteed Single-Occupancy rate for singles willing to share a 4-bedroom stateroom.

North Americans love to cruise! In 1986 alone two million vacationed at sea.

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[7]Nicholas Blenkey. "Can The Cruise Lines Keep Booming?" Marine Log. vol 93 (February 1988) p. 29

[8]Syvlia McNair, "How to Choose Your Cruise." The Rotarian. (October 1987) p. 28

Why Do People Take A Cruise?

Most travel agents and cruise vacationers agree that cruising is a great vacation value. Many people choose a cruise for that reason. The initial expense for a cruise includes air transportation from almost anywhere in the U.S., the cruise itself, a variety of onboard entertainment, meals, and most services on board. Of course the passenger pays for the frills, such as drinks, trapshooting laundry, beauty salons, saunas, and phone calls. Many people enjoy cruises because of the convenience of a home away from home from which they may see exotic ports without the hassles of hotels, restaurants, parking and crowded shopping malls. Most ships include their own shopping arcades for luxuries, gifts and personal needs. Credit cards, travelers checks, or cash are all welcome in these duty-free shops (a significant amount of a ship's revenue is made from on-activities and shops).

Entertainment is also another major reason a person may choose a cruiseship as a vacation. Some of the ships are just that, the vacation in themselves. Some people remain on board in certain ports of call and enjoy the ships activities. Entertainment includes casinos, lounges with dance floors, parties, Broadway shows, big bands, movie theatres, and sporting events.

Cruises are convenient and a good value but many people take a cruise because of their intangible value. A cruise for many is a chance for adventure, romance, and excitement. It is a time to enjoy a life of leisure while being catered to by others. Some one else cooks, straightens the lodging rooms twice a day, watches the children, and does the driving (navigating in this case). People have a great chance to socialize, make new friends, spend time with old friends, learn about different cultures, and virtually experience a different way of life.

People cruise for many reasons: the romance of the sea and exotic places, the excitement of new experiences, the enjoyment of luxury and endless entertainment, or maybe just to get away and relax. Whatever their reason one factor remains dominant. No one would take a cruise if it wasn't enjoyable, people want to get out and have fun. Cruising offers that fun.

What Do Cruise Passengers Expect?

Safety at sea becomes a major concern in the maritime industry and because of this, strict standards are adhered too. Passengers expect their experience at sea to be a safe one and to never feel doubt or concern that it isn't.

Aside from safety, passengers expect all the comforts of home and do not want to be inconvenienced in any way. In general, the longer the cruise, the more luxurious the service and facilities and, of course, the more expensive.[9] At any price or length of time spent on board, luxury is expected. Marketing efforts have instilled the aspect of luxury, (especially in the ship's public spaces) so people expect just that!

Many passengers look forward to their stay on board because it has a "mystique ingredient", the essence of excitement and is a foreign experience. Cruises to some are what they have dreamed about; adventure, luxurious surroundings, mystique and elegance, all with the comforts of home!

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[9]ibid. p.30

Who Cant't Take A Cruise.

Sorry no pets are allowed. Fluffy and Rover must remain at home with someone who owes you a big favor!

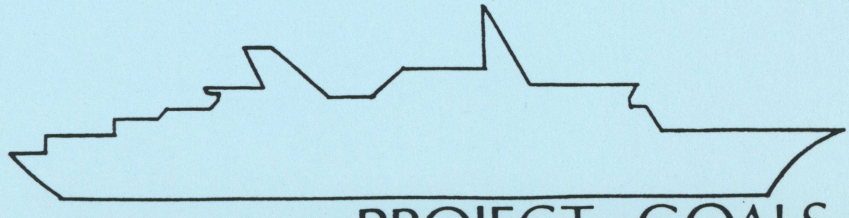
Stowaways are typically prevented from enjoying NCL's accommodations, except in one case. In June 1985 two young friends, one 19, the other 22 years old, mingled with a group of travel agents boarding the "Norway" and became stowaways until the last day of the cruise. Crew members noticed they were always in the same clothes. They were apprehended by the ship's officers and put into the brig.

The Associated Press published their story in August and reported that the stowaways offered their unstinted endorsement concerning the glamour and luxury of the "Norway". "There's nothing like a cruise"1 one said. They reportedly took part in the ships activities, mingled with paying guests and slept on deck or in odd corners. The pair took breakfast and lunch on deck, skipped dinner because they had no assigned places, but stuffed themselves at the midnight buffet to make up for the missed meal. The stowaways were undeniably delighted with their adventure and the ship itself.

NCL did not file charges, and agreed that the publicity was worth more than the cost to the line, but wanted to avoid encouraging stowaways! The adventurous pair agreed to reimburse the company with monthly installments.[10]

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[10]Lori Cioffi, "Two Stowaways Praise Norway's Luxury..." Travel Weekly. (November 1987) p. 12



PROJECT GOALS

* To design public spaces that are open and spacious.

* To incorporate lighting, texture, and specified materials that promote the essence of luxury and elegance.

* To create new circulation paths that eliminate long hallways and visually break up the space.

* To incorporate an additional small restaurant onto one of the three upper decks.

* To create public spaces that are inviting and unique.

* To give the spaces a sense of comfort and relaxation.

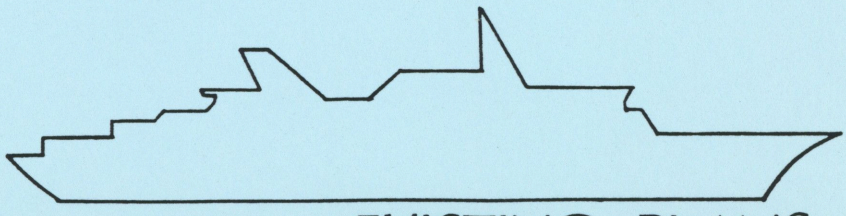
* To Design spaces that reflect quality.

* To create an atmosphere which reflects the romance of the sea.

* To provide variety throughout the spaces.

* To provide a variety of entertainment and dining spaces.

* To create spaces that reflect and enhance the **Skyward's** established reputation.



EXISTING PLANS

About the Skyward

The Skyward cruise ship took her maiden voyage in December of 1969. Composed of seven habitable decks, she has a passenger capacity of 790 plus a crew of 300.

Her overall length is 160.3m (525 ft.) and she has a gross weight of 16,254 lbs.

The Skyward cruises year-round from Miami to Cancun Mexico, the Cozumel and Grand Caymen islands, and to NCL's private island. These cruises last seven days, departing Sunday at 8:00 A.M. Service time for this ship is critical because it is docked for only 8 hours.

Cruising speed for the Skyward is 16 knots and is powered by two main engines and five auxillary engines.

Entertainment aboard the Skyward includes a late-evening piano bar and nightclub, a theatre, show lounge, casino, and a card room.

There is one restaurant and one indoor\outdoor cafe.

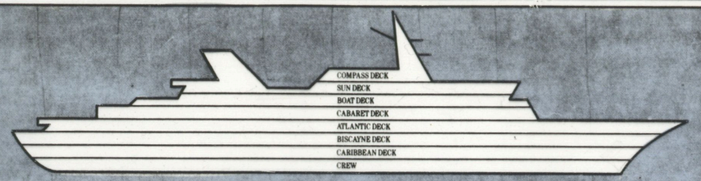
Sports and fitness facilities include a swimming pool, sports deck, and a sauna.

There are duty-free shops in the shopping arcade, a boutique, beauty salon, photo gallery, hospital, a playroom for children, and three liquor stores.

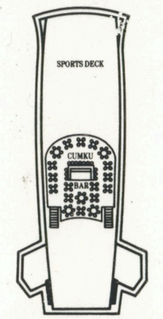
The crew are provided with their own facilities which include lodging, a hospital and a dayroom.

Additionally there are laundry facilities, a galley, pantries for room service and service to the lounges, strorage facilities, and mechanical rooms.

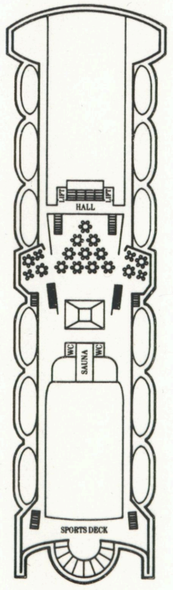
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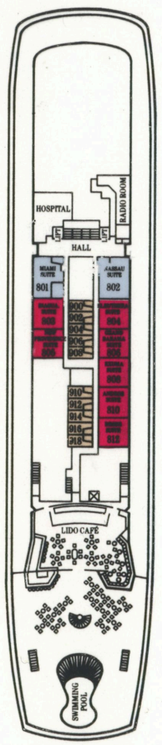
Gross tonnage: 16,254. Overall length: 525 feet. Beam: 75 feet. Draft: 22 feet. Engines: 7. Cruise speed: 16 knots. Passengers: 790 maximum. Crew: 300. Maiden voyage: Dec. 21, 1969.



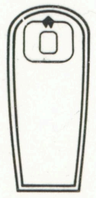
COMPASS DECK



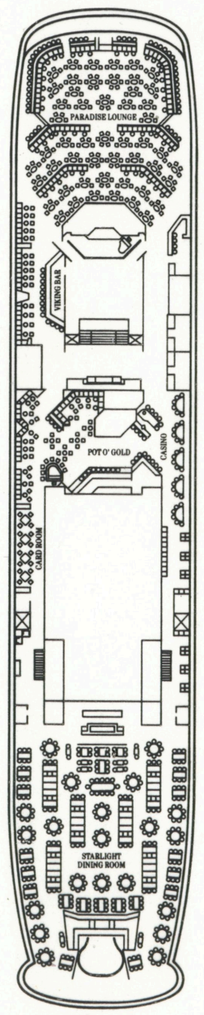
SUN DECK



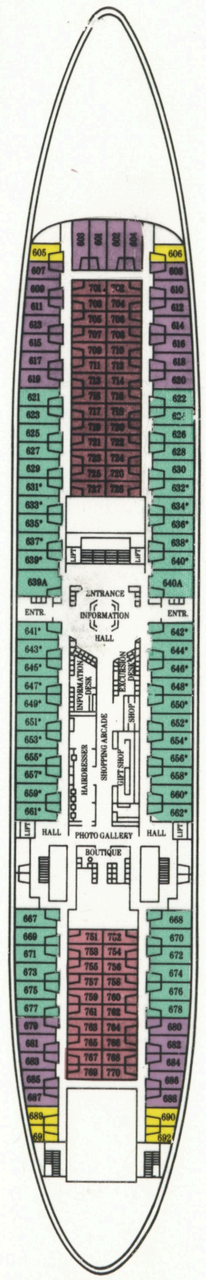
BOAT DECK



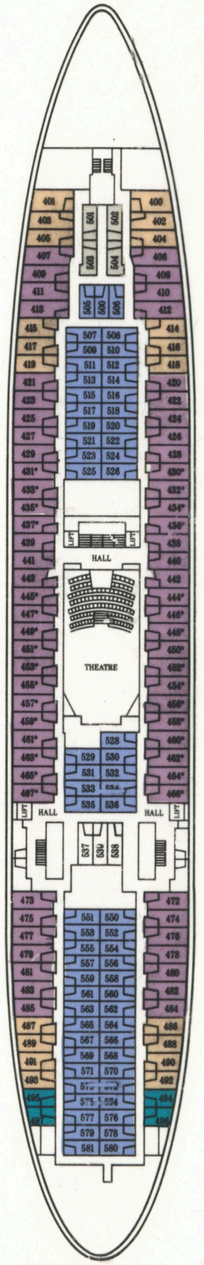
OBSERVATION PLATFORM



CABARET DECK

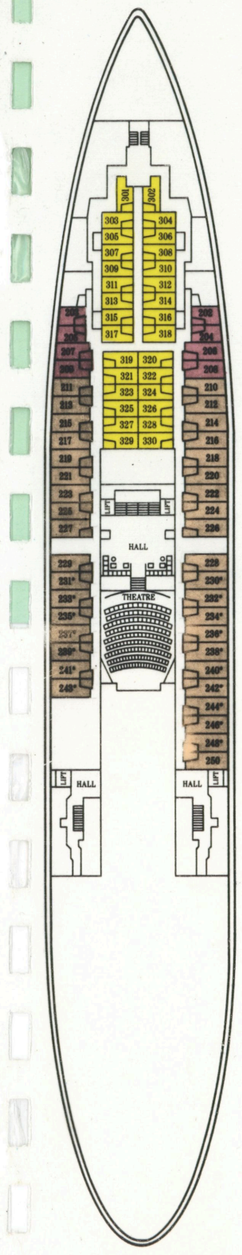


ATLANTIC DECK



BISCAYNE DECK

*These rooms can accommodate four passengers.



CARIBBEAN DECK

		Peak*	Value**	Economy†
1	**BOAT DECK** Outside deluxe suites. Sitting room with sofa bed, lounge chairs, refrigerator; bedroom with double bed; two private baths with shower and toilet–one with tub.	$2145	$2095	$2025
2	**BOAT DECK** Outside suites. Full double bed, convertible sofa, refrigerator, private bathroom with tub, shower and toilet.	1875	1825	1755
3	**ATLANTIC DECK** Outside rooms. Two lower beds (these beds may be arranged as a double bed), with private shower and toilet.	1675	1625	1555
4	**ATLANTIC DECK** Outside rooms. Full double bed and folding upper berth, with private shower and toilet. **BISCAYNE DECK** Outside rooms. Two lower beds (these beds may be arranged as a double bed), with private shower and toilet.	1600	1550	1480
5	**BOAT DECK** Inside rooms. Double bed and folding upper berth, with private shower, toilet. **BISCAYNE DECK** Outside rooms. Full double bed and folding upper berth, with private shower and toilet. **CARIBBEAN DECK** Outside rooms. Two lower beds (these may be arranged as a double bed), with private shower and toilet.	1525	1475	1405
6	**ATLANTIC DECK** Inside rooms. Full double bed and folding upper berth, with private shower and toilet. **CARIBBEAN DECK** Outside rooms. Full double bed and folding upper berth, with private shower and toilet.	1450	1400	1330
7	**BISCAYNE DECK** Inside rooms. Double bed and folding upper berth, with private shower and toilet.	1375	1325	1255
8	**ATLANTIC DECK** Outside rooms. Lower bed, folding upper berth, with private shower and toilet. **CARIBBEAN DECK** Inside rooms. Double bed and folding upper berth, private shower and toilet.	1300	1250	1180
9	**BISCAYNE DECK** Outside rooms. Lower bed and upper berth, with private shower, toilet.	1250	1200	1130
10	**BISCAYNE DECK** Inside rooms. Oversize bed, folding upper berth, with private shower and toilet.	1095	1045	975
11	**THIRD/FOURTH PERSON** Including infants and children sharing stateroom with two full-fare paying adults.	495	495	495
12	**GUARANTEED SINGLES RATE** Single occupancy of a stateroom will be assigned to the passenger. Assignment is at the sole discretion of the Company. Fares subject to availability.	1495	1375	1295

***PEAK:** Jan 24-Mar 27.

****VALUE:** Jan 3-17, Apr 3-24, Jun 19-Aug 21, Oct 30-Nov 20.

†**ECONOMY:** May 1-Jun 12, Aug 28-Oct 23, Nov 27-Dec 11.

PLEASE NOTE: All prices are in U.S. dollars. Rates are per person based on double occupancy of twin or double-bed room. See category description and specify requirements with your travel agent at time of booking. Reservations subject to change in the event of full ship charter.

CHILD TRAVELING WITH ONE ADULT: Child under 17 cruising as second person in cabin pays 75 percent of full-tariff adult rate less $250 travel allowance for cruise-only; 75 percent of full adult rate for cruise including air.

PORT CHARGES: $25 per person, regardless of age.

GROUP AND CHARTER RATES: Available on request.

CLOUD 9 AIR/SEA PACKAGE ADD-ONS: See pages 68–69.

CHRISTMAS AND NEW YEAR'S SAILINGS: NCL will offer special cruises during Christmas and New Year's. Contact your travel agent for dates and fares.

NCL CRUISE PRICE GUARANTEE: In the event of any price increase, deposited or fully paid passengers will be protected at the cruise-only rates published here.

CRUISE-ONLY TRAVEL ALLOWANCE: Passengers not requiring round-trip air transportation to Miami may deduct $250 from the rates listed above.

STANDARD SINGLE OCCUPANCY FARE: Passengers requesting single occupancy of a stateroom within a specific fare category will be charged 150%–200% of the fare for the selected accommodation. Fare subject to availability.

SPECIAL QUAD SHARE FARE FOR SINGLES: $650. See page 70 for details.

SHIP'S TOUR

NCL not only takes you to special places. The ships are destinations in themselves.

Here's a quick, deck-by-deck tour of some of the special places on board the Skyward.

Compass Deck: Upper Deck Bar (intimate, 80-seat lounge for sunset cocktails) and the sports deck.

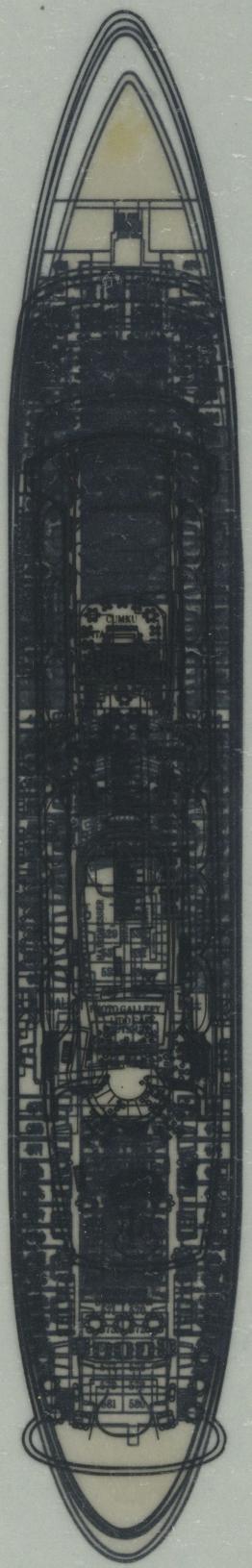
Sun Deck: Sports deck and sauna.

Boat Deck: Swimming pool and the Quarter Deck Café (indoor and outdoor cocktails–disco from 10 p.m.).

Cabaret Deck: Ports of Call Restaurant, Tivoli Cabaret (our main show lounge with seating for 420), Captain's Bar, Monte Carlo Casino (live gaming room), Connections Lounge (late-evening nightclub and piano bar), and Shuffles Card Room.

Atlantic Deck: Duty-free shops, boutique, and photo gallery.

Biscayne and Caribbean Decks: Theatre (a 180-seat cinema).



CARIBBEAN DECK

BISCAYNE DECK

ATLANTIC DECK

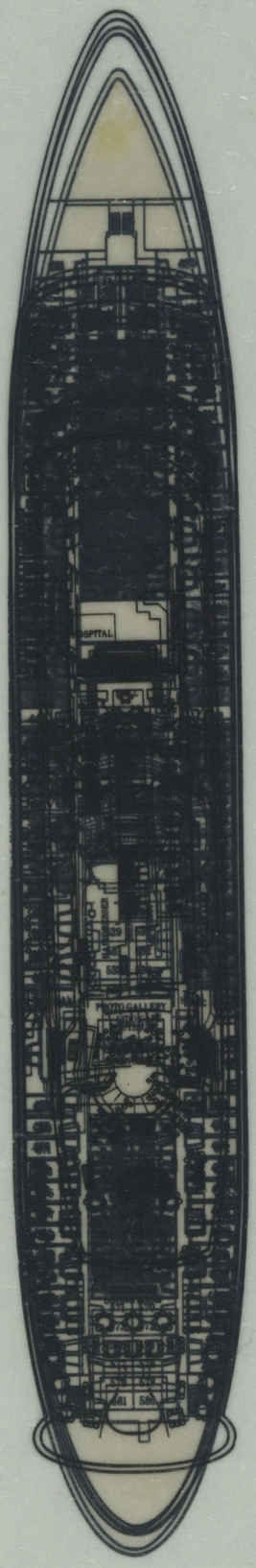
CABARET DECK

BOAT DECK

SUN DECK

COMPASS DECK

OBSERVATION PLATFORM



CARIBBEAN DECK

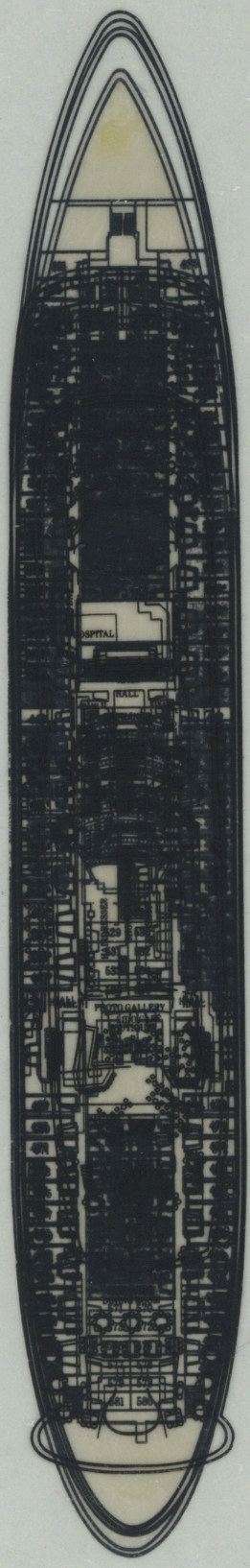
BISCAYNE DECK

ATLANTIC DECK

CABARET DECK

BOAT DECK

SUN DECK



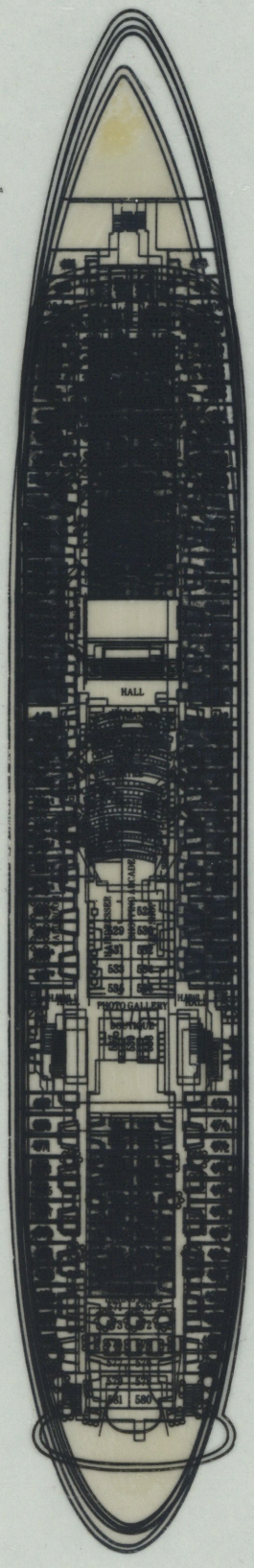
CARIBBEAN DECK

BISCAYNE DECK

ATLANTIC DECK

CABARET DECK

BOAT DECK

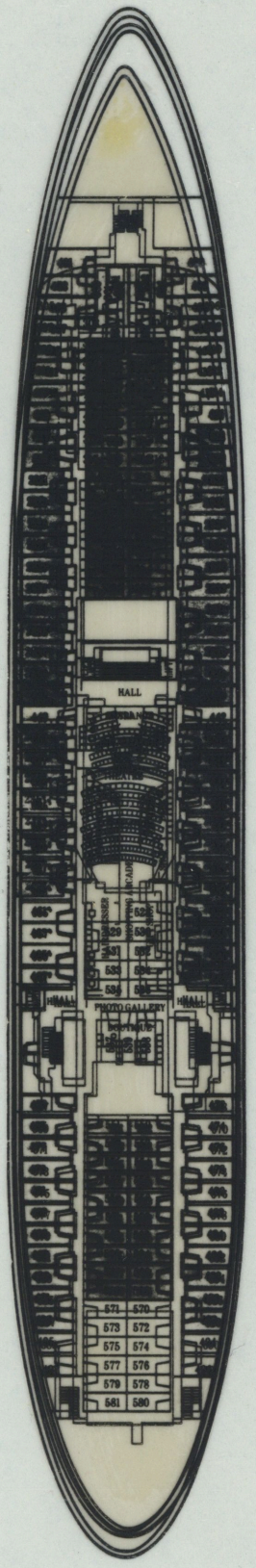


CARIBBEAN DECK

BISCAYNE DECK

ATLANTIC DECK

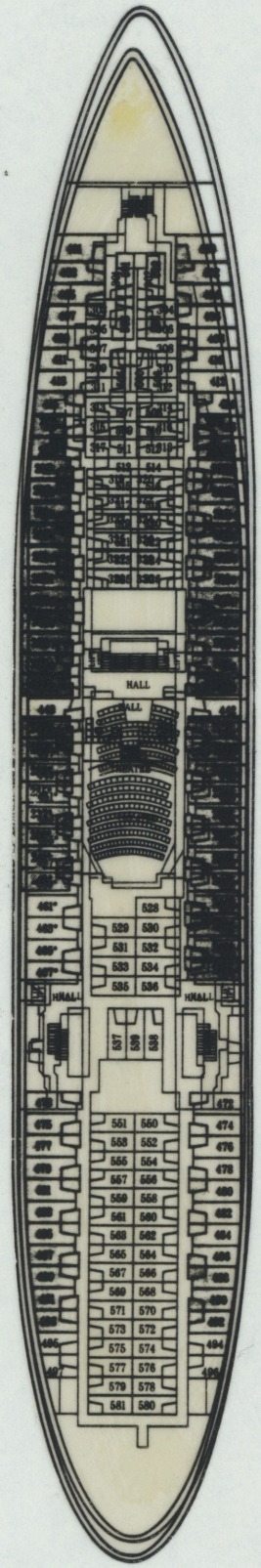
CABARET DECK



CARIBBEAN DECK

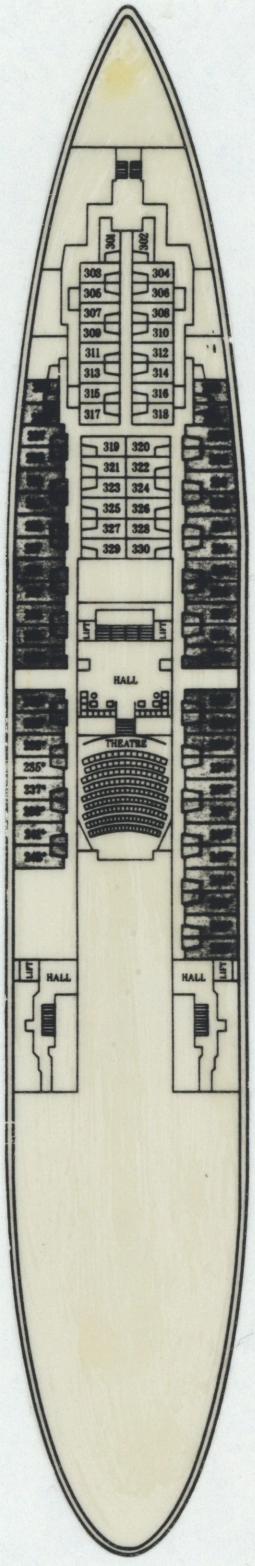
BISCAYNE DECK

ATLANTIC DECK

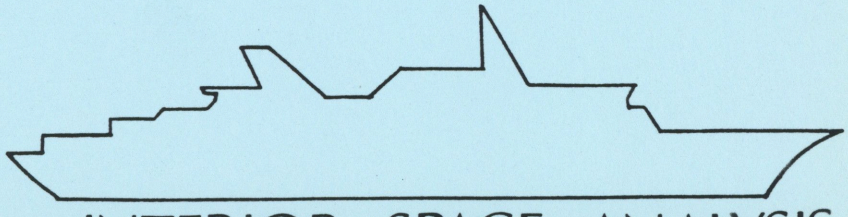


CARIBBEAN DECK

BISCAYNE DECK



CARIBBEAN DECK



INTERIOR SPACE ANALYSIS

Interior Space Analysis

The following pages include an analysis of the spaces aboard the **Skyward.** Information that was gained from case studies and study of the existing plans are reflected in the analysis.

The format below is used to provide information concerning each space:

Name of Space:

Approximate Square Meters:

Number of Occupants:

Space Description:

Requirements:
Needs:
Wants:

Atlantic Deck:

***Room:** Lobby
Area: 144 sq.m.
Purpose: to provide a transition area for oncoming and outgoing passengers
Occupancy: varies
Description: welcoming, elegant, inviting, gay, bright
Requirements:
Needs: handicap accessible, information area, centralized, hard flooring
Wants: open to above, natural light

***Room:** Shopping Arcade
Area: 200 sq.m.
Purpose: to provide a variety of shops and service to passengers.
Occupancy: varies
Description: alluring, comfortable, bright, organized
Requirements:
Needs: boutique, hairdresser, info. desk, gift shop, drug store, photo shop, liquor store
Wants: display area, ample walkways, hard flooring, carpet, natural light

Boat Deck:

* **Room:** Pool Area
Area: 96 sq. m.
Purpose: to provide swimming facilities and sunbathing areas.
Description: Bright, clean, open, inviting
Requirements:
Needs: hard surfaces, easy to maintain
Wants: clean colors, smooth finish

* **Room:** Lounge\Bar
Area: 160 sq. m.
Purpose: to provide beverages and seating around the pool.
Occupancy: 70
Description: Shaded, inviting, cool, casual
Requirements:
Needs: shaded area, tables and chairs, bar, hard flooring.
Wants: casual furniture, tile flooring

* **Room:** Lido Cafe
Area: 180 sq. m.
Occupancy: 40
Purpose: dining and beverage facilities with a view
Description: casual, friendly, relaxing
Requirements:
Needs: tables and chairs, open to deck, hard flooring
Wants: casual furniture, tile flooring

Compass Deck:

***Room:** Lounge
Area: 120 sq.m.
Purpose: to provide an evening cocktail lounge
Occupancy: 70
Description: intimate, quiet, romantic
Requirements:
Needs: tables and chairs, bar and stools
Wants: carpeting

Sun Deck:

***Room:** Fitness Room
Area: 56 sq.m.
Purpose: to provide fitness equipment, shower and sauna facilities
Occupancy: varies
Description: bright, healthful, clean, appealing
Requirements:
Needs: sauna facilities, showers, hard flooring
Wants: massage room, weight equipment, aerobics floor

***Room:** Sun Deck
Area: 242 sq.m.
Purpose: to provide outdoor lounging area
Occupancy: 30
Description: open, friendly, inviting, relaxing
Requirements:
Needs: tables and chairs, hard flooring
Wants: soda\juice bar

Caribbean Deck

***Room:** Theater
Area: 180 sq. m.
Purpose: to provide seating for audiences attending stage productions or movies.
Occupancy: 320
Description: open, comfortable, plush, elegant
Requirements:
Needs: soft seating, controlled lighting
Wants: rich materials, carpeting

Rainbow Deck

***Room:** Lounge
Area: 567 sq.m.
Purpose: to provide entertainment in the form of dancing, floor shows and socializing
Occupancy: 360
Description: open, active, exciting
Requirements:
Needs: tables and chairs, bar and barstools, small stage, dance floor, handicapped accessible
Wants: rich materials, high gloss surfaces, carpeting.

***Room:** Casino
Area: 342 sq.m.
Purpose: to provide facilities for recreational gambling
Occupancy: 280
Description: elegant, enticing, friendly, exciting
Requirements:
Needs: slot machines, card tables, roulette wheel, cocktail bar
Wants: plush materials, carpeting, comfortable seating

***Room:** Dining Room
Area: 570 sq.m.
Purpose: to provide dining facilities for three meals plus three buffets each day
Occupancy: 360
Description: spacious, airy, inviting, elegant, comfortable, plush
Requirements:
Needs: tables and chairs, bussing stations
Wants: carpeting, plants, plush fabrics

Square Meter Summary

Caribbean Deck:

Space	Square Meters
Theater	180
Pantry (Room Service)	30
Mechanical	126 (2)
Garbage Room	45
Staff Lodging	240
Passenger Lodging	1600
Total	2347
Total available	2794
10% circulation	280
Remainder (for adjustments)	167

Biscayne Deck:

Theater	180
Pantry (Room Service #1)	30
Pantry #2	20
Mechanical	126 (2)
Misc. Services (Baggage etc.)	168
Staff Area	78
Passenger Lodging	1900
Total	2628
Total available	3082
10% circulation	308
Remainder (for adjustment)	146

Atlantic Deck:

Space	Square Meters
Entrance	144
Shopping Arcade	200
Pantry #1	20
Pantry #2	20
Telephone Room	8
Playroom	35
Staff Room	120
Mechanical	126 (2)
Passenger Lodging	1700
Total	2373
Total Available	2760
10% circulation	276
Remainder (for adjustment)	111

Cabaret Deck:

Paradise Lounge	567
Pantry	36
Galley	322
Dining	570
Casino	342
Restrooms	12 (3)
Cocktail Bar	72
Open Deck	192
Mechanical	24 (2)
Total	2185
Total available	2554
10% circulation	255
Remainder (for adjustment)	114

Boat Deck:

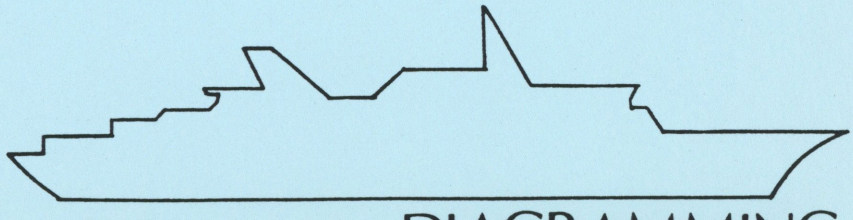
Space	Square Meters
Outdoor Lounge	160
Indoor Lounge	180
Restrooms	12 (2)
Liquor Store	6
Pool Area	96
Mechanical	28 (2)
Hospital	96
Staff and Officer's Quarters	168
Radio Room	40
Offices	18
Officer's Dayroom	51
Deluxe Suites	225
Double Occupancy Rooms	96
Total	1216
Total Available	1364
10% circulation	136
Remainder (for adjustment)	92

Sun Deck:

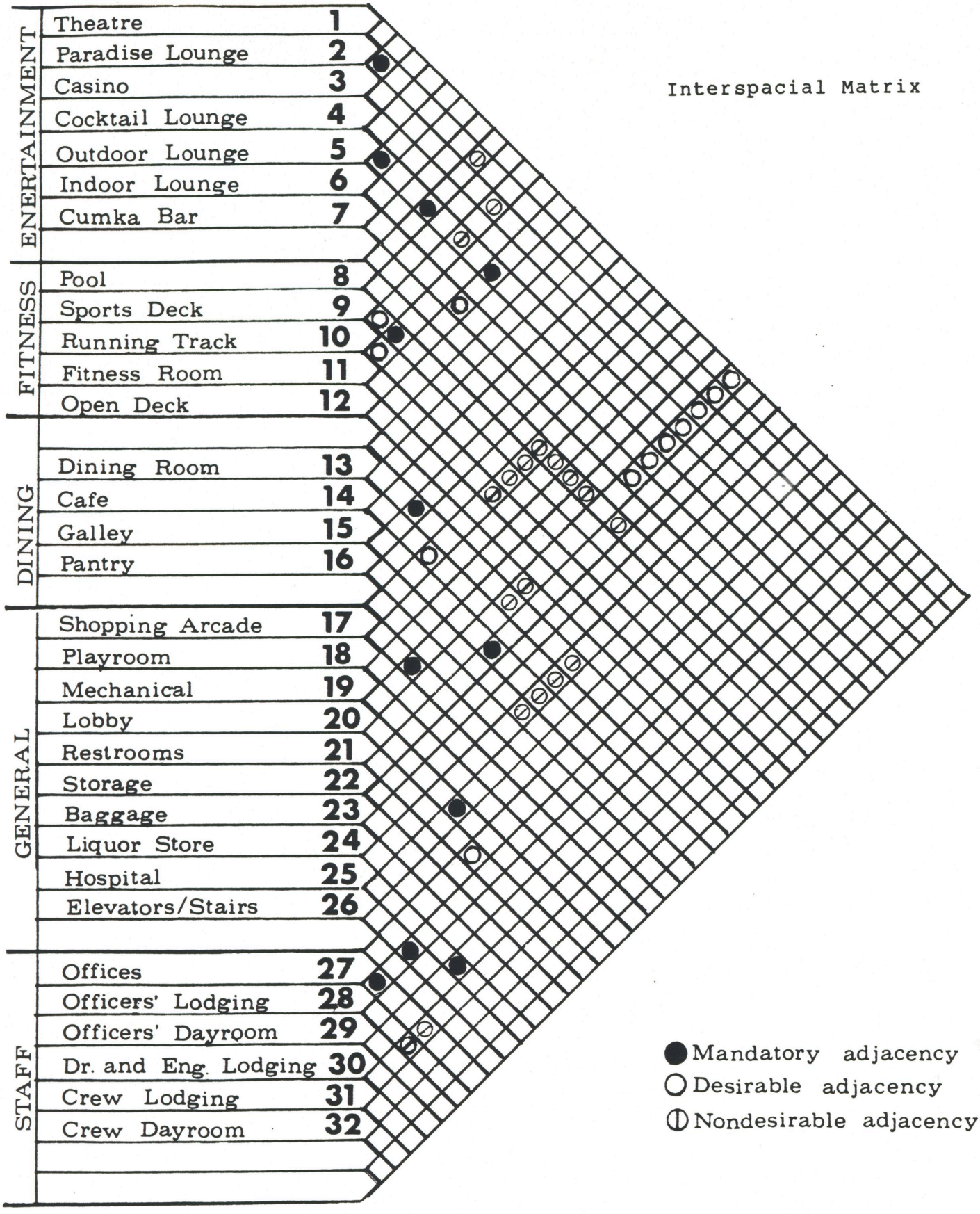
Officer's Quarters	293
Mechanical #1	78
Sun Deck	242
Mechanical	84
Fitness	56
Total	768
Total Available	753
Remainder (for adjustment)	15

Compass Deck:

Cumka Bar	120
Sports Deck	120
Total	240
Total Available	242

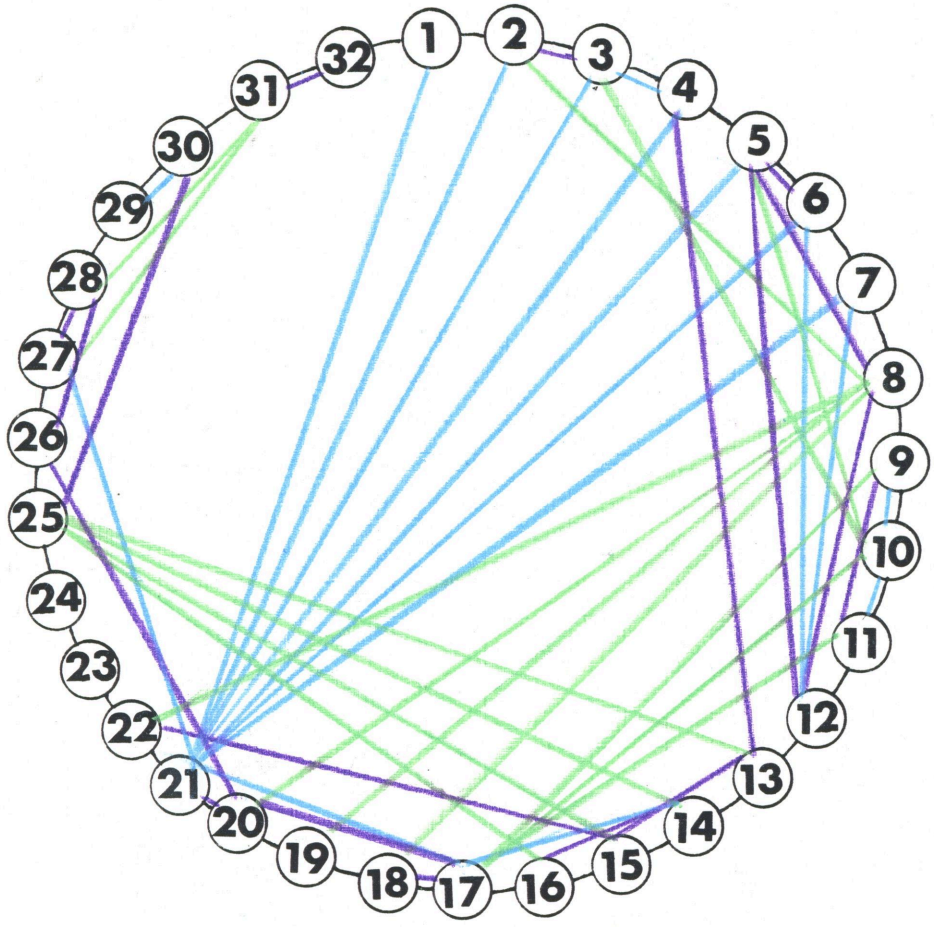


DIAGRAMMING


Interspacial Matrix
ENERTAINMENT
Theatre 1
Paradise Lounge 2
Casino 3
Cocktail Lounge 4
Outdoor Lounge 5
Indoor Lounge 6
Cumka Bar 7
FITNESS
Pool 8
Sports Deck 9
Running Track 10
Fitness Room 11
Open Deck 12
DINING
Dining Room 13
Cafe 14
Galley 15
Pantry 16
GENERAL
Shopping Arcade 17
Playroom 18
Mechanical 19
Lobby 20
Restrooms 21
Storage 22
Baggage 23
Liquor Store 24
Hospital 25
Elevators/Stairs 26
STAFF
Offices 27
Officers' Lodging 28
Officers' Dayroom 29
Dr. and Eng. Lodging 30
Crew Lodging 31
Crew Dayroom 32
Mandatory adjacency
Desirable adjacency
Nondesirable adjacency

Bubble Diagram--Phase 1

This step shows the relationship of spaces to each other without size consideration.



KEY

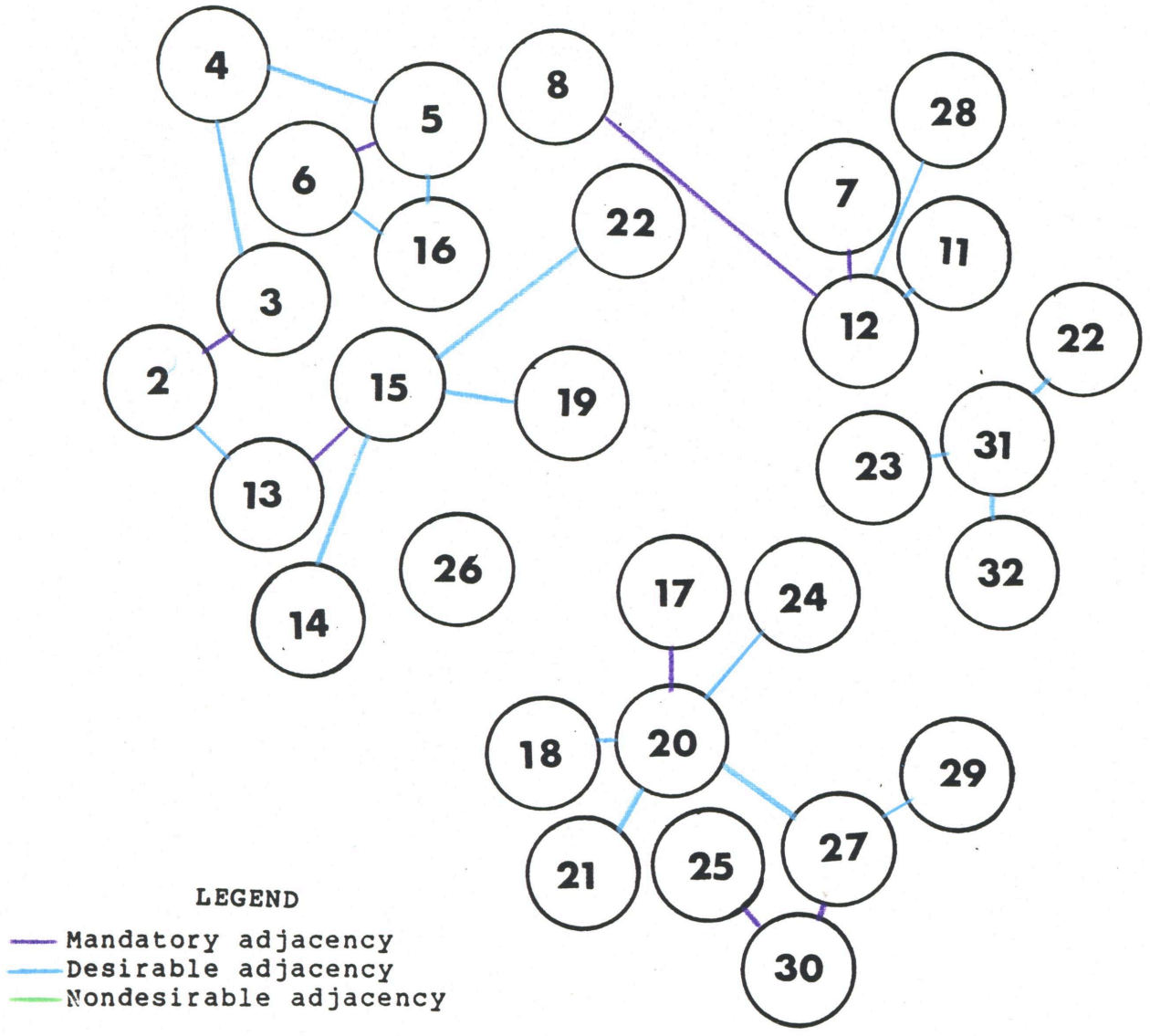
1. Theatre
2. Paradise Lounge
3. Casino
4. Cocktail Lounge
5. Outdoor Lounge
6. Indoor Lounge
7. Cumka Bar
8. Pool
9. Sports Deck
10. Running Track
11. Fitness Room
12. Open Deck
13. Dining Room
14. Cafe
15. Galley
16. Pantry
17. Shopping Arcade
18. Playroom
19. Mechanical
20. Lobby
21. Restrooms
22. Storage
23. Baggage
24. Liquor Store
25. Hospital
26. Elevators\Stairs
27. Office
28. Officers' Lodging
29. Officers' Dayrm.
30. Dr.\Eng. Lodging
31. Crew Lodging
32. Crew Dayroom

LEGEND

Mandatory adjacency
Desirable adjacency
Nondesirable adjacency

Bubble Diagram--Phase 2

Each space is an equal size with interactions between them dictating the adjacency relationships.



LEGEND

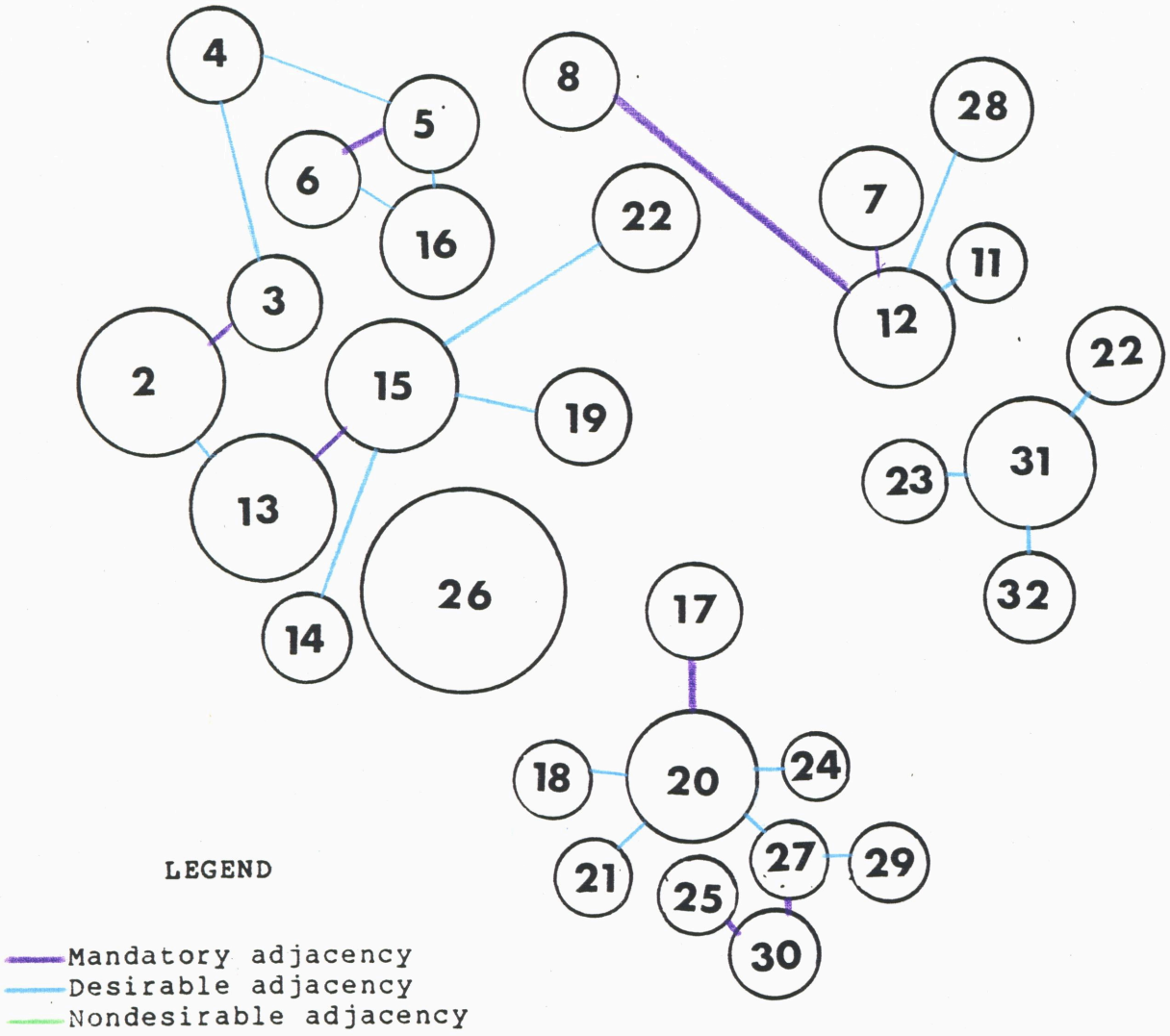
- Mandatory adjacency
- Desirable adjacency
- Nondesirable adjacency

KEY

1. Theatre
2. Paradise Lounge
3. Casino
4. Cocktail Lounge
5. Outdoor Lounge
6. Indoor Lounge
7. Cumka Bar
8. Pool
9. Sports Deck
10. Running Track
11. Fitness Room
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15. Galley
16. Pantry
17. Shopping Arcade
18. Playroom
19. Mechanical
20. Lobby
21. Restrooms
22. Storage
23. Baggage
24. Liquor Store
25. Hospital
26. Elevators\Stairs
27. Office
28. Officers' Lodging
29. Officers' Dayrm.
30. Dr.\Eng. Lodging
31. Crew Lodging
32. Crew Dayroom

Bubble Diagram--Phase 3

In this phase the relative size of each space is added.



LEGEND

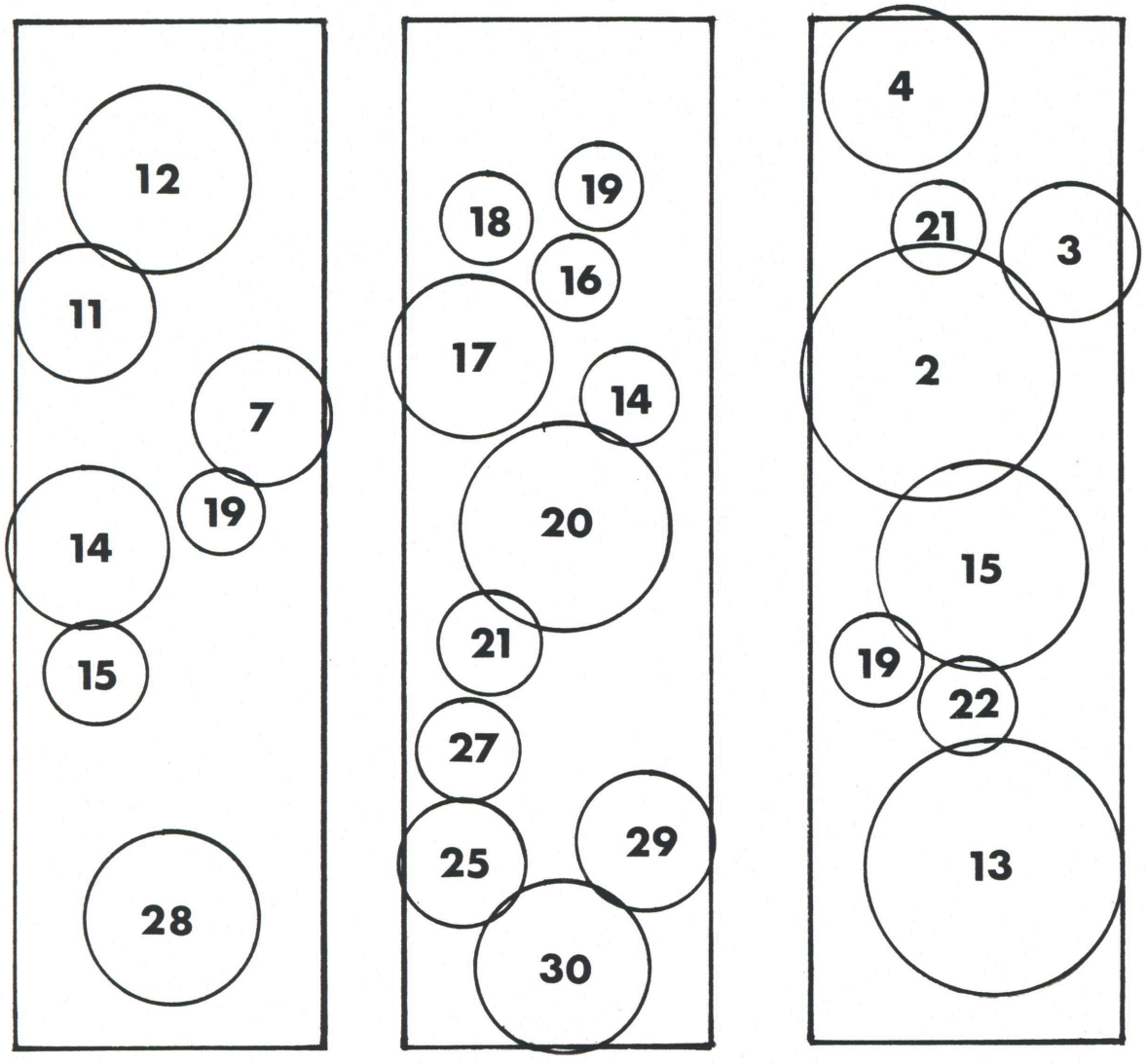
Mandatory adjacency
Desirable adjacency
Nondesirable adjacency

KEY

1. Theatre
2. Paradise Lounge
3. Casino
4. Cocktail Lounge
5. Outdoor Lounge
6. Indoor Lounge
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22. Storage
23. Baggage
24. Liquor Store
25. Hospital
26. Elevators\Stairs
27. Office
28. Officers' Lodging
29. Officers' Dayrm.
30. Dr.\Eng. Lodging
31. Crew Lodging
32. Crew Dayroom

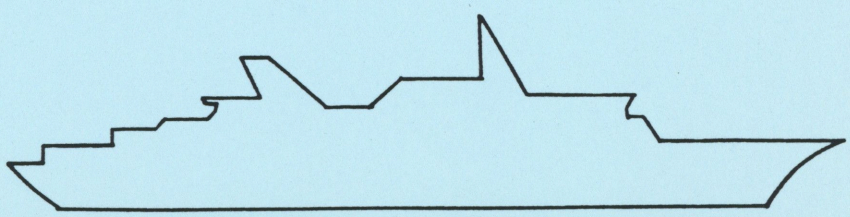
Bubble Diagram--Phase 4

The spaces are arranged proportionally in the ship's envelope according to the previous flow diagrams.



KEY

1. Theatre
2. Paradise Lounge
3. Casino
4. Cocktail Lounge
5. Outdoor Lounge
6. Indoor Lounge
7. Cumka Bar
8. Pool
9. Sports Deck
10. Running Track
11. Fitness Room
12. Open Deck
13. Dining Room
14. Cafe
15. Galley
16. Pantry
17. Shopping Arcade
18. Playroom
19. Mechanical
20. Lobby
21. Restrooms
22. Storage
23. Baggage
24. Liquor Store
25. Hospital
26. Elevators\Stairs
27. Office
28. Officers' Lodging
29. Officers' Dayrm.
30. Dr.\Eng. Lodging
31. Crew Lodging
32. Crew Dayroom



ENVIRONMENTAL ANALYSIS

Climatic Conditions

The **Skyward** cruises between the latitudes of 20 and 28 degrees. Typically the temperature within this zone varies between 78 and 95 degrees fahrenheit, the mean temperature being about 86 degrees. The climate is categorized as a wet and dry, and the humidity usually remains between 69-75%.

The summer months are generally hot with dry sunny mornings, a high sun period, and often showers in the afternoon.

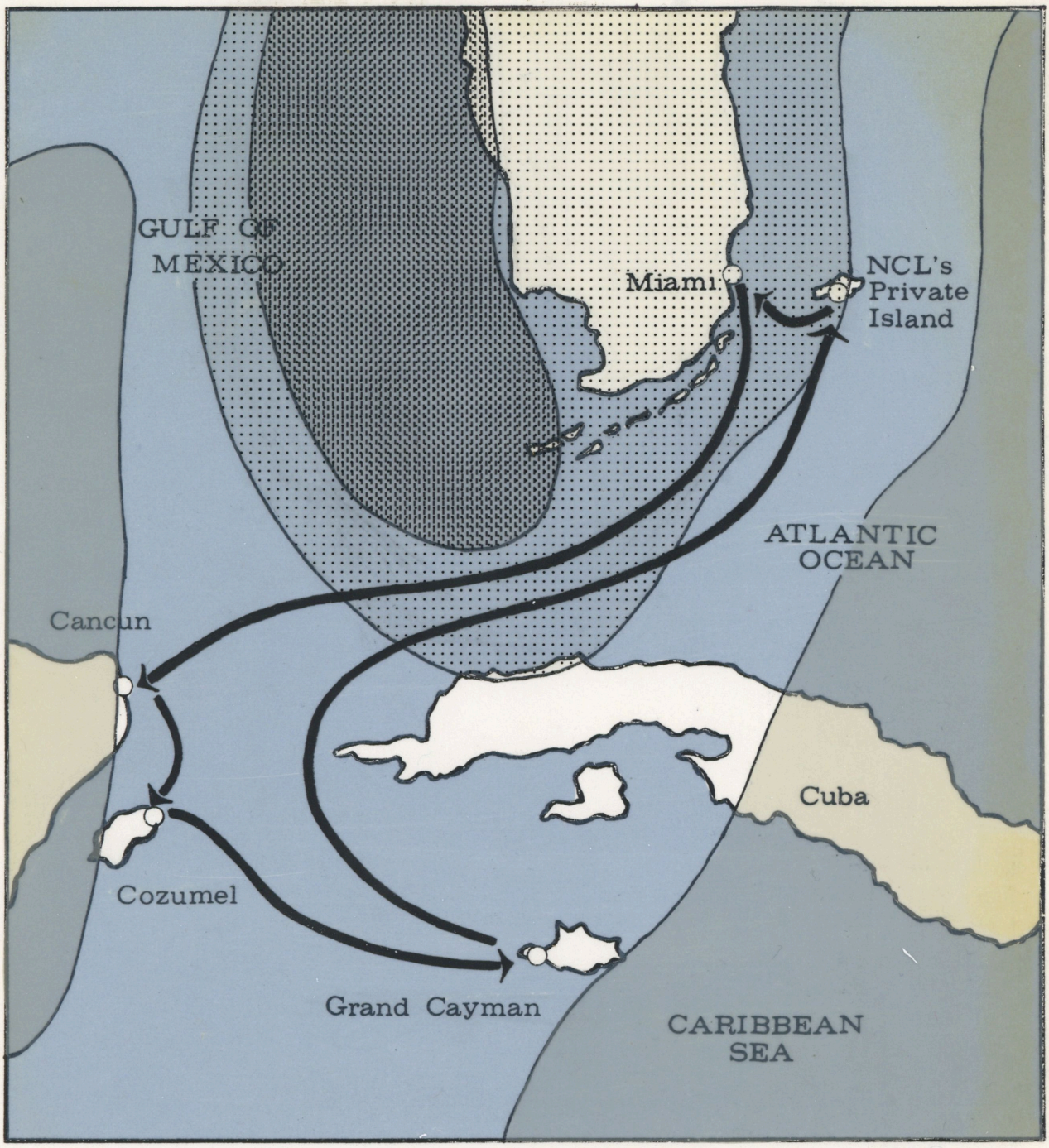
Tropical storms occur occasionally, particularly during the hurricane season from June to November.

During the winter months the weather may be variable depending upon the exact location of the ship. Temperatures generally remain in the range of hot and warm.

Since the salt water of the open seas has a great heat capacity and possibility of convective exchange between cold and warm surfaces, it decreases the fluctuation of temperatures and provides constant humidity.

Total Hours of Sunshine.....(Annual)

SHIP's ROUTE

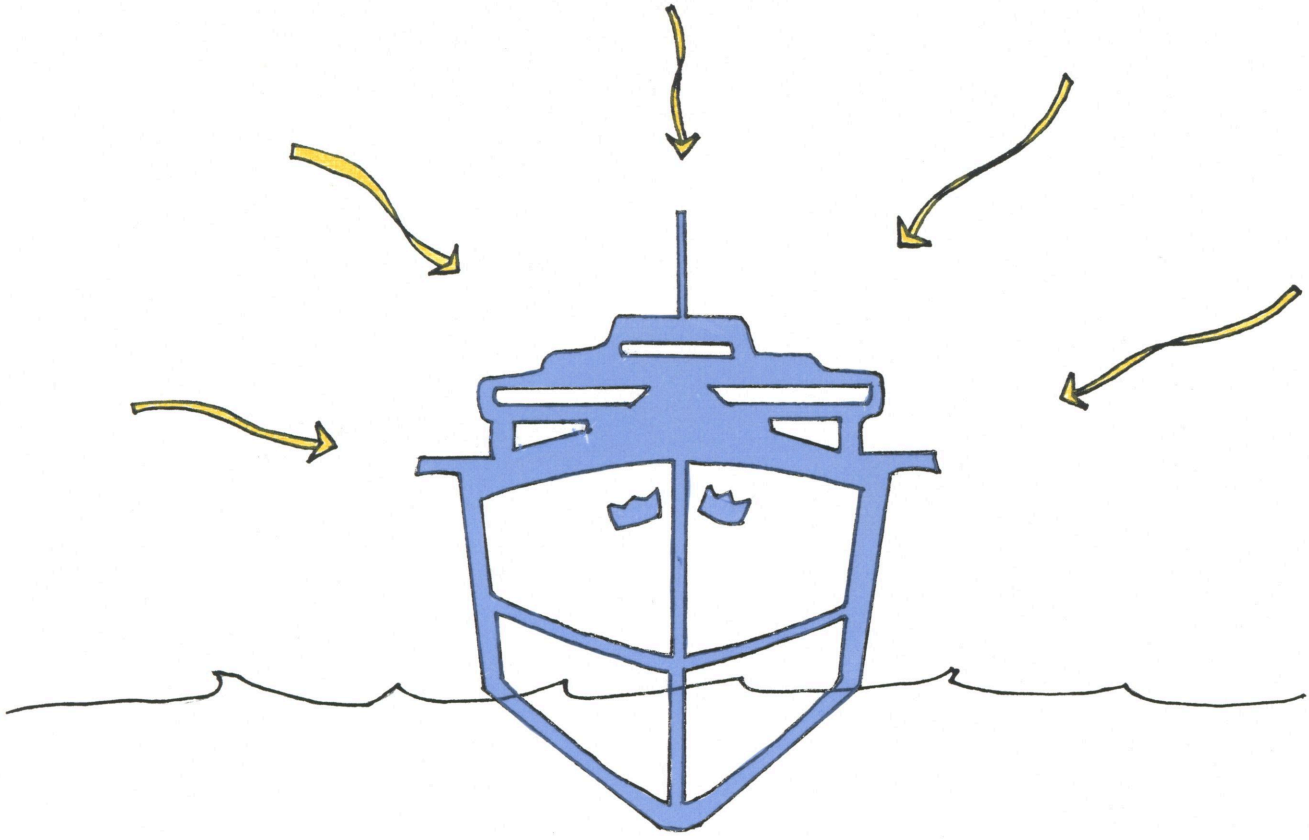


.... 3000 hrs.

.... 2800 hrs.

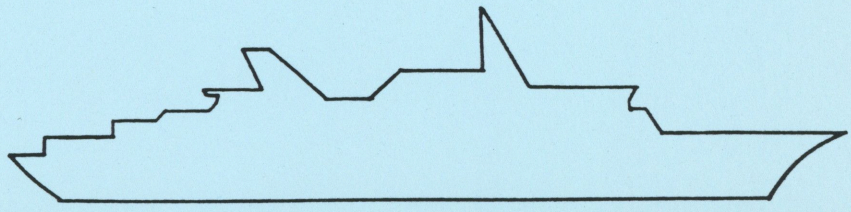
.... 2600 hrs.

.... 2400 hrs.



Solar Positions

Sun Angles will vary depending upon the location of the ship and the season of the year. The ship will be entirely exposed to the sun during at least one phase of its route, either embarking upon the cruise or returning from it. The high reflectivity of the ocean should also be considered.



CASE STUDIES

The following pages include several studies on dining and lounge areas aboard cruiseships. One study includes a ship, the the Sun Viking, which was designed and built by Wartsila Marine Industries Inc., the creators also of the **Skyward.**

Because of the limited documentation of areas aboard ships, studies have also been included concerning lobby and dining areas within large hotels. An analysis has been done on each and implications to the **Skyward** presented.

Project: T.S.S. Fairsky, Public Spaces

Designer: Joszi Meskan, Interior Architecture and Design

Location: San Francisco, California

Introduction:

The T.S.S. Fairsky is a French built cruiseship operated by Sitmar. Her guest capacity is 1,776 with 6 public spaces, and 606 cabins. Joszi Meskan was chosen as the designer because of her extensive knowledge of hotel design. Work on this project lasted four and one half years.

Analysis:

Public spaces were designed using contemporary lines combined with old-time quality work.

Lighting is a dominant feature with a variety of types used including cold cathode tubes.

Sculptural forms and flowing lines were used to emphasize the structural curves of the vessel. The resulting design scheme was one of home-like comfort yet luxurious.

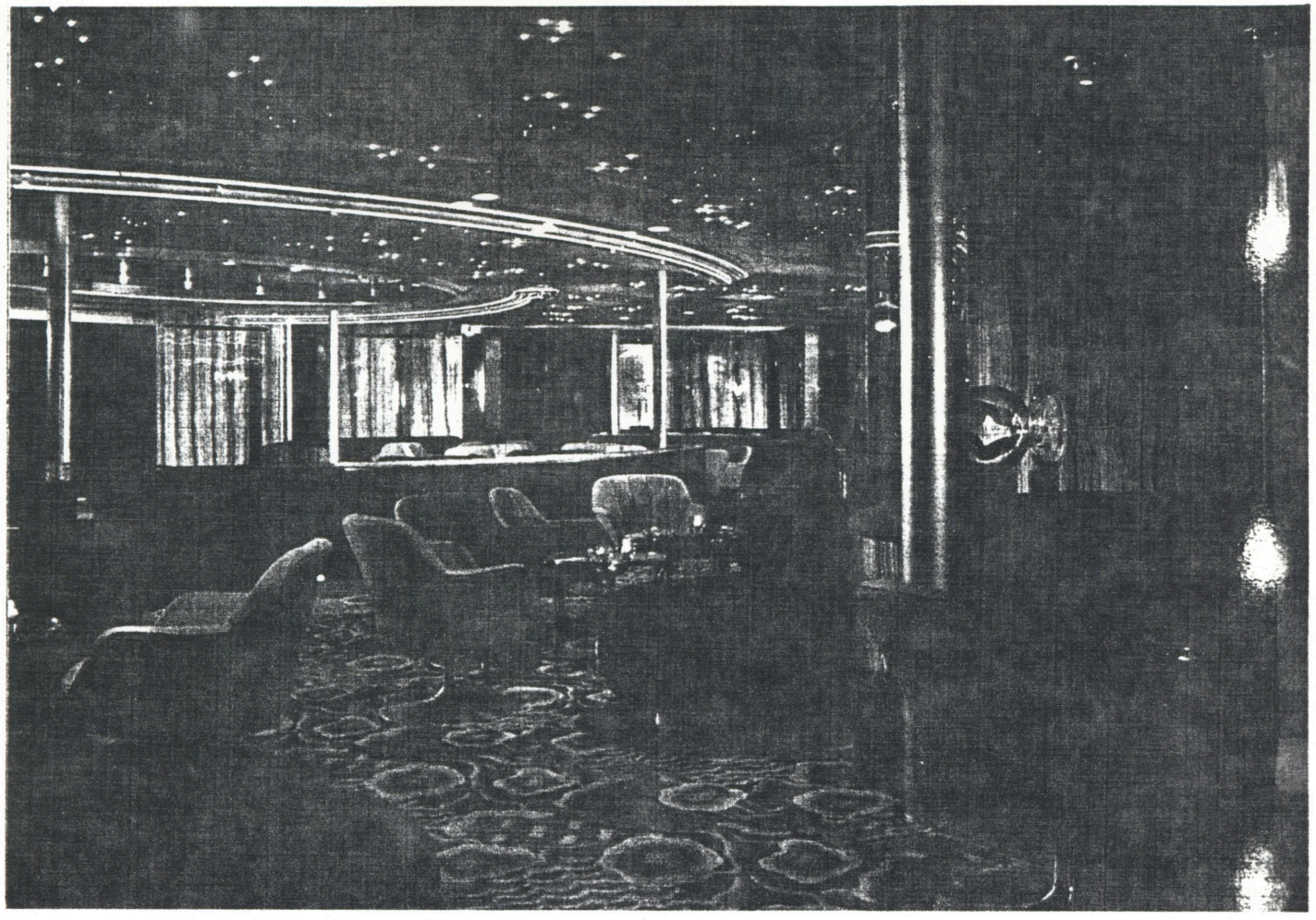
Many hand crafted items were designed especially for the Fairsky's public spaces. Hand painted tigereye walls were used to hide mechanical equipment and headroom was added by relocating air conditioning ducts.

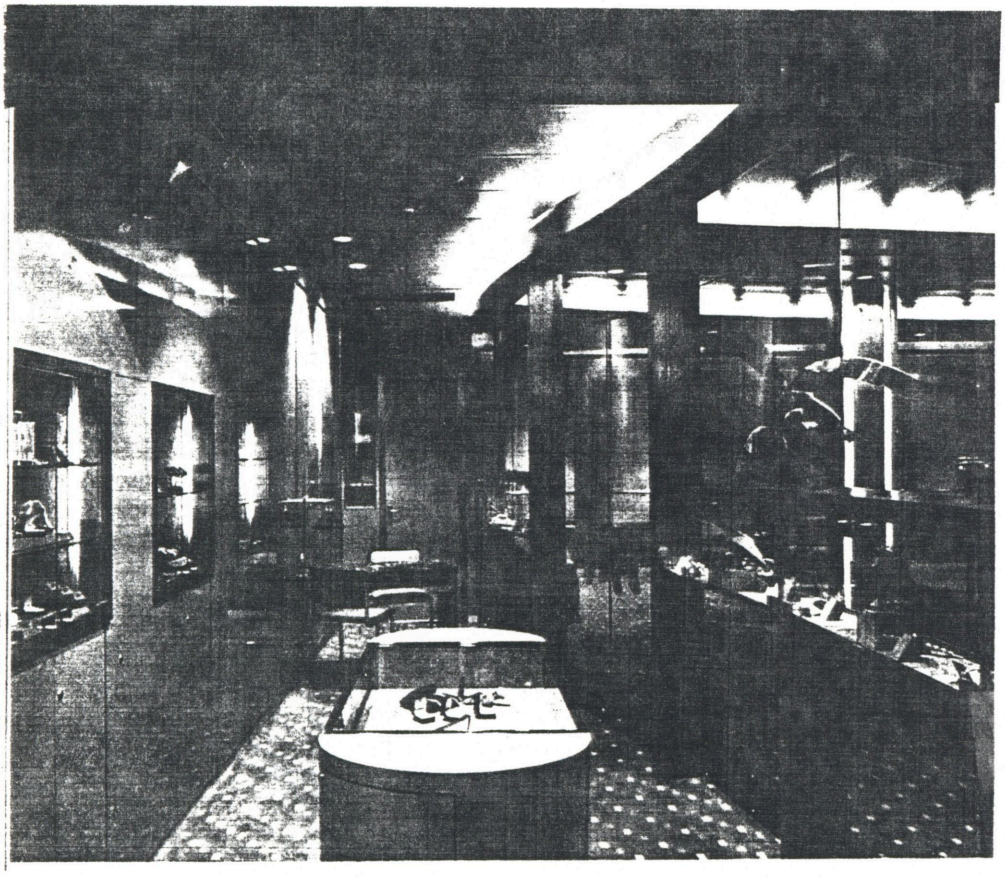
Implications:

The public spaces on the T.S.S. Fairsky were refurbished using curvilinear lines and eliminating long straight passageways, spaces and aisles. This is a major concern also for the **Skyward.**

The aura of mystique that won the Meskan Design Firm much acclaim was produce by the use of natural materials and intense clear color. Soft flowing forms and special lighting were important aspects in the restaurant and lounge areas of the Fairsky and willbe important to the **Skyward's** design also.

A large open plan with easy accessibility to safety equipment (ie. lifeboats, fire doors, etc.) was utilized thus creating luxurious and spacious areas. Each space aboard the Fairsky was treated as an individual concern; this uniqueness and elegancewould be appropriate and necessary aboard the **Skyward.**





Project: Viking Lounge

Designer: Joyce/Snoweiss Design Group

Location: Aboard the Sun Viking

Introduction:

The Viking Lounge is a round 660 sq.ft. lounge that is cantilevered from the ship's smoke stack, 32 feet above the upper deck. This lounge is one of the most poular aboard the ship especially during sunset.

Analysis:

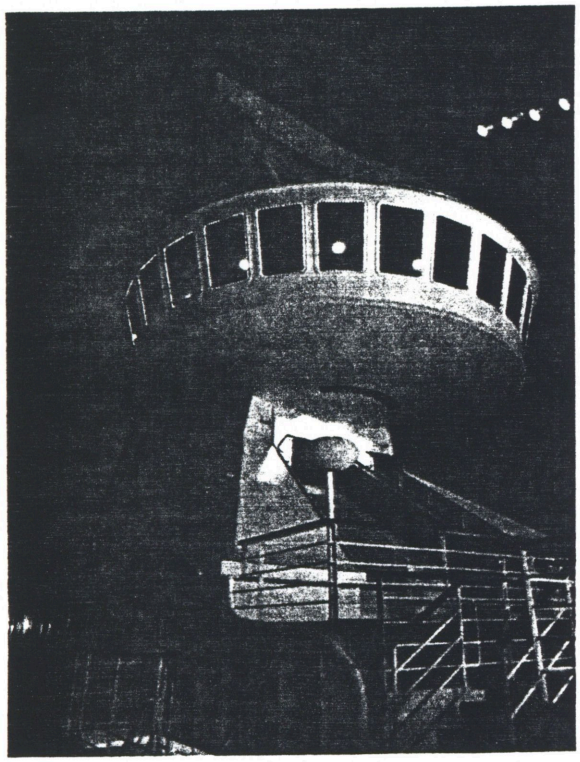
The Viking Lounge utilizes the saucer-shaped space to create a unique lounge that capitalizes on the view.

Seating is arranged mainly around the perimeter of the lounge with the service bar and stairway occupying most of the center area.

Implications:

A round predetermined floor plan presented a few limitations, as did the strict Norwegian Maritime Codes. A functional exciting design was produced and is possible aboard similar spaces on the **Skyward.** The Viking Lounge is a unique lounge not only in its location but also in the implications of the view to the user. Spaces aboard the **Skyward** will also deal with the presence of a view to the sea and a sense of openness.

Ceiling composition was an important aspect in the design of the Viking lounge. Attention to surfaces,and distinctive lighting were a major concern and will also be dealt with aboard the **Skyward.**

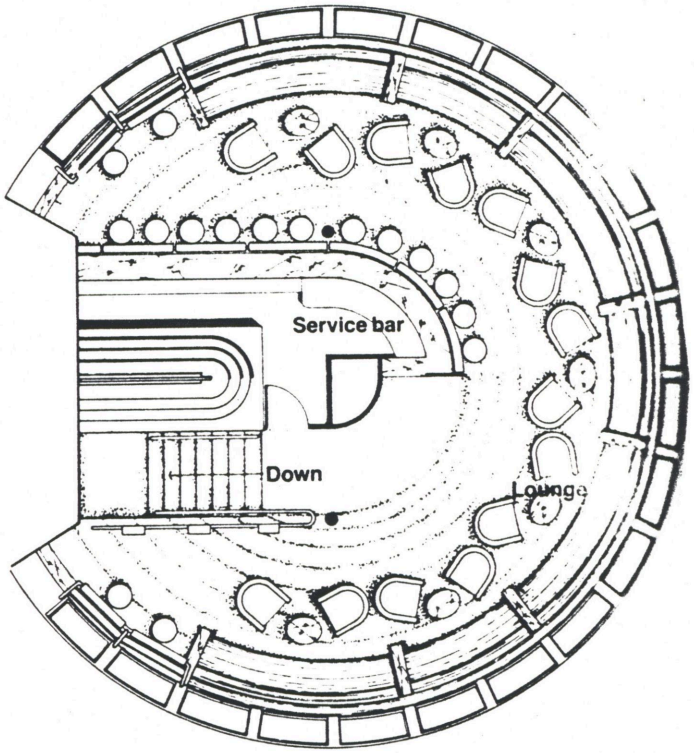


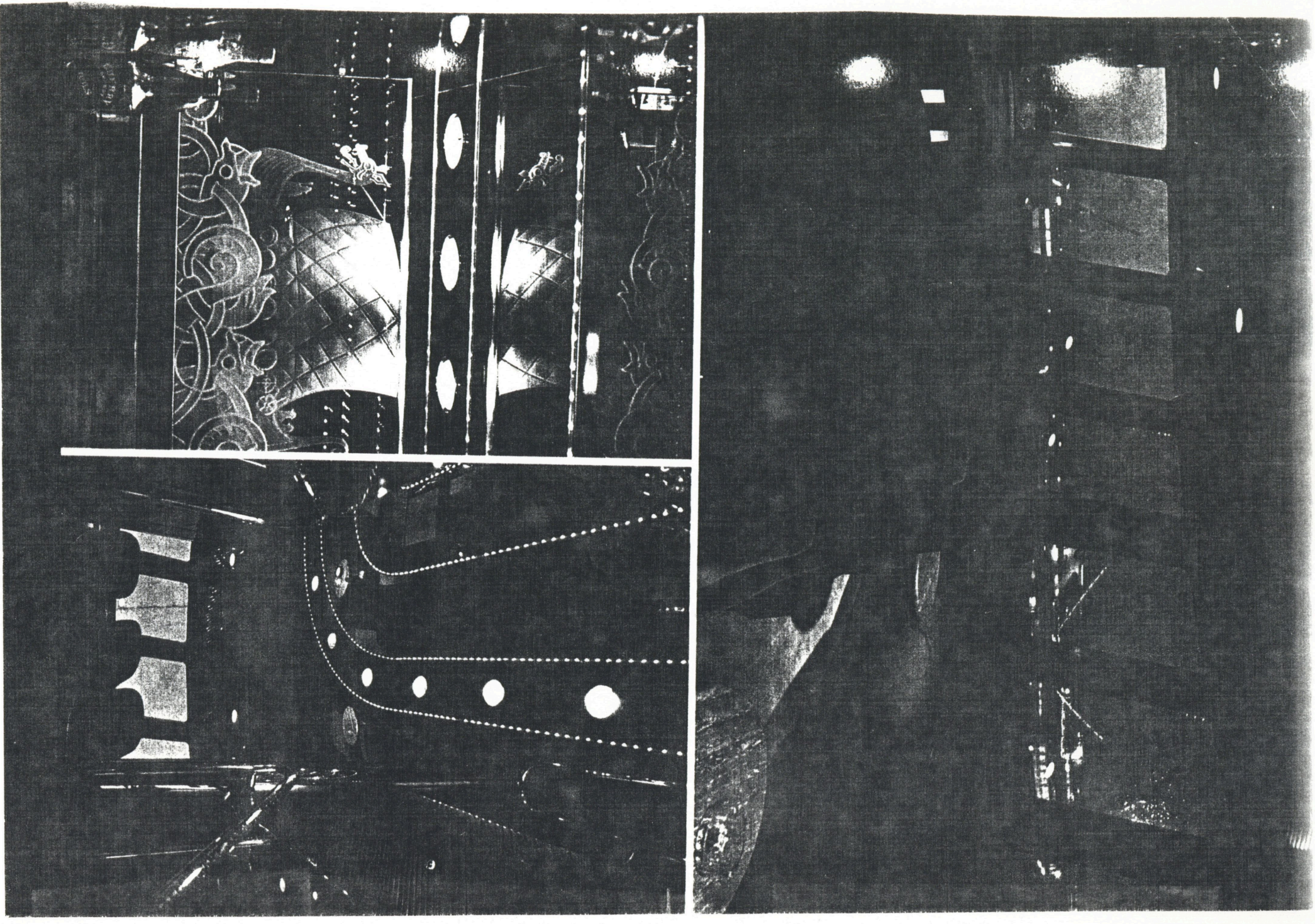
Above Deck

Joyce/Snoweiss design the interior of an elevated cocktail lounge aboard an ocean liner.

PHOTOGRAPHY: STEPHEN BROOKE

INTERIORS THAT MOVE





Project: Positano

Designer: Croxton Collaborative

Location: Manhattan, New York

Introduction:

Positano is a restaurant facility located on Park Avenue South in Manhattan. The restaurant occupies a leased 2,500 sq.ft. two-story industrial space. Cuisine focuses on seafood and fish which became elements in the design of the space.

Analysis:

The theme, derived from a small Italian town nestled within the rolling hills, was interpreted abstractly in this unique design.

The multilevel dining includes spaces in two upper levels an a ground level adjoined by stairways that wrap columns. Traffic flow follows a circular pattern around the perimeter of the first floor, up a stairway, and through the top zone.

The intermediate level offers a view to the level below while the upper level provides a view from only three tables.

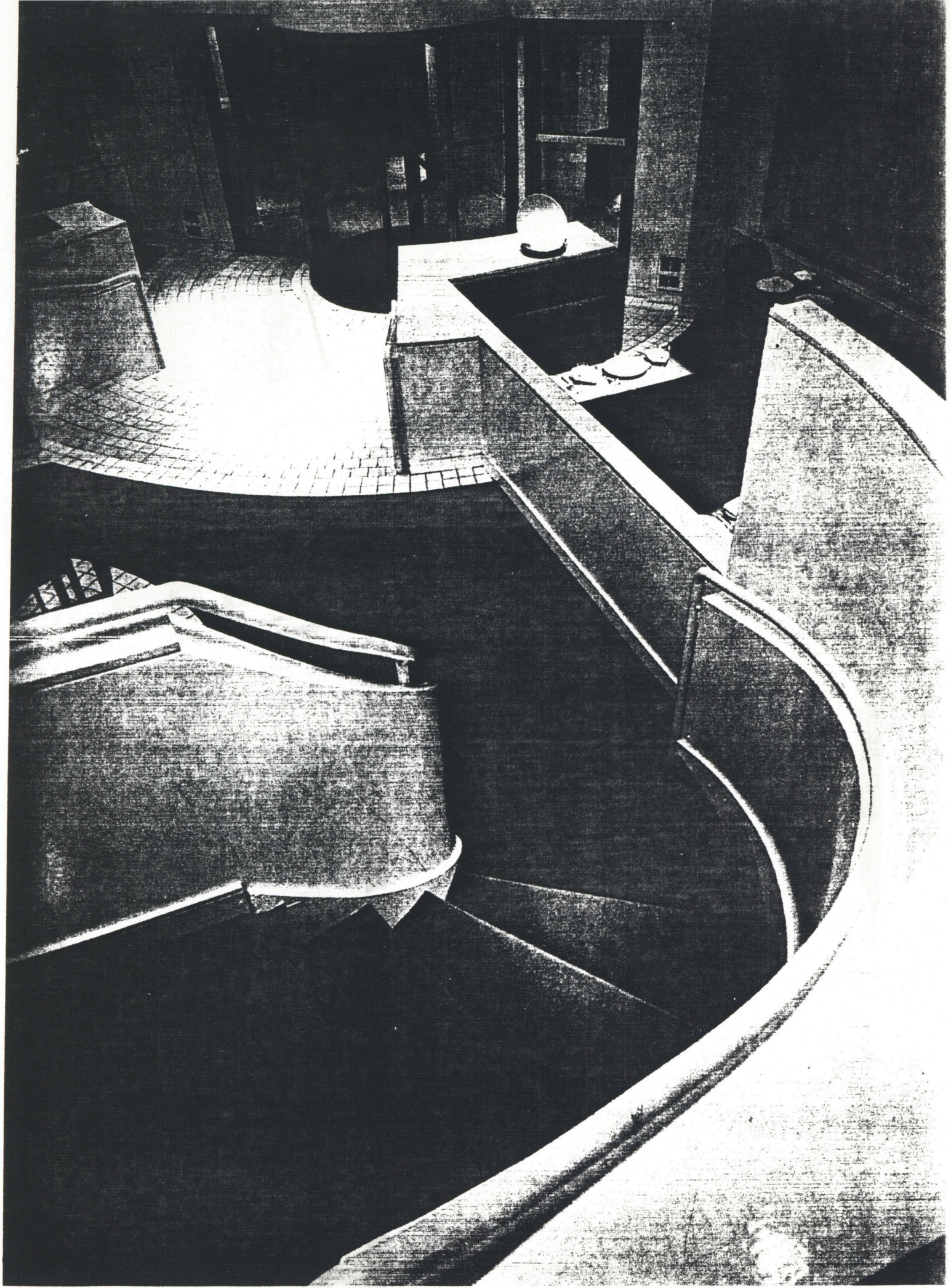
Materials used in the Positano were limited to carpet, tile, and marble. Exposed ductwork, columns, and ceilings were treated with paint finishes.

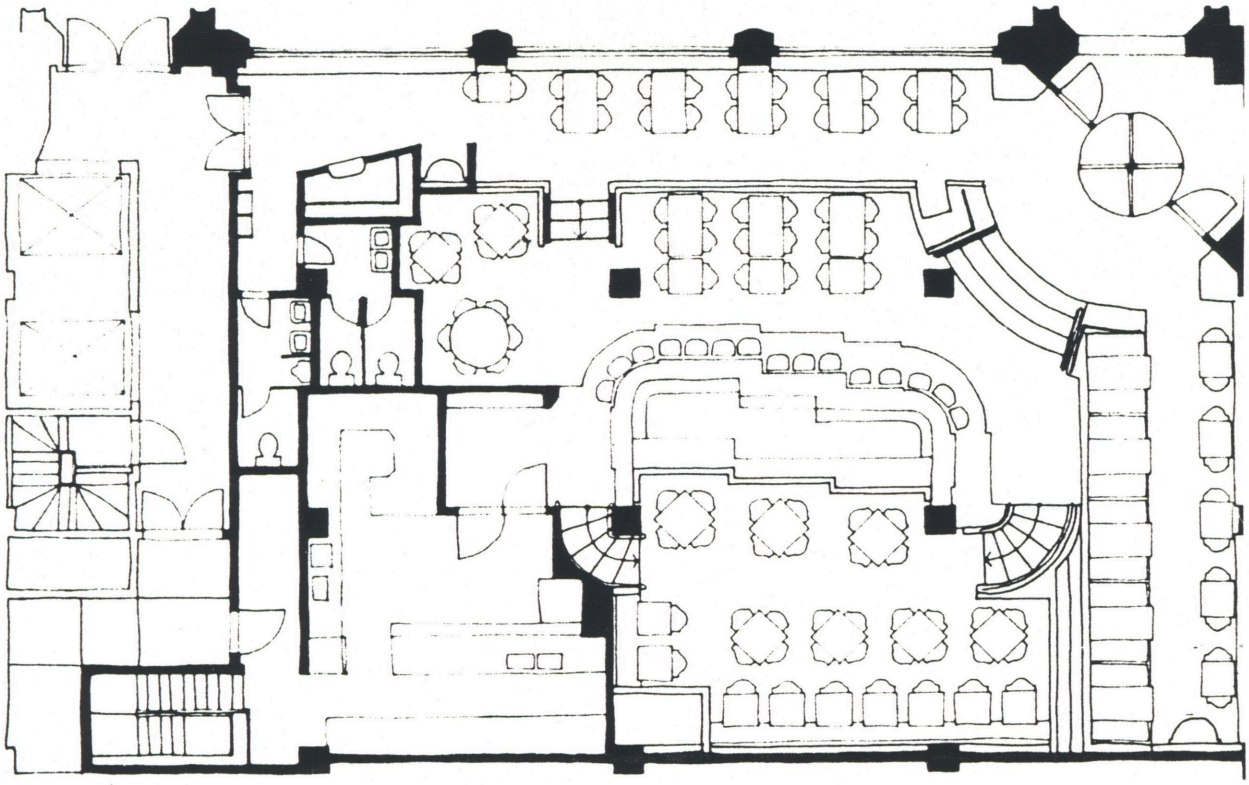
Implications:

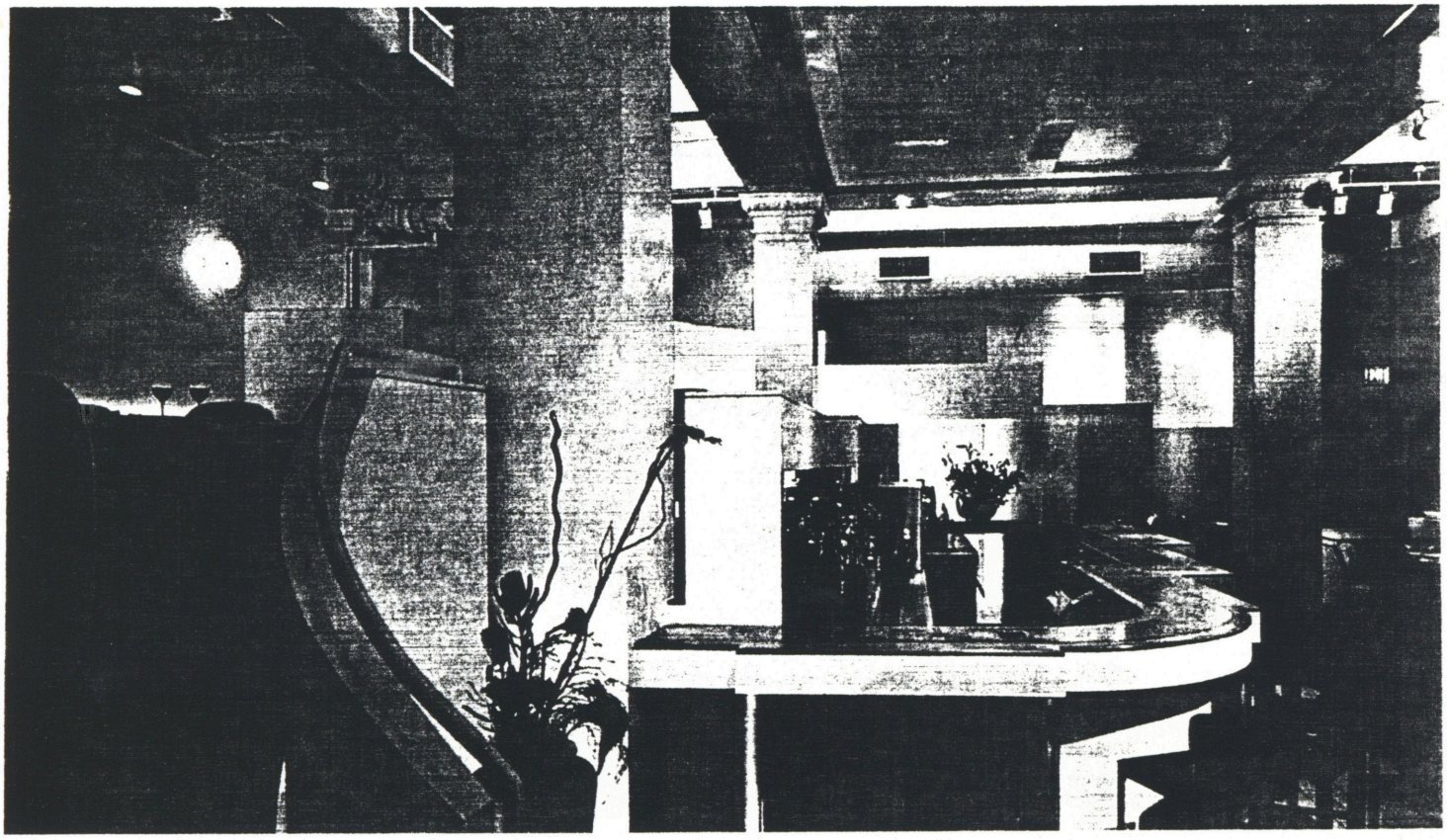
Positano's design offers no dining rooms per se, only distinct dining areas. Areas are delineated by the change in level and stepped wall treatments. This scheme which imparts a sense of motion and openness is an important aspect in the dining facilities aboard the **Skyward.**

Both the Positano and the dining space aboard the **Skyward** are essentially large halls supported by columns which must be integrated into the design.

The volume of the large space within the Positano was scaled down to human-size areas by using unique blocking treatments thus focusing the views on certain areas. This concept will be an important factor the **Skyward.**







Project: Meridian Hotel

Designer: Tom Lee, Limited

Location: New Orleans, Louisiana

Introduction:

The Meridian Hotel is located between Canal Street and Common Street in New Orleans. Because of its unique location, the building has passage to both streets, which created an uncommon challenge for the designer.

Analysis:

The resulting floor plan of the Meridian Hotel is a strange twisted one because of the parking and exiting demands placed upon a building with an obscure site.

Varying elevations were produced within the building and include a rotunda, lobby, and cocktail lounge.

Special lighting fixtures were developed to accommodate the vast scale within the building. Computerized devices are used to produce varying intensities.

Enormous column supports measuring 42" in diameter are located within the entrance space along with the elevator core.

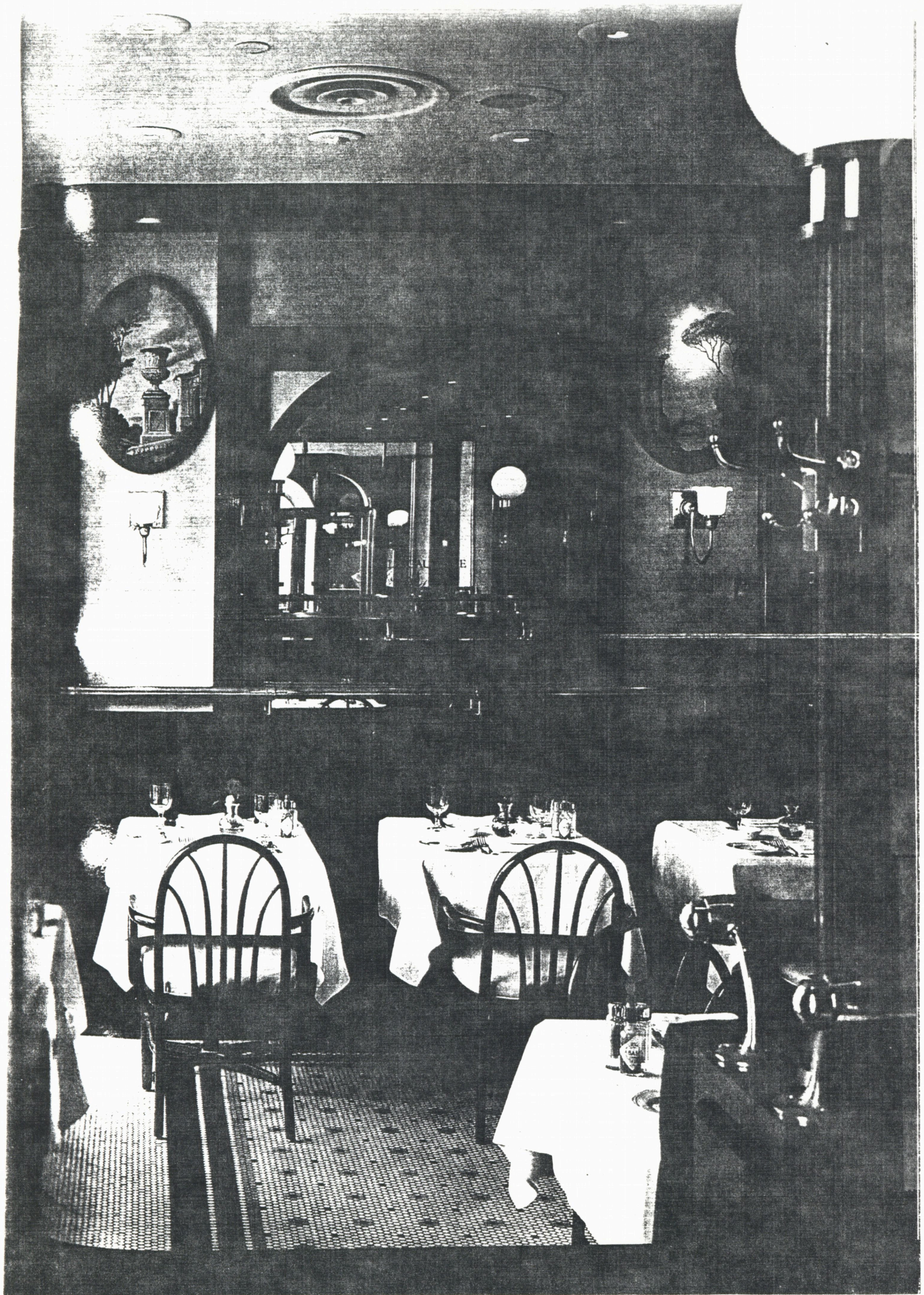
Flooring is limited to tile and carpeting. Custom murals, brass railings, and custom sconces were integrated into the design.

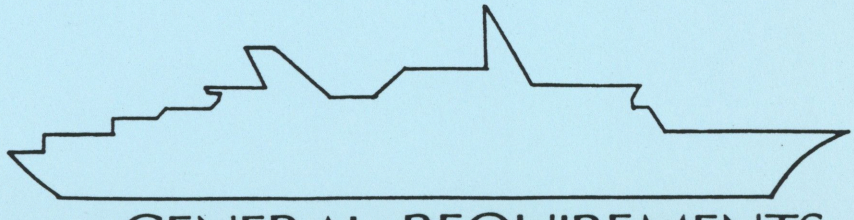
Implications:

The design of the Meridian Hotel presented unique challenges in that circulation paths were critical yet obstructed by large column supports. The ventilation and support systems aboard the **Skyward** create similar restrictions within the entrance lobby.

An arcade provides access to small retail shops within the Meridian and is a major concern also aboard the **Skyward.**

Major public areas throughout the Meridian were treated with special lighting fixtures and ceiling configurations. Because of the enclosed area aboard the **Skyward** ceiling treatments and lighting are a major concern.





GENERAL REQUIREMENTS

* Mechanical equipment must be accessible, elements in the wall and ceilings must be hinged or demountable.

* Total maintenance must be feasible within the eight hours between cruises.

* Textiles must be non-allergenic.

* Textiles must be non-flammable.

* Double doors in public spaces are mandatory for air-conditioning efficiency.

* Furniture must not have casters.

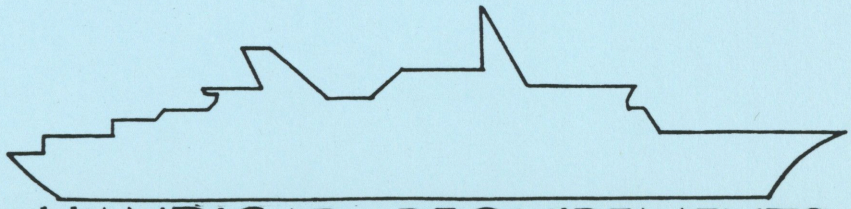
* Sharp corners should be avoided.

* Sprinkler heads may not be recessed.

* Individual components must be able to float and be weighted evenly.

* Wall surfaces must be non-flammable.

* Regular strength glass may not be used.



HANDICAP REQUIREMENTS

The following handicap requirements pertain only to the public spaces aboard the **Skyward.** Although the NCL attempts to accommodate the physically handicapped person, it should be noted that there are certain areas aboard the **Skyward** that are inaccessible to wheelchairs.

Passengers who are handicapped must be either self-sufficient or traveling with a companion to assist them. Small collapsible wheelchairs are the responsibility of the handicapped person.

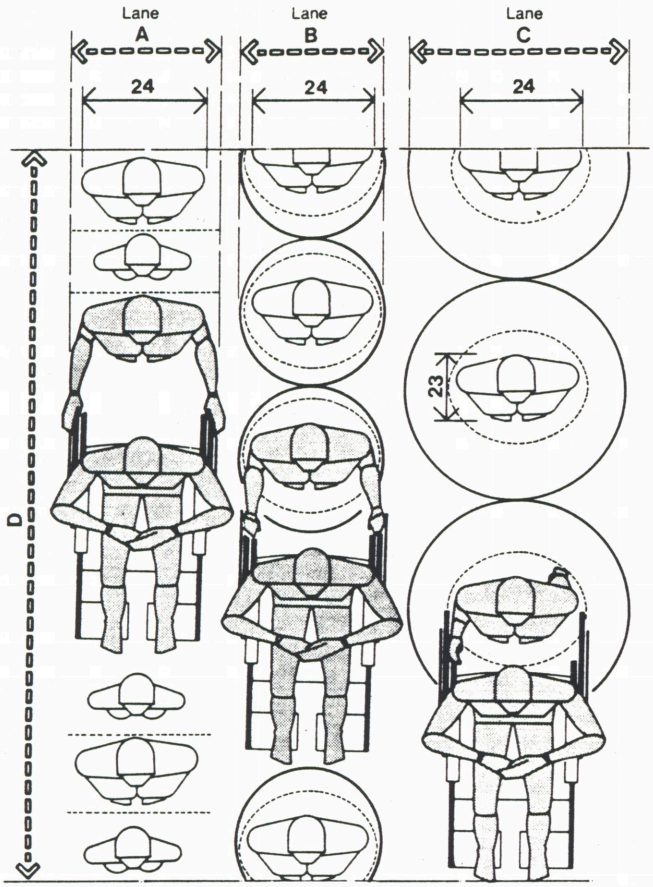
Although the design of passenger's cabins is not within the scope of this project, it should be noted that the bathroom doors in the cabins are only 20-22 inches wide and there is a 5-6" riser between the bathroom and sleeping area.

Physically impaired passengers must sign a statement which releases the NCL of all responsibility associated with their handicap, regarding their ability to use shipboard facilities and in the case of emergency.[1]

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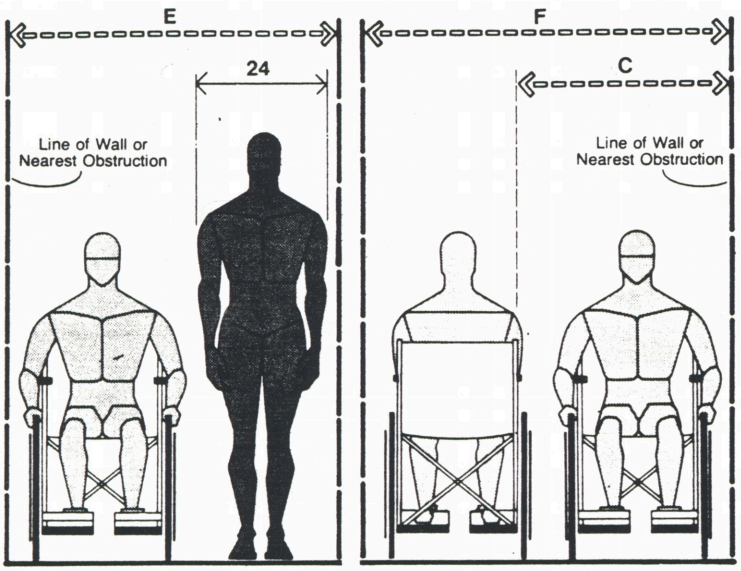
[1]Voyages. (Florida: Norwegian Caribbean Cruise Lines. 1988) pp. 30

8.1 HORIZONTAL CIRCULATION SPACES



QUEUE LINES / COMPARATIVE DENSITIES INCLUDING WHEELCHAIR-BOUND

The drawing at the top indicates the impact of a wheelchair-bound person on the same queue shown on the preceding page. The bottom drawing indicates corridor width clearances necessary to accommodate wheelchair circulation. Full two-way passage requires 60 in, or 152.4 cm, to allow two wheelchairs to pass side by side. Clearance for a single wheelchair is 36 in, or 91.4 cm. A 54-in, or 137.2-cm, corridor will allow an able-bodied individual to walk along side or pass a wheelchair-bound person. Ideally, rest stops should be provided where corridor lengths are particularly long. These may be in the form of properly designed alcoves along the circulation path; rest room lounges or reception areas may be substituted if reasonably located. Maximum distance between rest room stops should be about 100 ft, or 30.5 m. Provisions for wheelchair turning should also be considered. A full 360° turn can be negotiated within a 60-in, or 152.4-cm, diameter circle.



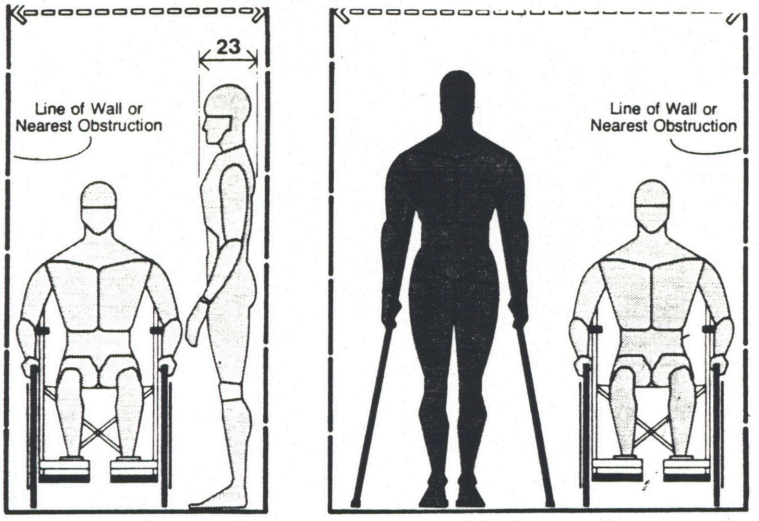
PARTIAL 2-WAY CIRCULATION **FULL 2-WAY CIRCULATION**

WHEELCHAIR CIRCULATION / CORRIDORS AND PASSAGES

	in	cm
A	30	76.2
B	24	61.0
C	36	91.4
D	120	304.8
E	54	137.2
F	60	152.4

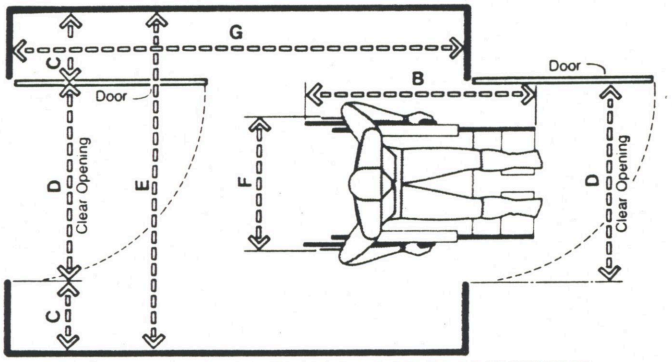
8.1 HORIZONTAL CIRCULATION SPACES

The top drawing indicates that a 60-in, or 152.4-cm, clearance is necessary for a person on crutches to walk along side or pass a person in a wheelchair. A 42-in, or 106.7-cm, clearance is needed to accommodate a person standing sideways, while allowing a wheelchair-bound person to pass. The other two drawings indicate the clearances necessary to accommodate a wheelchair in spaces where a series of two doors are involved. One drawing illustrates a situation where the two doors are in a row and the other where the doors are at right angles. A clearance of 84 in, or 213.4 cm, is necessary to allow the wheelchair to clear the first door as it swings shut. Since the length of the wheelchair is 42 in, or 106.7 cm, the 84-in dimension would allow for a door as wide as 36 in, or 91.4 cm, and an additional clearance of 6 in, or 15.2 cm, to spare. The 12-in, or 30.5-cm, minimum clearance on either side of the door allows enough maneuvering room for the wheelchair to approach the door at a slight angle and a person to grasp the door knob or pull and then back away. This is helpful when approaching the door from the in-swing side. When the doors are located at right angles to each other, it is essential that adequate space be provided to avoid interference between the two doors.

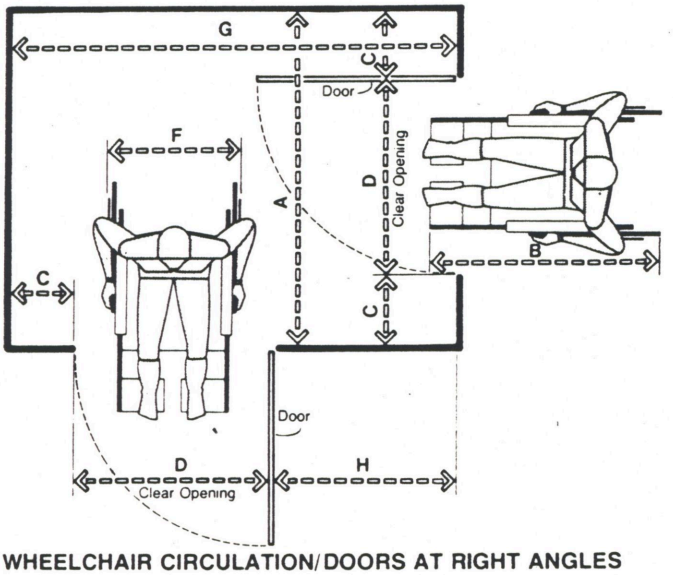


PARTIAL 2-WAY CIRCULATION FULL 2-WAY CIRCULATION

WHEELCHAIR CIRCULATION/CORRIDORS AND PASSAGES



WHEELCHAIR CIRCULATION / DOORS IN ALIGNMENT



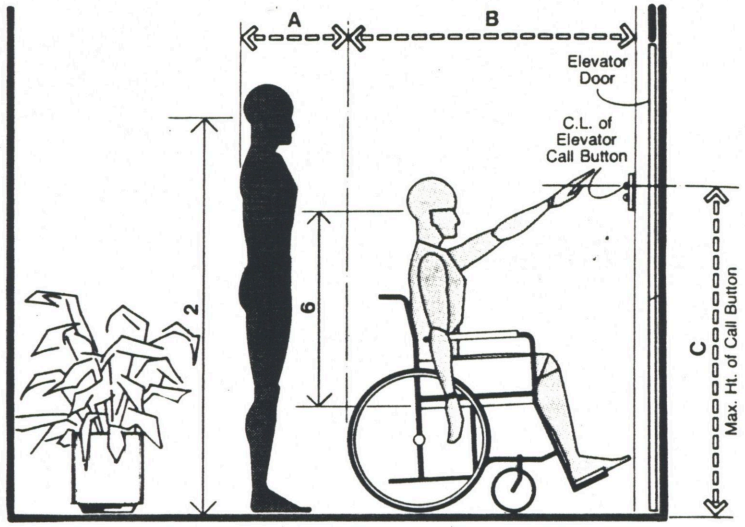
WHEELCHAIR CIRCULATION/DOORS AT RIGHT ANGLES

	in	cm
A	60	152.4
B	42	106.7
C	12 min.	30.5 min.
D	32	81.3
E	56 min.	142.2 min.
F	25	63.5
G	84	213.4
H	36 min.	91.4 min.

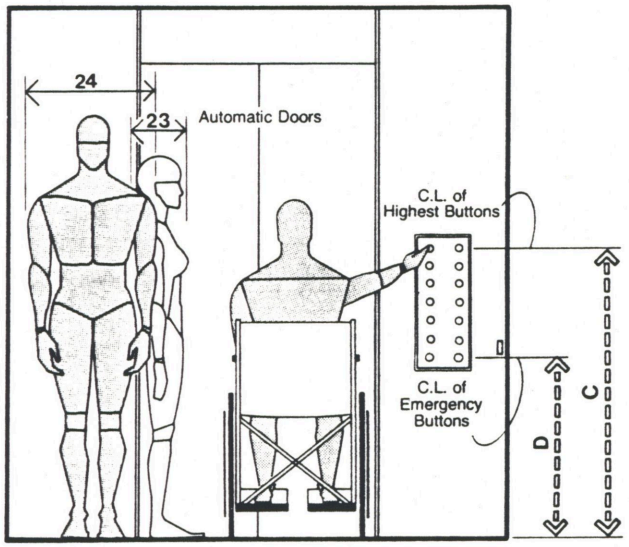
8.2 VERTICAL CIRCULATION SPACES

Vertical circulation systems must be responsive to the needs of people confined to wheelchairs as well as to those of able-bodied people. Corridor and lobby call buttons should be located 54 in, or 137.2 cm, above the floor. Emergency controls should be arranged so that the lowest button is a minimum of 30 in, or 76.2 cm, above the cab floor and the highest button a maximum of 48 in, or 121.9 cm, above the cab floor. Emergency buttons should be grouped together at the bottom of the panel. The center line of a telephone should be a maximum of 48 in above the cab floor and the height at the top of the handrail should be located between 32 and 34 in, or 81.3 and 86.4 cm, above the cab floor.

Ramps are also an important factor in providing accessibility of buildings to handicapped people. Most regulations and guidelines insist on a maximum gradient of one unit of height for every twelve units of length and a maximum horizontal distance of 30 ft, or 9 m, without a horizontal landing of at least 42 in, or 106.7 cm. Landings should be provided at all changes in ramp direction and at entrances and exits. Platform lengths should provide at least 42-in clearance from any door swing into the ramp. Where the door does not swing into the ramp, the platform should extend a minimum of 24 in, or 61 cm, past the latch side of the door.

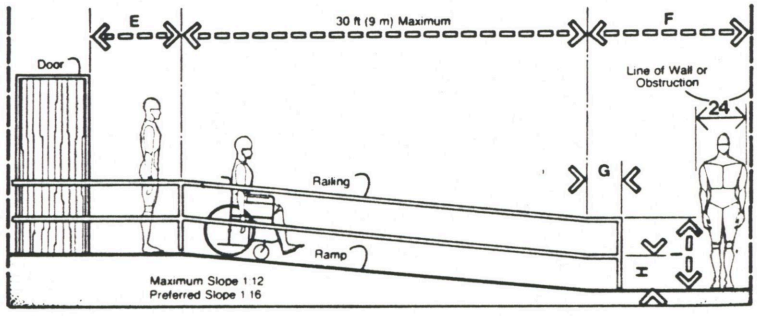


ELEVATORS / LOBBY



ELEVATORS / CAB INTERIOR

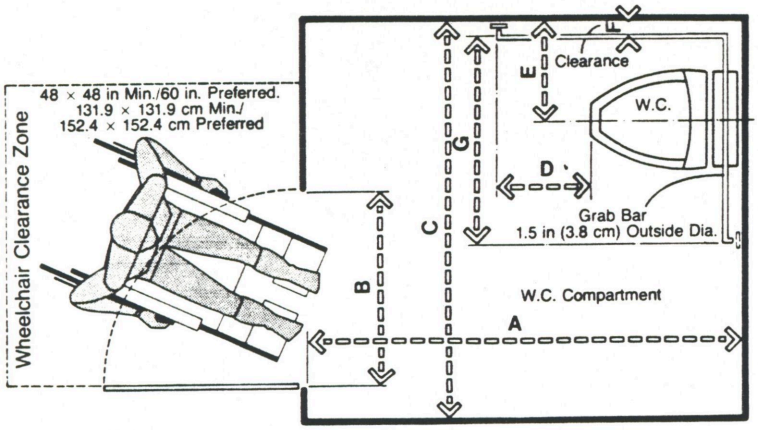
	in	cm
A	18	45.7
B	48 min.	121.9 min.
C	54 max.	137.2 max.
D	30	76.2
E	42 min.	106.7 min.
F	72 min.	182.9 min.
G	12–18	30.5–45.7
H	18–20	45.7–50.8
I	33–34	83.8–86.4



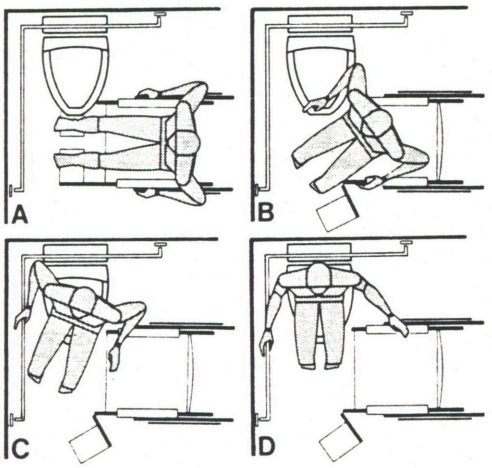
ACCESS RAMP

8.3 PUBLIC BATHROOMS

Rather than the front transfer approach discussed on the preceding page, a more comfortable access to the W.C. for the wheelchair user is the side approach transfer. The top drawing shows the minimum compartment dimensions for such a transfer: 66 by 72 in, or 167.6 by 182.9 cm. To appreciate the problems faced by those confined to a wheelchair in gaining access to rest room facilities, it is necessary to understand something of the transfer process. The center drawing attempts to break down that process into four basic movements; techniques will vary from user to user, but the process is essentially as illustrated. The bottom drawing shows some of the basic heights and clearances to be considered in a conventional W.C. compartment. Note that different heights for the W.C. are suggested in response to the anthropometric requirements of elderly people and children.



WATER CLOSET COMPARTMENT/ SIDE APPROACH TRANSFER



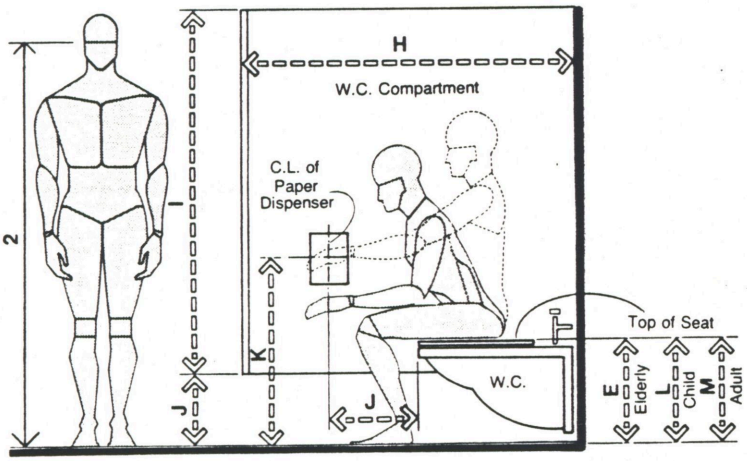
A User Approaches W.C. From the Side

B Chair Armrest Is Removed and Footrest Is Swung to Side for Clearance. For Stability and Leverage, One Hand Is Placed on W.C. Seat or Grab Bar and the Other on Chair. Transfer Movement Begins

C User Lifts, Slides, and Rotates onto W.C. Seat

D Transfer Is Complete. Body Stability Is Maintained by Grasping Grab Bar and Seat of Chair

TECHNIQUE FOR SIDE APPROACH TRANSFER

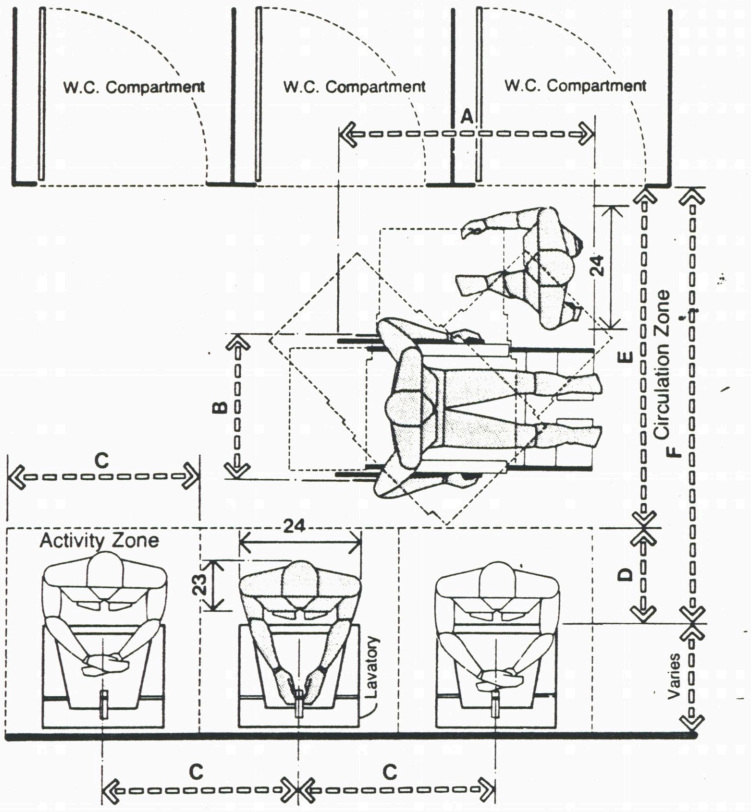


WATER CLOSET

	in	cm
A	72 min.	182.9 min.
B	32	81.3
C	66 min.	167.6 min.
D	18 min.	45.7 min.
E	18	45.7
F	1.5 min.	3.8 min.
G	36	91.4
H	54 min.	137.2 min.
I	58	147.3
J	12	30.5
K	30 max.	76.2 max.
L	10	25.4
M	14–15	35.6–38.1

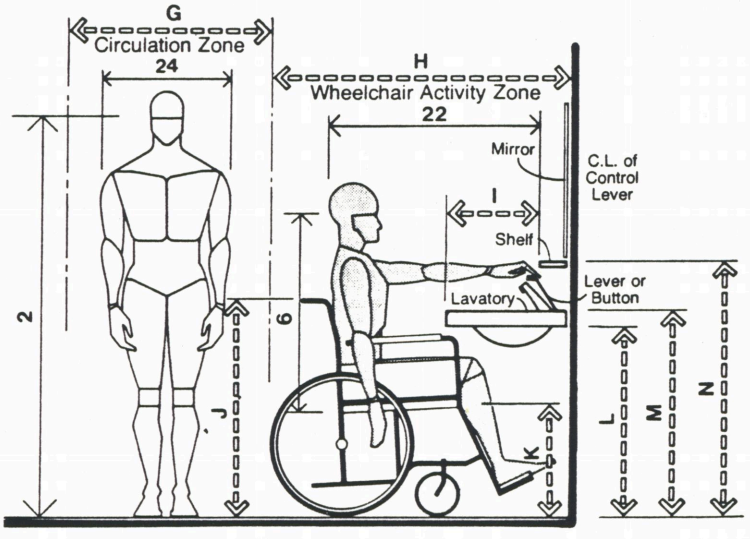
8.3 PUBLIC BATHROOMS

Lavatories, like urinals, are all too often located too close to each other. The result is an installation that may save floor space and may conform to the code in terms of quantity of fixtures, but simply does not permit the user comfortable access. It has been stated elsewhere that the larger-sized person has a maximum clothed body breadth dimension of almost 26 in, or 66 cm, which already exceeds the width of most lavatory models usually specified for public rest rooms. The body movements involved in the washing and grooming process increase the space occupied by the user even more. Unless adequate space is provided, body contact with the adjacent user will occur. A 32-in, or 81.3-cm, spacing as shown should provide for comfortable use of the fixtures. An activity zone of 18 in, or 45.7 cm, in front of the fixtures should be assumed. A circulation zone of 54 in, or 137.2 cm, is the minimum dimension that will allow for both wheelchair and pedestrian traffic. The drawing at the bottom indicates some of the basic clearances and heights required to make the lavatory accessible to the wheelchair user.

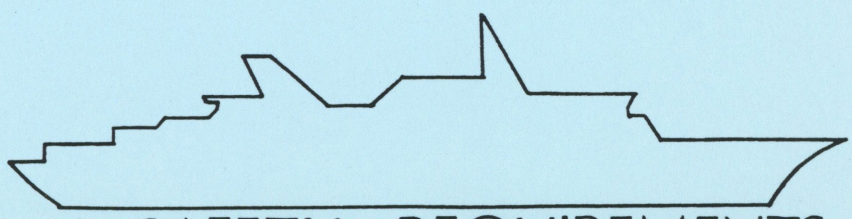


LAVATORY LAYOUT

	in	cm
A	42	106.7
B	25	63.5
C	32	81.3
D	18	45.7
E	54	137.2
F	72	182.9
G	30 min.	76.2 min.
H	48	121.9
I	18 max.	45.7 max.
J	36	91.4
K	19	48.3
L	30 min.	76.2 min.
M	34 max.	86.4 max.
N	40 max.	101.6 max.

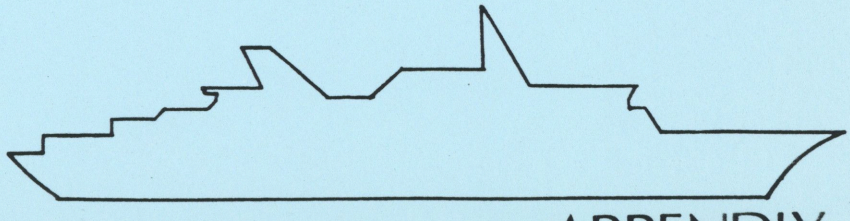


LAVATORY/ WHEELCHAIR USER



SAFETY REQUIREMENTS

Requirements regarding fire safety measures, means of escape, ventilation systems, personal life-saving appliances, main vertical and horizontal zones, and structure are all included in the appendix.



APPENDIX

1 The hull, superstructure, structural bulkheads, decks and deckhouses shall be constructed of steel or other equivalent material. For the purpose of applying the definition of steel or other equivalent material as given in regulation 3.7 the "applicable fire exposure" shall be according to the integrity and insulation standards given in the tables of regulations 26 and 27. For example where divisions such as decks or sides and ends of deckhouses are permitted to have "B-0" fire integrity, the "applicable fire exposure" shall be half an hour.

2 However, in cases where any part of the structure is of aluminium alloy, the following shall apply:

2.3 Where a fixed fire detection and fire alarm system is required for the protection of spaces other than those specified in paragraph 2.2, at least one detector complying with paragraph 1.11 shall be installed in each such space.

2.4 Detectors shall be located for optimum performance. Positions near beams and ventilation ducts or other positions where patterns of air flow could adversely affect performance and positions where impact or physical damage is likely shall be avoided. In general, detectors which are located on the overhead shall be a minimum distance of 0.5 m away from bulkheads.

2.5 The maximum spacing of detectors shall be in accordance with the table below:

Type of detector	Maximum floor area per detector	Maximum distance apart between centres	Maximum distance away from bulkheads
Heat	37 m^2	9 m	4.5 m
Smoke	74 m^2	11 m	5.5 m

The Administration may require or permit other spacings based upon test data which demonstrate the characteristics of the detectors.

2.6 Electrical wiring which forms part of the system shall be so arranged as to avoid galleys, machinery spaces of category A, and other enclosed spaces of high fire risk except where it is necessary to provide for fire detection or fire alarm in such spaces or to connect to the appropriate power supply.

3 *Design requirements*

3.1 The system and equipment shall be suitably designed to withstand supply voltage variation and transients, ambient temperature changes, vibration, humidity, shock, impact and corrosion normally encountered in ships.

3.2 Smoke detectors required by paragraph 2.2 shall be certified to operate before the smoke density exceeds 12.5 per cent obscuration per metre, but not until the smoke density exceeds 2 per cent obscuration per metre. Smoke detectors to be installed in other spaces shall operate within sensitivity limits to the satisfaction of the Administration having regard to the avoidance of detector insensitivity or oversensitivity.

3.3 Heat detectors shall be certified to operate before the temperature exceeds 78°C but not until the temperature exceeds 54°C, when the temperature is raised to those limits at a rate less than 1°C per minute. At higher rates of temperature rise, the heat detector shall operate within temperature limits to the satisfaction of the Administration having regard to the avoidance of detector insensitivity or oversensitivity.

3.4 At the discretion of the Administration, the permissible temperature

Regulation 24

Main vertical zones and horizontal zones

1.1 For ships carrying more than 36 passengers, the hull, superstructure and deckhouses shall be subdivided into main vertical zones by "A" class divisions. Steps and recesses shall be kept to a minimum, but where they are necessary they shall also be "A" class divisions. These divisions shall have insulation values in accordance with tables in regulation 26.

1.2 For ships carrying not more than 36 passengers, the hull, superstructure and deckhouses in way of accommodation and service spaces shall be subdivided into main vertical zones by "A" class divisions. These divisions shall have insulation values in accordance with tables in regulation 27.

2 As far as practicable, the bulkheads forming the boundaries of the main vertical zones above the bulkhead deck shall be in line with watertight subdivision bulkheads situated immediately below the bulkhead deck.

3 Such bulkheads shall extend from deck to deck and to the shell or other boundaries.

4 Where a main vertical zone is subdivided by horizontal "A" class divisions into horizontal zones for the purpose of providing an appropriate barrier between sprinklered and non-sprinklered zones of the ship, the divisions shall extend between adjacent main vertical zone bulkheads and to the shell or exterior boundaries of the ship and shall be insulated in accordance with the fire insulation and integrity values given in table 26.3 or in table 27.2.

5.1 On ships designed for special purposes, such as automobile or railroad car ferries, where the provision of main vertical zone bulkheads would defeat the purpose for which the ship is intended, equivalent means for controlling and limiting a fire shall be substituted and specifically approved by the Administration.

Regulation 28

Means of escape

1 Stairways and ladders shall be arranged to provide ready means of escape to the lifeboat and liferaft embarkation deck from all passenger and crew spaces and from spaces in which the crew is normally employed, other than machinery spaces. In particular, the following provisions shall be complied with:

.1 Below the bulkhead deck two means of escape, at least one of which shall be independent of watertight doors, shall be provided from each watertight compartment or similarly restricted space or group of spaces. Exceptionally, the Administration may dispense with one of the means of escape, due regard being paid to the nature and location of spaces and to the number of persons who might normally be accommodated or employed there.

.2 Above the bulkhead deck there shall be at least two means of escape from each main vertical zone or similarly restricted space or group of spaces at least one of which shall give access to a stairway forming a vertical escape.

.3 If a radiotelegraph station has no direct access to the open deck, two means of escape from or access to such station shall be provided, one of which may be a porthole or window of sufficient size or another means to the satisfaction of the Administration.

.4 A corridor or part of a corridor from which there is only one route of escape shall not exceed:

13 m in length for ships carrying more than 36 passengers, and
7 m in length for ships carrying not more than 36 passengers.

.5 At least one of the means of escape required by paragraphs 1.1 and 1.2 shall consist of a readily accessible enclosed stairway, which shall provide continuous fire shelter from the level of its origin to the appropriate lifeboat and liferaft embarkation decks or the highest level served by the stairway, whichever level is the highest. However, where the Administration has granted dispensation under the provisions of paragraph 1.1 the sole means of escape shall provide safe escape to the satisfaction of the Administration. The width, number and continuity of the stairways shall be to the satisfaction of the Administration.

.6 Protection of access from the stairway enclosures to the lifeboat and liferaft embarkation areas shall be to the satisfaction of the Administration.

.7 Stairways serving only a space and a balcony in that space shall not be considered as forming one of the required means of escape.

2.1 In special category spaces the number and disposition of the means of escape both below and above the bulkhead deck shall be to the satisfaction of the Administration and in general the safety of access to the embarkation deck shall be at least equivalent to that provided for under paragraphs 1.1, 1.2, 1.5 and 1.6.

2.2 One of the escape routes from the machinery spaces where the crew is normally employed shall avoid direct access to any special category space.

Regulation 29

Protection of stairways and lifts in accommodation and service spaces

1 All stairways shall be of steel frame construction except where the Administration sanctions the use of other equivalent material, and shall be within enclosures formed of "A" class divisions, with positive means of closure at all openings, except that:

.1 a stairway connecting only two decks need not be enclosed, provided the integrity of the deck is maintained by proper bulkheads or doors in one 'tweendeck space. When a stairway is closed in one 'tween-deck space, the stairway enclosure shall be protected in accordance with the tables for decks in regulations 26 or 27;

.2 stairways may be fitted in the open in a public space, provided they lie wholly within such public space.

2 Stairway enclosures shall have direct communication with the corridors and be of sufficient area to prevent congestion, having in view the number of persons likely to use them in an emergency. In so far as is practicable, stairway enclosures shall not give direct access to cabins, service lockers, or other enclosed spaces containing combustibles in which a fire is likely to originate.

3 Lift trunks shall be so fitted as to prevent the passage of smoke and flame from one 'tweendeck to another and shall be provided with means of closing so as to permit the control of draught and smoke.

Regulation 30

Openings in "A" class divisions

1 Except for hatches between cargo, special category, store, and baggage spaces, and between such spaces and the weather decks, all openings shall be provided with permanently attached means of closing which shall be at least as effective for resisting fires as the divisions in which they are fitted.

2 The construction of all doors and door frames in "A" class divisions, with the means of securing them when closed, shall provide resistance to fire as well as to the passage of smoke and flame.

3.1 Two means of escape shall be provided from each machinery space. In particular, the following provisions shall be complied with:

.1 Where the space is below the bulkhead deck the two means of escape shall consist of either:

.1.1 two sets of steel ladders as widely separated as possible, leading to doors in the upper part of the space similarly separated and from which access is provided to the appropriate lifeboat and liferaft embarkation decks. One of these ladders shall provide continuous fire shelter from the lower part of the space to a safe position outside the space; or

.1.2 one steel ladder leading to a door in the upper part of the space from which access is provided to the embarkation deck and additionally, in the lower part of the space and in a position well separated from the ladder referred to, a steel door capable of being operated from each side and which provides access to a safe escape route from the lower part of the space to the embarkation deck.

.2 Where the space is above the bulkhead deck, the two means of escape shall be as widely separated as possible and the doors leading from such means of escape shall be in a position from which access is provided to the appropriate lifeboat and liferaft embarkation decks. Where such means of escape require the use of ladders, these shall be of steel.

3.2 In a ship of less than 1,000 tons gross tonnage, the Administration may dispense with one of the means of escape, due regard being paid to the width and disposition of the upper part of the space; and in a ship of 1,000 tons gross tonnage and above, the Administration may dispense with one means of escape from any such space so long as either a door or a steel ladder provides a safe escape route to the embarkation deck, due regard being paid to the nature and location of the space and whether persons are normally employed in that space.

4 In no case shall lifts be considered as forming one of the required means of escape.

Regulation 32

Ventilation systems

1 *Passenger ships carrying more than 36 passengers*

1.1 The ventilation system of a passenger ship carrying more than 36 passengers shall, in addition to this part of this regulation, also be in compliance with the requirements of regulation 16.2 to 16.9.

1.2 In general, the ventilation fans shall be so disposed that the ducts reaching the various spaces remain within the main vertical zone.

1.3 Where ventilation systems penetrate decks, precautions shall be taken, in addition to those relating to the fire integrity of the deck required by regulations 18.1.1 and 30.5, to reduce the likelihood of smoke and hot gases passing from one 'tweendeck space to another through the system. In addition to insulation requirements contained in this regulation, vertical ducts shall, if necessary, be insulated as required by the appropriate tables in regulation 26.

1.4 Except in cargo spaces, ventilation ducts shall be constructed of the following materials:

.1 ducts not less than 0.075 m^2 in sectional area and all vertical ducts serving more than a single 'tweendeck space shall be constructed of steel or other equivalent material.

Regulation 33

Windows and sidescuttles

1 All windows and sidescuttles in bulkheads within accommodation and service spaces and control stations other than those to which the provisions of regulation 30.6 and of regulation 31.2 apply, shall be so constructed as to preserve the integrity requirements of the type of bulkheads in which they are fitted.

2 Notwithstanding the requirements of the tables in regulations 26 and 27:

.1 all windows and sidescuttles in bulkheads separating accommodation and service spaces and control stations from weather shall be constructed with frames of steel or other suitable material. The glass shall be retained by a metal glazing bead or angle;

.2 special attention shall be given to the fire integrity of windows facing open or enclosed lifeboat and liferaft embarkation areas and to the fire integrity of windows situated below such areas in such a position that their failure during a fire would impede the launching of, or embarkation into, lifeboats or liferafts.

Regulation 34

Restricted use of combustible materials

1 Except in cargo spaces, mail rooms, baggage rooms, or refrigerated compartments of service spaces, all linings, grounds, ceilings and insulations shall be of non-combustible materials. Partial bulkheads or decks used to subdivide a space for utility or artistic treatment shall also be of non-combustible material.

2 Vapour barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings, for cold service systems need not be non-combustible, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have qualities of resistance to the propagation of flame to the satisfaction of the Administration.

3 The following surfaces shall have low flame-spread characteristics:*

.1 exposed surfaces in corridors and stairway enclosures, and of bulkheads, wall and ceiling linings in all accommodation and service spaces and control stations;

.2 concealed or inaccessible spaces in accommodation, service spaces and control stations.

4 The total volume of combustible facings, mouldings, decorations and veneers in any accommodation and service space shall not exceed a volume equivalent to 2.5 mm veneer on the combined area of the walls and ceilings. In the case of ships fitted with an automatic sprinkler system complying with the provisions of regulation 12, the above volume may include some combustible material used for erection of "C" class divisions.

5 Veneers used on surfaces and linings covered by the requirements of paragraph 3 shall have a calorific value not exceeding 45 MJ/m^2 of the area for the thickness used.

6 Furniture in the corridors and stairway enclosures shall be kept to a minimum.

7 Paints, varnishes and other finishes used on exposed interior surfaces shall not be capable of producing excessive quantities of smoke and toxic products.

8 Primary deck coverings, if applied within accommodation and service spaces and control stations, shall be of approved material which will not readily ignite, or give rise to toxic or explosive hazards at elevated temperatures.*

Details of construction

1 In accommodation and service spaces, control stations, corridors and stairways:

.1 air spaces enclosed behind ceilings, panelling or linings shall be suitably divided by close-fitting draught stops not more than 14 m apart;

.2 in the vertical direction, such enclosed air spaces, including those behind linings of stairways, trunks, etc. shall be closed at each deck.

2 The construction of ceiling and bulkheading shall be such that it will be possible, without impairing the efficiency of the fire protection, for the fire patrols to detect any smoke originating in concealed and inaccessible places, except where in the opinion of the Administration there is no risk of fire originating in such places.

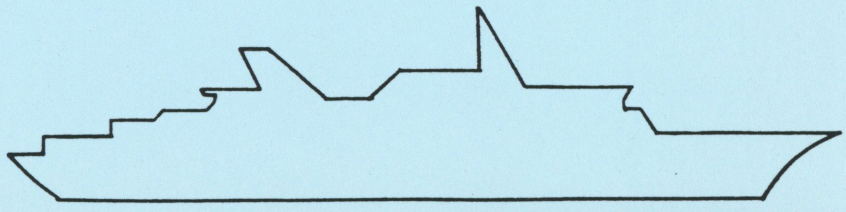
Regulation 46

Protection of stairways and lift trunks in accommodation spaces, service spaces and control stations

1 Stairways which penetrate only a single deck shall be protected at least at one level by at least "B-0" class divisions and self-closing doors. Lifts which penetrate only a single deck shall be surrounded by "A-0" class divisions with steel doors at both levels. Stairways and lift trunks which penetrate more than a single deck shall be surrounded by at least "A-0" class divisions and be protected by self-closing doors at all levels.

2 On ships having accommodation for 12 persons or less, where stairways penetrate more than a single deck and where there are at least two escape routes direct to the open deck at every accommodation level, consideration may be given by the Administration to reducing the "A-0" requirements of paragraph 1 to "B-0".

3 All stairways shall be of steel frame construction except where the Administration sanctions the use of other equivalent material.



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VOYAGES

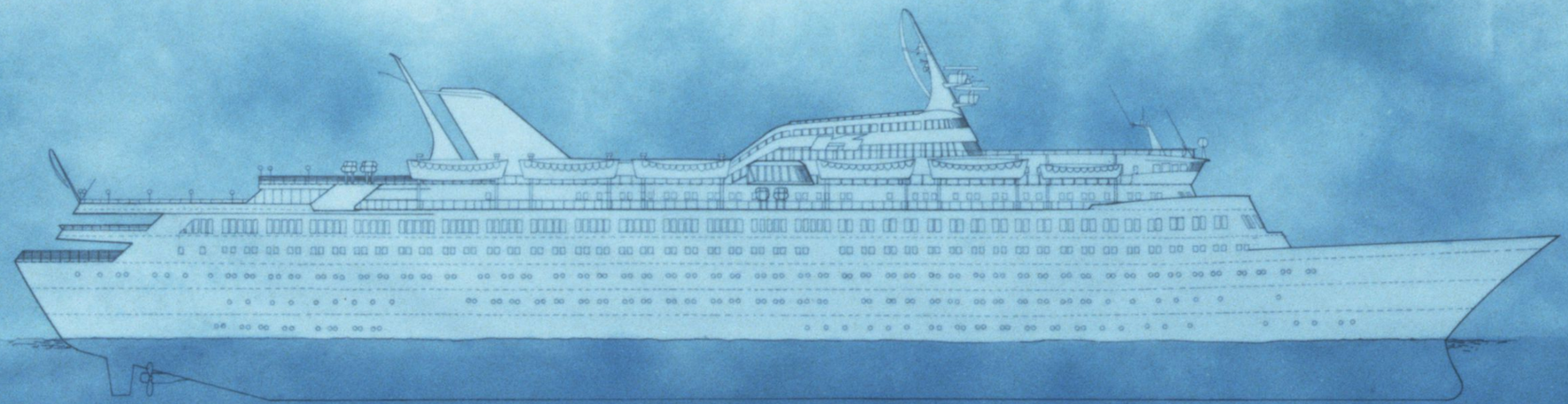
Relaxation

ONSHORE

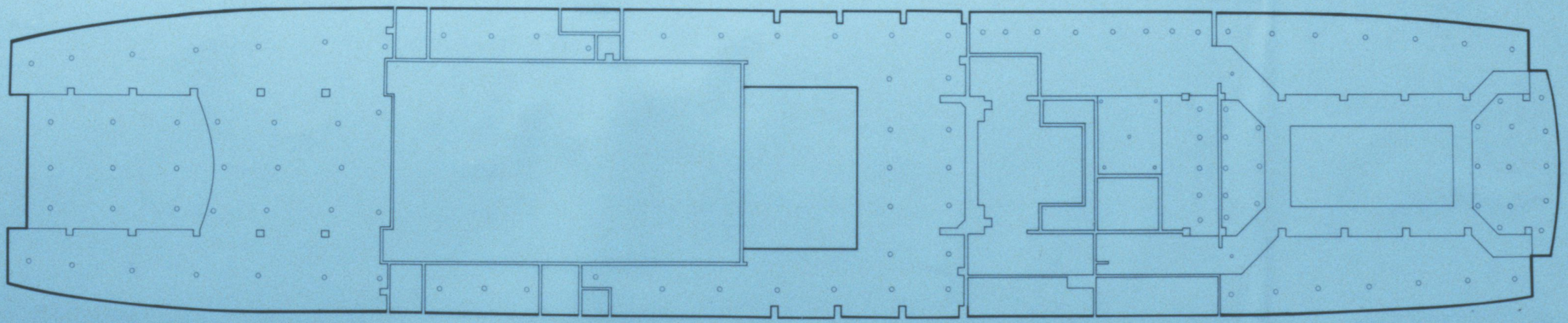
ACTIVITY

ON BOARD

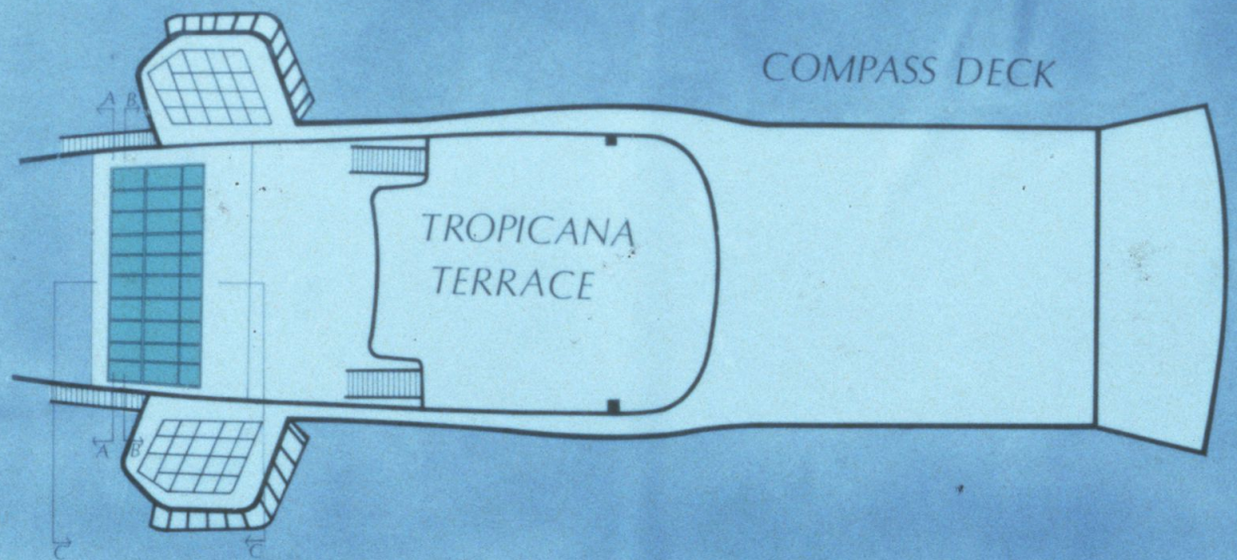
LET'S CRUISE!

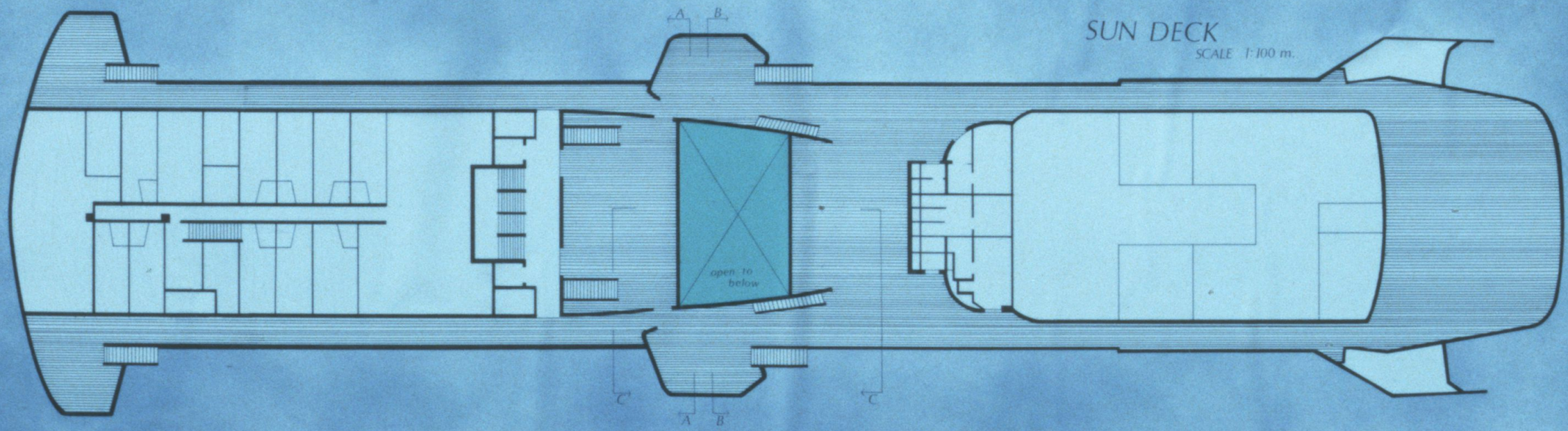


REFLECTED CEILING PLAN

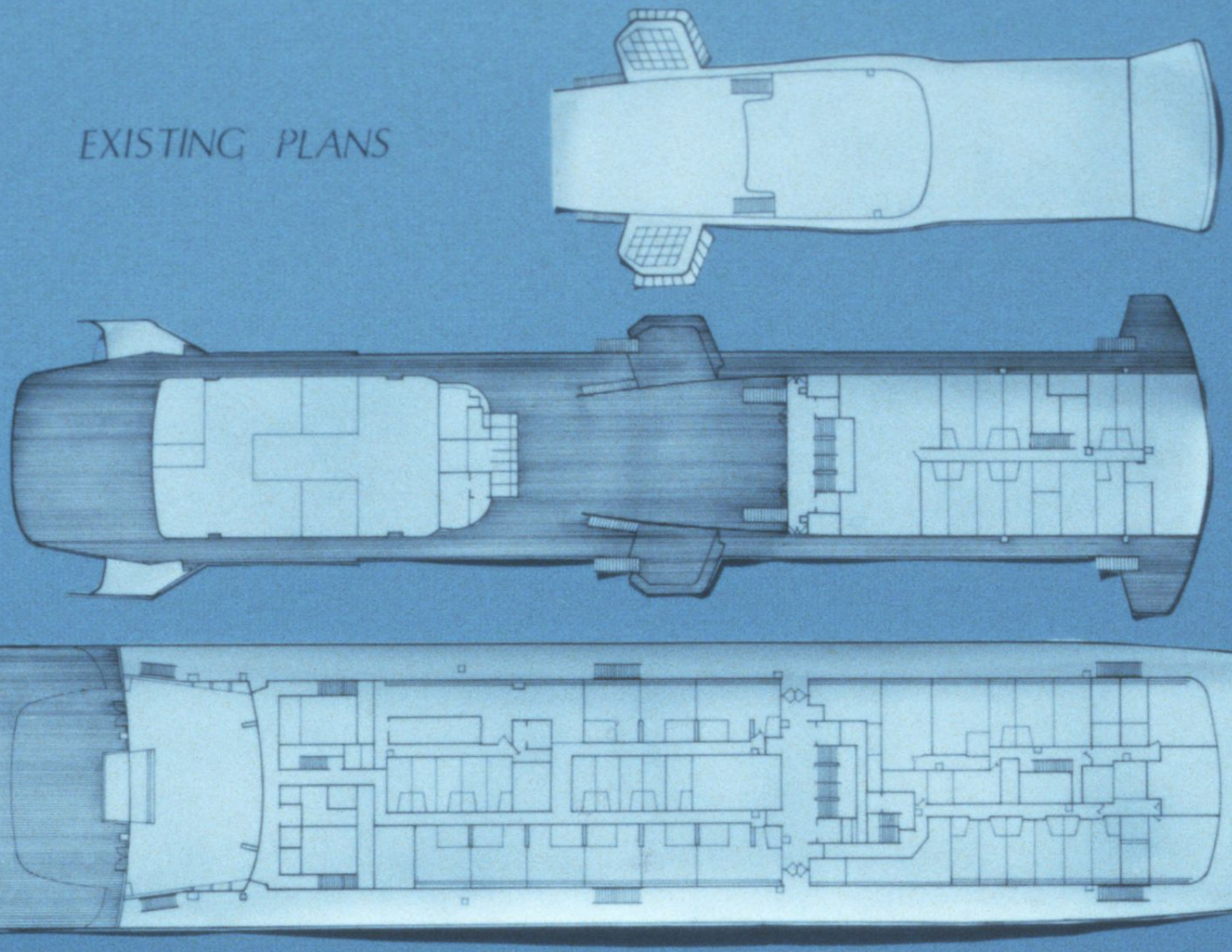


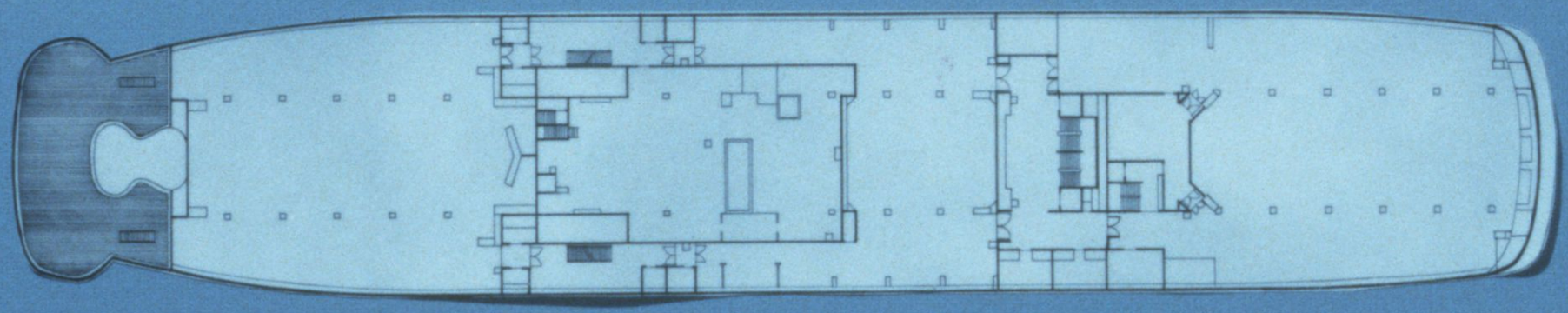
CABARET DECK SCALE 1:100 m.

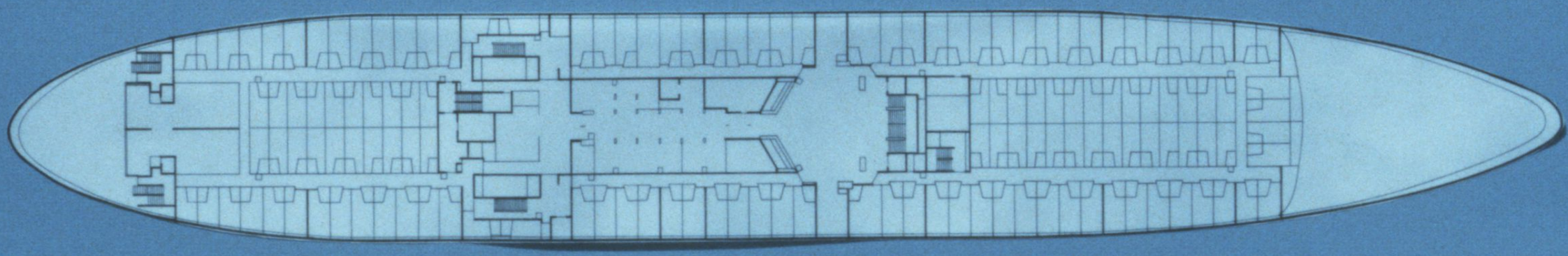

COMPASS DECK
TROPICANA
TERRACE
A
B
C

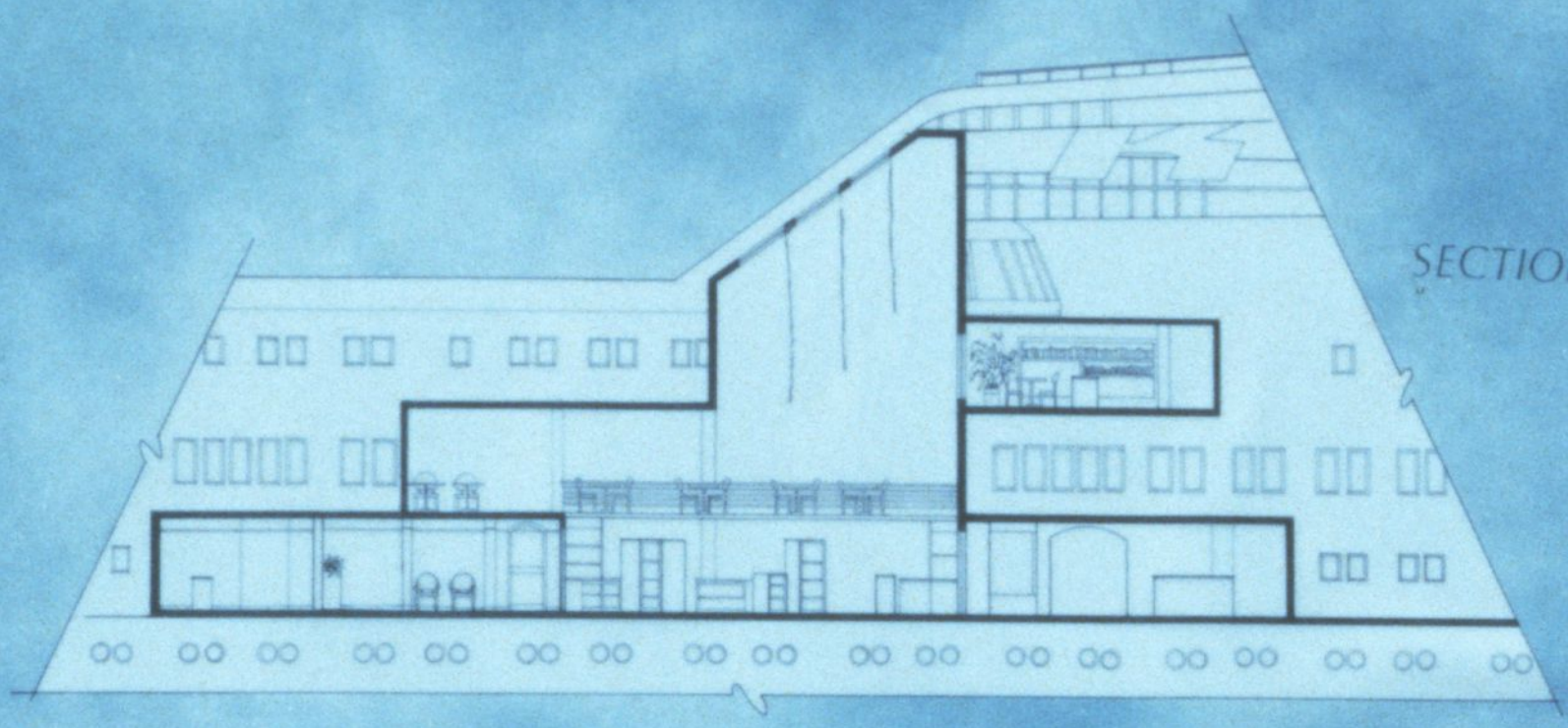

SUN DECK
SCALE 1:100 m.
A
B
C
open to
below

EXISTING PLANS

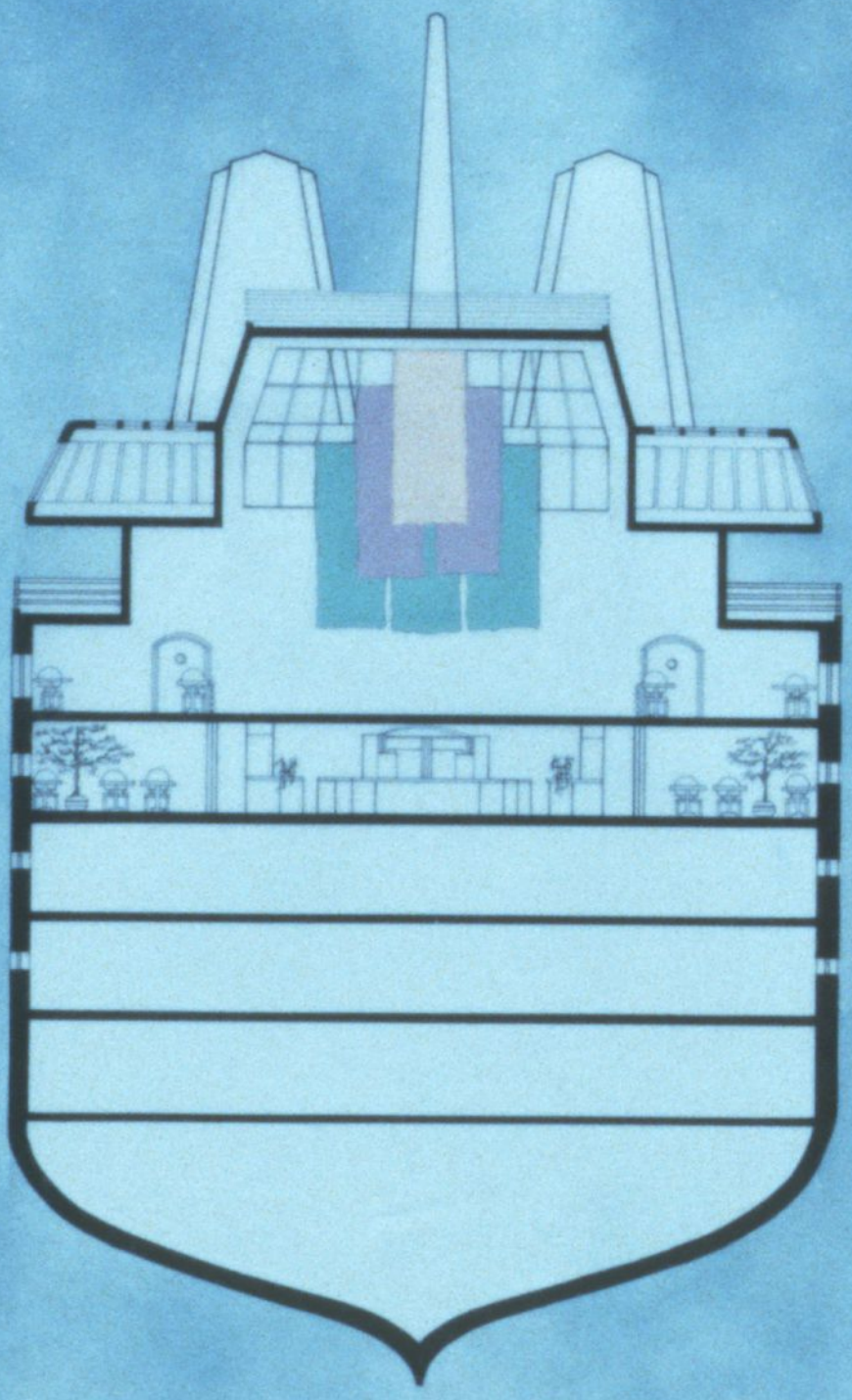








SECTION C-C

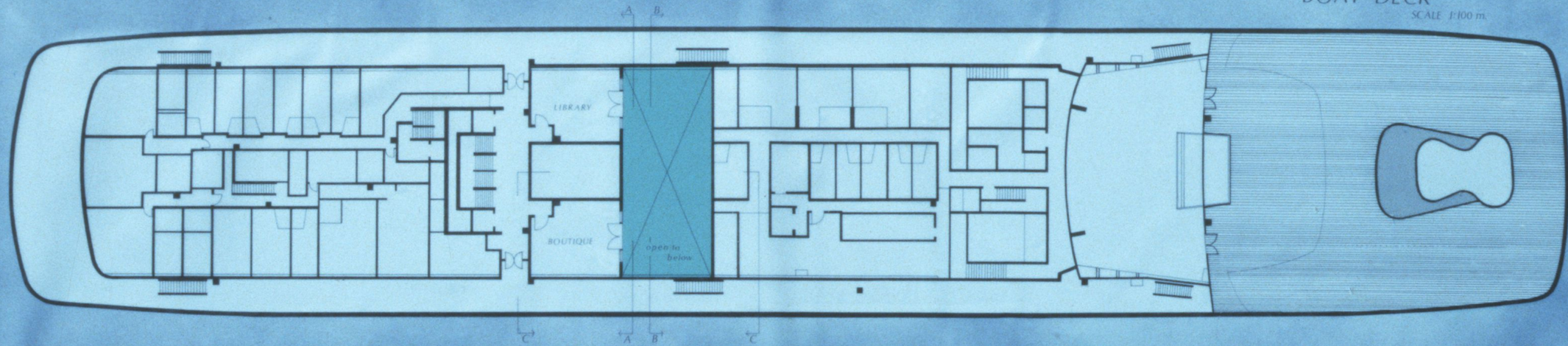


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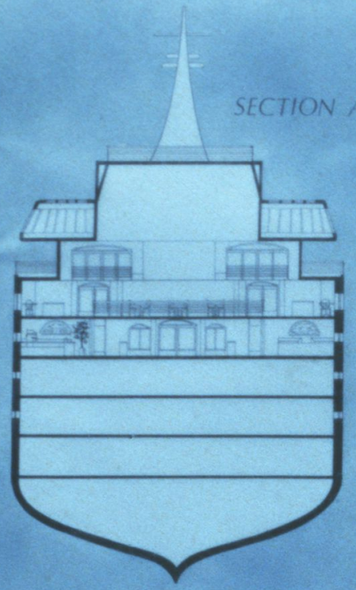
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BOAT DECK

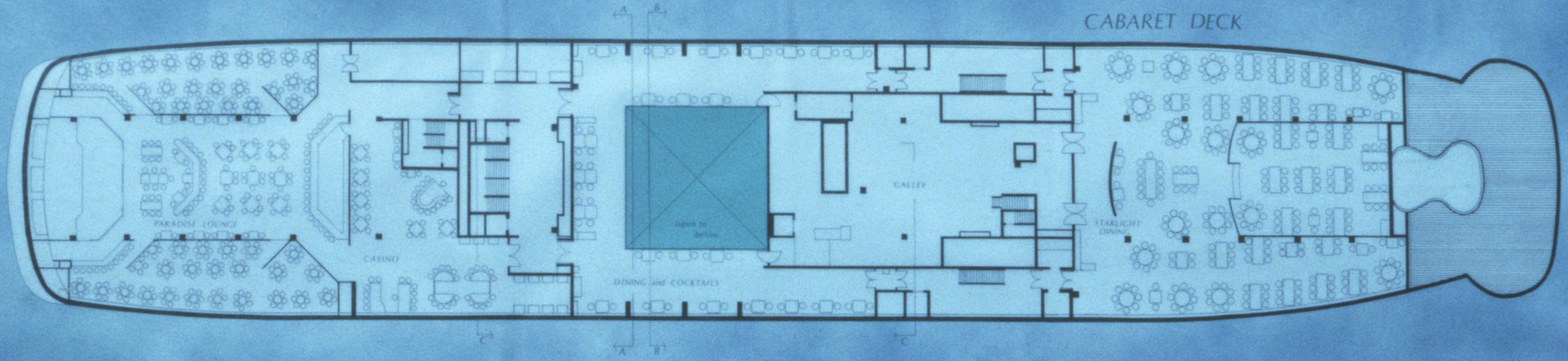
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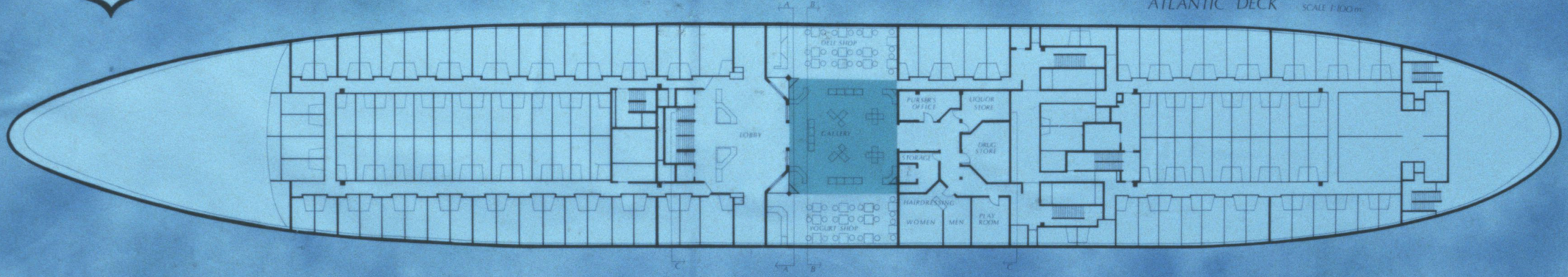
SECTION A-A



CABARET DECK



ATLANTIC DECK SCALE 1:100 m



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