Yash Raj Gupta

5 Star Hotel

Sanand, Gujarat, India

Dec, 2025

5 Star Hotel

Sanand, Gujarat, India

BACHELOR OF ARCHITECTURE

BY

Yash Raj Gupta

211110039

DEPARTMENT OF ARCHITECTURE AND PLANNING

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL

DEC 2025

ARC 511 – Thesis Project

5 Star Hotel

Sanand, Gujarat, India

Submitted by:

Yash Raj Gupta
211110039
B. ARCH
9th Semester, 5th Year

UNDER THE GUIDANCE OF

Dr. Rajat Soni

DEPARTMENT OF ARCHITECTURE AND PLANNING

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY

BHOPAL (MP)-462003

© MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL – 2025
ALL RIGHTS RSERVED

DEPARTMENT OF ARCHITECTURE AND PLANNING

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL

CANDIDATE DECLARATION

The Thesis Project in the subject ARC 511, entitled "**5 Star Hotel, Sanand, Gujarat, India"**, is being submitted in partial fulfilment of the requirement for the award of degree of Bachelor of Architecture by the undersigned for evaluation.

The matter embodied in this project is a record of my own work. If, in future, it is found that the above statement is false, then I have no objection in withdrawal of Bachelor of Architecture Degree awarded to me by the Institute.

Date: 1st – 2nd Dec, 2025

Yash Raj Gupta
211110039

RECOMMENDATION

Based on the above declaration of the student, the undersigned recommends that the work submitted by the candidate may be considered for the final end term examination of the subject ARC-511, Thesis Project.

Date: 1st – 2nd Dec, 2025

Dr. Rajat Soni
Thesis Guide

CERTIFICATION OF EXAMINATION

The Bachelor of Architecture Thesis Viva-Voce examination of Mr/Ms Yash Raj Gupta Scholar No.211110039, was held on 1/12/2025 to 2/12/25.

Dr. Nakul Dhagat
Head of Department

Dr. Vicky Lalramsangi
Thesis Coordinator

ABSTRACT

This thesis report presents a comprehensive exploration and design proposal for a 5-star hotel situated in the rapidly industrializing and evolving landscape of **GIDC Sanand, Gujarat**. Anchored in the innovative concept of **"Inside-Out Heaven,"** the project envisions a transformative hospitality experience that harmoniously blends luxury, architecture, and the unique ecological and industrial character of Sanand.

The study incorporates in-depth case studies of celebrated hospitality spaces across the globe, analyzing how they successfully merge indoor comfort with the natural and built environments. These insights form the conceptual backbone for crafting a guest experience that reflects the dynamic interplay of nature and industry found in Sanand.

At the core of the report is the design development of the hotel, meticulously detailing the architectural language, spatial flow, material palette, and design strategies that bring the "Inside-Out Heaven" vision to life. Emphasis is placed on incorporating green courtyards, semi-open lounges, and seamless transitions between inside and outside—offering guests a serene escape amidst the vibrant industrial belt.

Sustainability remains a guiding principle throughout the project. From the use of passive design techniques and energy-efficient systems to locally sourced materials and smart water management, the hotel design aspires to coexist responsibly within its semi-arid, industrial ecosystem.

By fusing extensive research with context-specific design thinking, this thesis proposes a bold, future-facing blueprint for luxury hospitality in **Sanand**. The "Inside-Out Heaven" concept redefines indulgence—offering a sensorial experience that blurs the line between refined interior sanctuaries and the raw, rhythmic essence of Gujarat’s industrial heartland.

ACKNOWLEDGMENT

The completion of this thesis report has been one of the most significant parts of my thesis study. I would like to acknowledge everyone who has helped me throughout in the completion of this Thesis Report, directly or indirectly.

At this moment of accomplishment, first of all I would like to thank our Thesis Coordinator ***Prof. Vicky Lalramsangi*** *and my Thesis Guide* ***Dr. Rajat Soni****. This work would not have been possible without their guidance, support and encouragement. Their insightful leadership and knowledge benefited us to successfully overcome many difficulties through the process and taught me a lot. Their valuable suggestions helped us make our work better. Thank you so much for your continuous support and presence whenever needed.*

I would like to express my deep appreciation and indebtedness to my teachers and supervisors for their endless support, kindness, and understanding during the project duration.

Furthermore, I would like to thank my fellow batch mates and seniors. Their help and support has helped me throughout my Thesis work. Last but not the least; I would like to thank all my relatives, family, and friends who supported me in one way or another and the Great Almighty for his blessings.

Date: **29-11-2025** **Yash Raj Gupta**

TABLE OF CONTENTS

CANDIDATE DECLARATION iii

ABSTRACT iv

ACKNOWLEDGMENT v

1 CHAPTER I: INTRODUCTION 1

1.1 AIM 1

1.2 OBJECTIVES 1

1.3 SITE LOCATION 1

1.4 SITE AREA 2

1.5 SITE PLAN 2

1.6 PROPOSING AGENCY 3

1.7 SITE LOCATION ON MASTERPLAN 3

1.8 SITE CONTEXT 3

1.9 Site Proximity & Surroundings 4

1.10 DESIGN BRIEFS 5

1.11 SCOPE OF WORK 6

2 CHAPTER 2: LITERATURE REVIEW 9

2.1 GUJARAT COMPREHENSIVE DEVELOPMENT CONTROL REGULATIONS - 2017 9

2.2 HOTEL AND MIXED USE DEVELOPMENT REGULATIONS 18

2.3 MINISTRY OF TOURISM GUIDELINES: 19

2.4 GUIDELINES FOR SECURITY MEASURES IN HOTELS: 33

2.5 TIME SAVER STANDARDS (BUILDING TYPES)- HOTEL: 36

2.6 TIME SAVER STANDARDS (BUILDING TYPES)- RESTAURANTS: 82

2.7 TIME SAVER STANDARDS (BUILDING TYPES)- KITCHENS: 97

2.8 TIME SAVER STANDARDS (INTERIOR DESIGN): 107

2.9 NATIONAL BUILDING CODE 135

2.10 INDIAN STANDARD CODE FOR HOTELS AND RESTAURANTS: 142

3 CHAPTER 3: SITE ANALYSIS 148

SITE INVENTORY **148**
3.1 DEMOGRAPHIC OF SANAND DIST. AHMEDABAD 149
3.2 TOPOGRAPHY 149
3.3 SEISMIC ACTIVITY: 151
3.4 SOIL TYPE: 151
3.5 CLIMATE- 151
Average Temperature in sanand 152
Precipitation 152
Rainfall 153
Humidity 154
Wind 154
Sunpath 155
3.6 Climate Analysis in Building- 156
SUN HOURS ANALYSIS 156
FEBRUARY- 157
MAY 157
AUGUST 158
DECEMBER 158
DAY LIGHT POTENCIAL 159
WIND ANALYSIS 159
WIND COMFORT ANALYSIS- 160
WIND DIRECTION ANALYSIS- 160
SUN PATH ANALYSIS 161
4 CHAPTER 4: LIVE CASE STUDY 1 ..... **163**
TAJ LAKEFRONT, BHOPAL **163**
4.1 INTRODUCTION 164
4.2 Details: 164
4.3 LOCATION 165
4.4 SITE 165
4.5 Site Characteristics: 166

4.6 FACILITIES....166
4.7 APPROACH ROAD....167
4.8 VERTICAL ZONING....167
4.9 AREA STATEMENT....168
4.10 FLOOR PLANS....178
Basement 2 Plan:....178
Basement 1 Plan:....178
Ground Floor Plan:....179
First Floor Plan:....180
Second Floor Plan:....180
Typical Floor Plan (3rd to 7th) Floor :....181
8th Floor Plan :....181
9th Floor Plan :....182
10th Floor Plan:....182
4.11 GUEST ROOMS TYPOLOGY....183
Executive Suite....183
Twin Room....184
King Room....186
Presidential Suite....187
4.12 VIEW/INTERIOR OF SPACES....189
4.13 SERVICES....190
5 CHAPTER 5: LIVE CASE STUDY 2....195
HILLTON GARDEN INN, PUNE....195
5.2 HILLTON GARDEN INN , PUNE....195
5.3 LOCATION....196
5.4 PROXIMITY....196
5.5 SITE LOCATION....197
5.6 FACILITIES....198
5.7 VERTICAL ZONING....198
5.8 AREA STATEMENT....199

5.9 Guest Accommodation Zone 199
5.10 F&B (Food & Beverage) 199
5.11 Meeting & Event Spaces 200
5.12 Recreation & Wellness 200
5.13 Lobby & Public Interface 200
5.14 Back-of-House (BOH) & Services 201
5.15 Circulation, Lifts, Vertical Cores 201
5.16 GUEST ROOM TYPOLOGY 202
5.17 FLOOR PLANS 206
5.18 VIWES / INTERIOR SPACES 210
5.19 SERVICES 214
6 CHAPTER 6: DESK APPRAISAL 1 217
VIVANTA BY TAJ GURGAON 217
6.2 Executive Summary 217
6.3 Project Overview 218
6.4 Design Brief and Vision 220
6.5 ARCHITECTURAL PERSPECTVE 220
6.6 ARCHITECTURAL FEATURES & MATERIALS 223
6.7 Table 2: Key Architectural Materials and Applications 227
6.8 Spatial Organization and Functional Zoning 228
6.9 Key Functional Zones 232
6.10 Table 3: Major Functional Areas and Capacities 234
6.11 Structural System and Construction Technology 235
6.12 Structural Framework 235
6.13 BUILDING SERVICES & SUSTAINABILITY 238
6.14 CONCLUSION 241
7 CHAPTER 7: DESK APPRAISAL 2 243
HYATT REGENCY GURGAON 243
Executive Summary 243
7.1 Introduction 244

7.2 Architectural Vision and Objectives 245
7.3 Architectural Design Philosophy 247
7.4 Table 1: Key Meeting & Event Space Capacities 251
7.5 Guest Accommodations (Room and Suite Layouts, Amenities) 255
7.6 Vertical and Horizontal Circulation Analysis 256
7.7 Materials, Finishes, and Construction 261
7.8 Structural System 262
7.9 Building Services and Technology Integration 263
7.10 Sustainability Features and Green Building Initiatives 266
7.11 Architectural Review and Critique 268
7.12 Conclusion 269
8 CHAPTER 8: REFRENCES 271
REFRENCES 271

TABLE OF CONTENTS

Figure 1 SITE LOCATION 2
Figure 2 SITE PLAN WITH DIMENSIONS 2
Figure 3 SITE LOCATION ON MASTER PLAN 3
Figure 4 SITE CONNECTIVITY 4
Figure 5 TOPOGRAPHICAL CONTOURS OF SANAND 150
Figure 6 CLIMATIC EXPERIENCE IN SANAND AROUND THE YEAR 152
Figure 7 TEMPERATURE IN SANAND ANUALLY 152
Figure 8 AVERAGE PRECIPTATION IN SANAND 153
Figure 9: AVERAGE RAINFALL IN SANAND 153
Figure 10 AVERAGE HUMIDITY IN SANAND 154
Figure 11 AVERAGE WIND SPEED IN SANAND 155
Figure 13: SUNPATH ANALYSIS 156
Figure 14: SUN HOUR ANALYSIS OF FEBRUARY MONTH 157
Figure 15: SUN HOUR ANALYSIS OF MAY MONTH 158
Figure 16: SUN HOUR ANALYSIS OF AUGUST MONTH 158
Figure 17: SUN HOUR ANALYSIS OF DECEMBER MONTH 159
Figure 18: DAY LIGHT POTENCIAL 159
Figure 19: WIND COMFORT ANALYSIS 160
Figure 20: WIND DIRECTION ANALYSIS 161
Figure 21: SUN LIGHT ANALYSIS 162
Figure 22: TAJ 164
Figure 23: TAJ SITE LOCATION 165
Figure 24: TAJ SITE PLAN 165
Figure 25: TAJ APPROCH ROADS 167
Figure 26: TAJ VERRTICAL ZONING 167
Figure 27: TAJ BASEMENT 2 PLAN 178
Figure 28: TAJ BASEMENT 1 PLAN 179
Figure 29: TAJ GROUND FLOOR PLAN 179
Figure 30: TAJ FIRST FLOOR PLAN 180
Figure 31: TAJ SEACOND FLOOR PLAN 180
Figure 32: TAJ EIGHT FLOOR PLAN 181
Figure 33: TAJ NINTH FLOOR PLAN 182
Figure 34: TAJ TENTH FLOOR PLAN 182
Figure 35: TAJ EXECUTIVE ROOVE SUITE ROOM PLAN 184
Figure 36: TAJ DELUX TWIN BEDROOM PLAN 185
Figure 37: TAJ DELUX BED ROOM PLAN 186
Figure 38: TAJ PRESIDENTAL SUITE PLAN 188

1 CHAPTER I: INTRODUCTION

INTRODUCTION

A business hotel is an establishment primarily designed to cater to the needs of corporate travelers, offering lodging and services that support work-related activities. Traditionally focused on providing a functional room with essentials such as a comfortable bed, desk, and connectivity options, business hotels have evolved to incorporate modern amenities like high-speed internet, ergonomic workspaces, and soundproof environments that ensure productivity and comfort. Typical features found in business hotel rooms include a work desk with task lighting, multiple charging ports, a digital safe, coffee-making facilities, and a flat-screen television. Enhanced business-class offerings may include express check-in/check-out services, complimentary breakfast, meeting rooms, and executive lounges. Larger business hotels also offer amenities such as fitness centers, airport shuttle services, co-working spaces, and 24-hour business centers.

1.1 AIM

The main aim is to achieve a fully functional Hotel design without any compromise to aesthetics and services.

1.2 OBJECTIVES

- To design a hotel responding to the site conditions.
- To follow the immediate urban context and design accordingly.
- To reflect the economic dynamism and industrial identity of Sanand.
- To design the hotel as a high-functioning node within Sanand's growing industrial ecosystem
- To use the site views to the fullest and follow every bye-law that the site commands.
- To create efficient service networks keeping in mind the highest standards of hospitality industry.

1.3 SITE LOCATION

Name of the Project: Proposed 5 Star Hotel

Location: GIDC Sanand-II (Plot SM-39/5),

Sanand-II Industrial Estate,

District - Ahmedabad

State - Gujarat

Site Coordinates : 23°00'21.5"N, 72°14'59.6"E



Figure 1 SITE LOCATION

1.4 SITE AREA

Total Land Area: 20,168.54 sq.m.

1.5 SITE PLAN

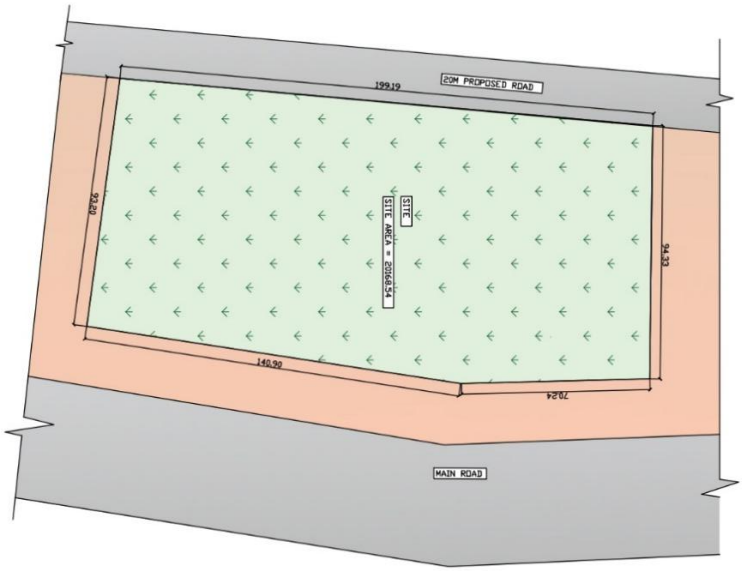


Figure 2 SITE PLAN WITH DIMENSIONS

1.6 PROPOSING AGENCY

Name of the Proponent: GOV. of Gujrat

1.7 SITE LOCATION ON MASTERPLAN

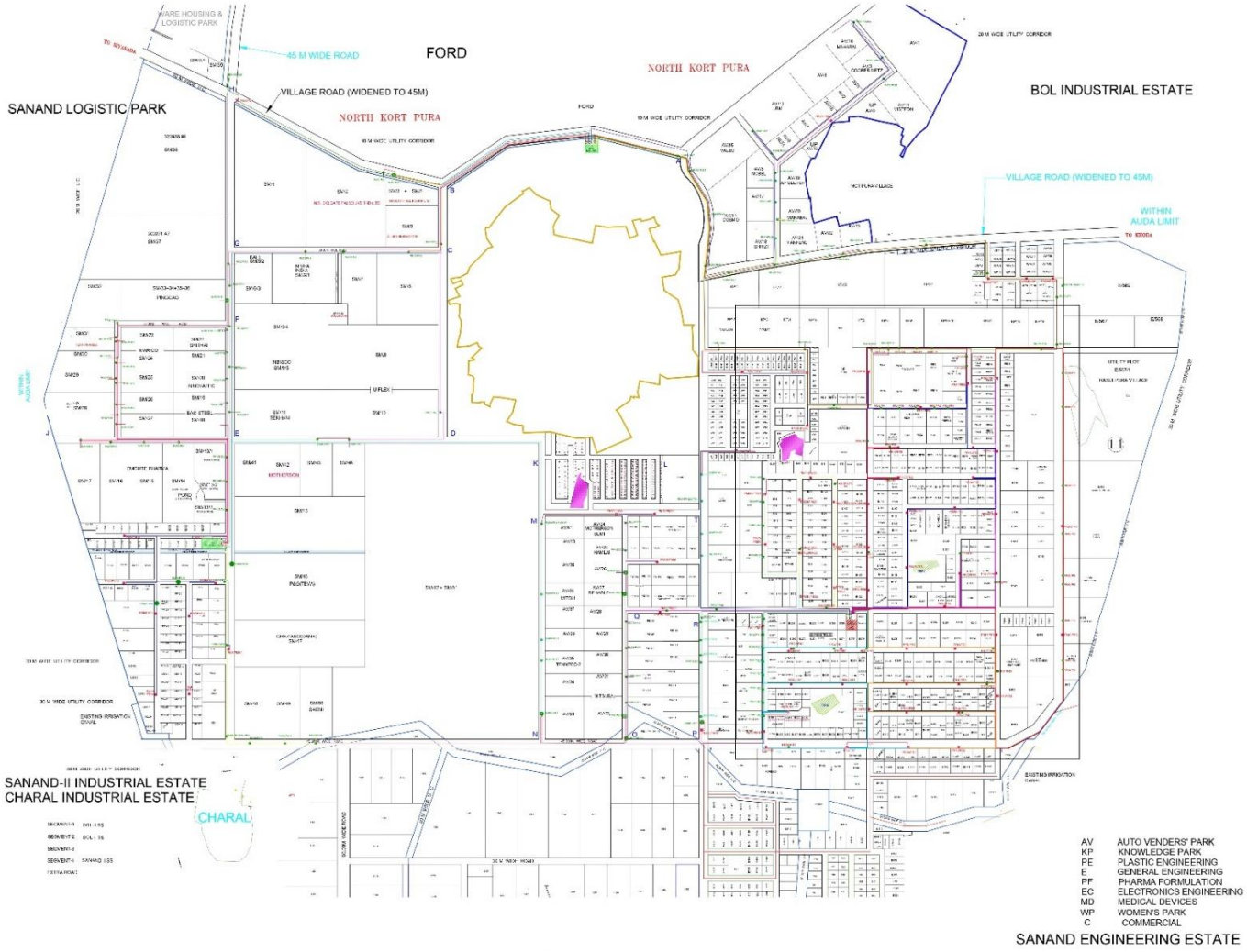


Figure 3 SITE LOCATION ON MASTER PLAN

1.8 SITE CONTEXT

The proposed site for the 5-star hotel is strategically located within the industrial zone of Sanand, Gujarat, offering both accessibility and potential for high footfall from business and industrial visitors. The location is well-connected by various modes of transport, albeit with a preference for private or industrial commuting methods due to the distance from major public transit hubs.

Connectivity & Transportation Access

Bus Access:
The nearest bus stop is **Sanand ST Stand**, located approximately **17 km** from the site. For intercity and long-distance travel, the **Ahmedabad Central Bus Station** at **Gita Mandir**, approximately **40 km** away, offers comprehensive connectivity.

Railway Access:
The **Chharodi Railway Station**, located **5 km** from the site, serves as the closest railway link and caters primarily to local trains. For broader national rail access, **Ahmedabad Junction**, a major railhead, is located **43 km** away.

Air Connectivity:
The nearest airport is the **Sardar Vallabhbhai Patel International Airport**, situated about **50 km** from the site. While not immediately adjacent, the airport provides direct flights to major cities across India and select international destinations. Additionally, **helipads located within nearby industrial areas** offer a high-speed commute alternative, particularly for corporate or VIP guests.

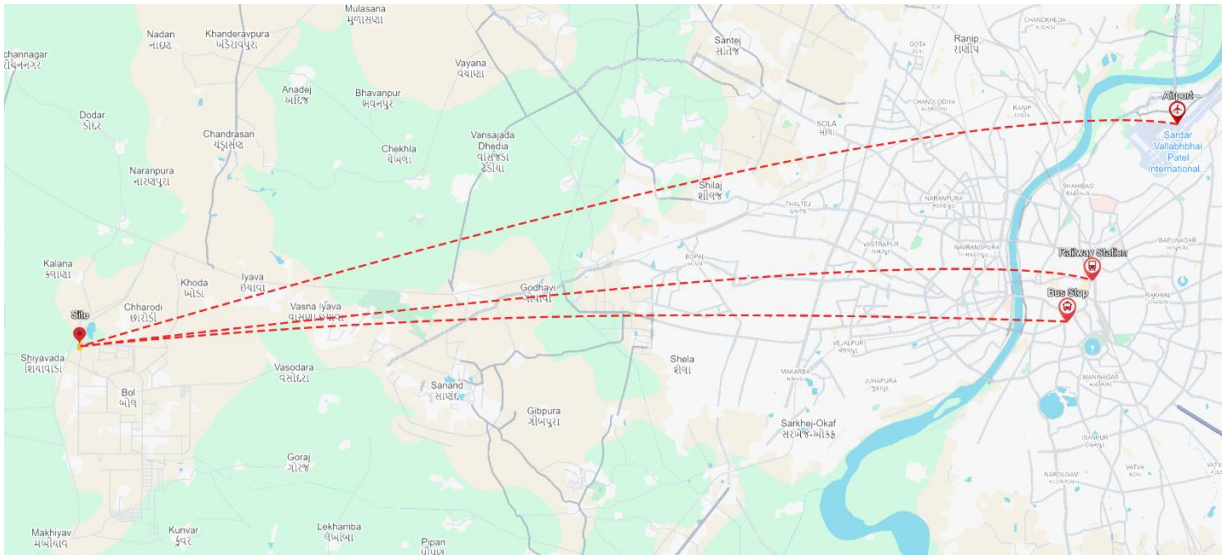


Figure 4 SITE CONNECTIVITY

1.9 SITE PROXIMITY & SURROUNDINGS
The site is enveloped by a thriving **industrial ecosystem**, contributing to a consistent demand for premium hospitality services from domestic and international business travelers,

consultants, and corporate delegates. The presence of large-scale manufacturing units and tech parks nearby underscores the need for high-end accommodations and business conferencing facilities.

Social Infrastructure

- Educational Institutions Nearby:
- Northkotpura Primary School
- Charal Primary School
- College of Safety and Fire Technology – an institute that brings in students, faculty, and visiting professionals regularly.

Healthcare Facilities Nearby:

- Sub Centre Bol
- Doctor House Bol
- Occupational Health Centre – serving primarily industrial workers and local residents.

1.10 DESIGN BRIEFS

Project Title: Development of a 5-star hotel in Sanand, Ahmedabad, Gujarat.

Proposing Authority: Industrial zone under GIDC (Gujarat Industrial Development Corporation)

Surrounding Features: The proposed project site is located in the industrial-commercial zone of Sanand, Ahmedabad, a rapidly developing hub within Gujarat's manufacturing corridor. The site is surrounded by major industrial establishments and benefits from excellent regional connectivity. It is located approximately 35 km from Sardar Vallabhbhai Patel International Airport and around 25 km from Ahmedabad Junction Railway Station, ensuring convenient access for national and international business travelers. The site is also well connected via S.G. Highway and the Ahmedabad–Dholera Expressway, making it highly accessible for corporate visitors and industrial delegates frequenting the region.

Target Audience: Corporate travelers, visiting consultants, technical experts, business delegations

Key Industries Nearby: Tata Motors, Ford India, Nestlé, Hitachi, Colgate-Palmolive, and other major MNCs. Sanand has emerged as a crucial industrial corridor in Gujarat, experiencing rapid growth in infrastructure, employment, and industrial investments. However, there is a **distinct lack of premium hospitality infrastructure** within this

industrial zone, creating a prime opportunity for the development of a dedicated business hotel.

1.11 SCOPE OF WORK

The scope of work includes but is not limited to:
Development of the 5 Star Hotel at Sanand shall have:

A. Rooms
B. Conference Hall / Convention Hall
C. Restaurant and bar
D. Health club
E. Banquet Hall
F. 24/7 Café
G. Spa
H. Swimming Pool
I. Admin Block, Entrance Foyer and lobby
J. Commercial Space
K. Ballroom
L. Basement for parking and services

What Makes This Business Hotel Different from Others

This Business Class Hotel in Sanand, Ahmedabad, is strategically designed to cater specifically to the unique demands of corporate travelers and industrial professionals, unlike standard leisure or tourist-oriented hotels. While most hotels focus on general hospitality, this property is tailor-made for productivity, convenience, and professional engagement, offering a seamless blend of work and comfort.

Key Differentiators:

- Strategic Location Within an Industrial Hub
- Located at the heart of Sanand's GIDC industrial area, the hotel eliminates the need for long travel from city hotels.
- Direct proximity to major industrial players (Tata Motors, Ford, Hitachi, etc.) gives business guests faster access to their destinations.
- Business-First Design Philosophy
- Layouts, circulation, and services are designed around a corporate lifestyle—from express check-ins to flexible meeting schedules.
- A dedicated Business Lounge supports informal meetings, interviews, and quick networking.

- Smart Room Technology
- Rooms are equipped with high-speed Wi-Fi, ergonomic workstations, soundproofing, and digital automation—ideal for working professionals.
- Long-stay suites with kitchenettes cater to consultants or project-based guests staying for extended durations.
- Purpose-Built Meeting & Conference Spaces
- Unlike general banquet halls found in typical hotels, this property includes:
- Modular boardrooms with video conferencing
- Seminar rooms for training sessions
- A business center with private work pods and printing/scanning facilities
- A 200+ pax conference hall designed for corporate product launches, industry meetups, or investor presentations
- Efficient Service Networks
- Back-of-house (BOH) services are zoned for minimal disturbance, ensuring quiet, focused environments.
- 24/7 concierge and business support (IT, logistics, courier, etc.) tailored to business schedules.
- Quick Access & Transit Connectivity
- Located just 35 km from SVP International Airport and 25 km from Ahmedabad Railway Station, the hotel is highly accessible for national and international executives.
- Work-Life Balance Amenities
- Rooftop café for after-hours relaxation or informal networking
- Fitness center and wellness zone to maintain well-being during tight schedules
- Sound-insulated rooms and smart lighting to improve rest quality for peak productivity

How It Enhances Meeting & Accommodation Experiences

Features	Meeting Experience	Accommodation Experience
Location	Near factories & industrial zones for on-`time meetings	Less commuting means more time for rest/work
Technology Integration	High-end AV systems, video conferencing	Smart room control, VPN-ready high-speed Wi-Fi
Space Flexibility	Modular halls & convertible spaces	Room layouts designed for both work and relaxation
24/7 Business Support	On-demand admin, tech, and logistic support	Round-the-clock room service and concierge
Professional Ambience	Formal, modern décor suited for business discussions	Calming, minimalist interiors to reduce travel stress
Extended Stay Comfort	Meeting spaces connected to lounge zones	Suites with kitchenettes for long-stay professionals

2 CHAPTER 2: LITERATURE REVIEW

2.1 GUJARAT COMPREHENSIVE DEVELOPMENT CONTROL REGULATIONS - 2017

Floor Space Index (FSI) & Regulations.

FSI Structure per Use Zone

Use Zone	Base FSI (Free)	Chargeable FSI (40% of Jantri Rate)	Maximum Permissible FSI
Commercial Zone	1.8	0.9	2.7

Height of Building:

Max height:

No Restriction

"**No HEIGHT Restriction for This Plot As per proposal by GIDC"**

Dimensional Controls Based on Abutting Road Width

Road Width	Max Building Height	Road Side Margin	Other Margins *(Reg. 12.3)*	Between Buildings	From Common Plot
Less than 9.0 m	10.0 m (AUDA/SUDA/VUDA) 15.0 m (RUDA & others)	2.5 m	2.5 m	2.5 m	3.0 m
9.0–12.0 m	15.0 m	3.0 m	3.0 m	4.5 m	3.0 m
12.0–18.0 m	25.0 m	4.5 m	3.0 m	6.0 m	6.0 m
18.0–40.0 m	45.0 m	7.5 m	6.0 m	9.0 m	6.0 m

Road Width	Max Building Height	Road Side Margin	Other Margins *(Reg. 12.3)*	Between Buildings	From Common Plot
40.0 m and above	70.0 m	9.0 m	8.0 m	12.0 m	6.0 m

Ground Cover:
Industrial Use: Max 50% of the building unit area
Residential & Commercial Use: Max 40% of the Plot Area

Minimum Marginal Distance Between Detached Structures

Clause 12: General Standards
There must be a minimum marginal distance between two detached structures based on the development type:

Development Type	**Minimum Distance**
Residential Development	4.5 meters
Industrial Development	4.5 meters
Commercial Development	6.0 meters

Approch Road- Incase of industries and commercial development, the minimum width of approach to building shall be 3.5 mtr.

Plinth- No building shall have plinth less than 45 cm measured from the crown of the road in front of the building. Provided that the ground floor of the building be permitted on pillars subject to the conditions that at no point its clear height over the ground level shall be less than 2 meters, and further that this space shall at all times be kept free from any enclosures except for genuine staircase and sanitary block.

Clause 17 – Height of Floors

The **minimum height of floors** in a building measured from the **floor finish to the bottom of the lowest structural member** at any point shall be:

3 meters for commercial development

For specific spaces like dining areas, verandahs, bathrooms, corridors, puja rooms, coal rooms, passages, stair cabins, and pump rooms, the **minimum height shall be 2 meters**

The **maximum floor height** shall not exceed:

3.6 meters for commercial development

Clause 18 – Stairs, Lobbies & Corridors

In residential, commercial, and public buildings, the width of lobbies or corridors shall follow these guidelines:

(i) Minimum clear width of corridors:

meter for lengths up to 3 meters

For every additional 3 meters (or part thereof), increase width by **15 cm**

Maximum width limit: 2.5 meters

(ii) Clear width of common staircases:

Minimum **1.2 meters**

In single-occupancy residential bungalows/apartments, **minimum 0.9 meters** may be allowed

(iii) For buildings with **more than six tenements per floor**, minimum stair width shall be **1.5 meters**

(iv) Staircase placement:

Must be accessible within **15 meters** from any entrance of the unit

(v) Cantilever staircases:

Width up to **0.9 meters** may be permitted

Allowed in **minimum 3-meter-wide margins** in residential buildings

Clause 18 – Stairs, Lobbies & Corridors

In residential, commercial, and public buildings, regulations for lobbies and staircases include:

(i) *Corridor width:* Minimum 1.0 meter up to 3 meters in length

For every additional 3 meters or part thereof, increase corridor width by **15 cm**

Maximum width limit: 2.5 meters

(ii) *Common staircase width:*

Minimum **1.2 meters**

0.9 meter width permitted in single-occupancy residential bungalows/apartments

(iii) For buildings with more than **six units/tenements per floor**, minimum stair width: **1.5 meters**

(iv) *Staircase access distance:*

Should be located within **15 meters** of any entrance unit

(v) *Cantilever staircases:*

Maximum width: **0.9 meters**

Permitted in **minimum 3-meter-wide margins** in residential buildings

Clause 19 – Sanitary Accommodation

Residential Development: Minimum one toilet per unit or house

Industrial Buildings: Sanitary accommodations must be as per the **Factory Act requirements**

Commercial Development: Minimum one W.C. for **each sex** on **each floor**

Buildings of Public Nature:

Minimum **one W.C. for each sex**

One **urinal for every 25 males**

One **urinal for every 25 females**

Clause 20 – Ventilation

Every room in a residential building must be constructed to provide adequate ventilation by means of:

Windows and/or Ventilators:

Must open directly to an interior/exterior open space, or to a verandah or gallery adjoining open air spaces

Clear opening area **not less than 1/10th of the room's floor area**

Aggregate Door Opening (to outside open spaces):

Windows and ventilators must total **not less than 1/7th of the room or kitchen's floor area**

Clause on Lighting & Ventilation – Industrial & Commercial Buildings

Factories, Industries, Warehouses

Every room must be provided with:

Windows, ventilators, skylights, and doors opening to outside open space

Total clear openings **not less than 1/7th of the floor area**

Adjacent open air space must be **at least 1/3rd the height** of the building wall it abuts

Relaxation Possible:

If artificial lighting and ventilation are installed to the **satisfaction of GIDC** (Gujarat Industrial Development Corporation)

Factory Act Compliance:

Ventilation must meet Factory Act standards (if applicable)

Staircase Requirements

Must be ventilated via an **open air space of at least 1 sq. meter**

Wall facing this open space must have:

Windows totaling at least 1.2 sq. meters per storey to light and ventilate the staircase

Commercial & Public Buildings

Every room must have:

Ventilation equaling **1/7th of the floor area**

Includes windows, ventilators, and door openings to outside open space

In case of factories, industries, and buildings of warehouses, every room shall be lighted and ventilated by a sufficient number of windows, ventilators, and skylights inclusive of doors opening on outside open spaces.
Minimum clear opening: not less than **1/7th of the floor area**,
Adjacent open space width: **not less than 1/3rd of the height** of the part of the building abutting such space.

Relaxation: If artificial lighting and ventilation are installed to the **satisfaction of GIDC**, these requirements may be relaxed.
Any ventilation provided must also satisfy the **Factory Act**, where applicable.

Staircases must be lighted and ventilated from an open air space of **not less than 1 sq. meter**. Staircase walls adjoining this space must have **windows totaling at least 1.2 sq. meters per storey** to light and ventilate it.

For commercial and public buildings, each room must have ventilation equal to **1/7th of the floor area**, including door openings, windows, and ventilators facing open space.

Clause 22 – Compound Wall Regulations

"The height of compound wall shall not exceed 2 meters from road level.
In cases where height exceeding the above is provided special approval of Managing Director GIDC shall be obtained.

Regulation 5 – Definition and Computation of FSI

Floor Space Index (FSI)
Subject to sub-clause (2), it means the ratio of the combined gross floor area of all floors (including walls) — except areas specifically exempted — to the plot or building unit area.

Formula:

FSI = Total floor area including walls of all floors / Plot area or building unit

Areas Not Included in FSI Calculation

Open parking spaces (no enclosures, height restrictions apply)

Hollow plinths with max 2.8 m height (residential buildings only)

Ramps leading exclusively to parking areas

Interior open spaces and ventilation ducts

Weather shed up to 0.60 m width

Staircase landings (dimensions as specified)

Basement used only for parking (max clear height 2.6 m)

Security cabin up to 4 sq.m

Electric room as per utility company specs

Regulation 9 – Control of Storm Water

(a) Definition

Storm sewer: A drainage system excluding sewage and industrial wastes, except unpolluted cooling water.

(b) Regulations

Discharging storm water, surface water, groundwater, roof runoff, or subsurface drainage into sanitary sewers is prohibited.
Exception: Uncontaminated cooling water or unpolluted industrial process water **may be allowed** by the Engineer if no storm sewer is available.

Storm water and other unpolluted drainage **must be directed to**:

Designated **storm sewers**, or

Approved **natural outlets**

"*Industrial cooling water/unpolluted process water requires prior Engineer approval."*

Regulation 21 – Parking Requirements

Minimum Parking Space

Off-street parking must be provided for:
Any newly constructed building used for the first time
Any existing building whose use has changed to one of the specified categories

These requirements are laid out in the **Table for Minimum Off-Street Parking Spaces**

Parking Norms – Commercial & Business Establishments

Applies to:

Business offices, banks, hostels, guest houses, restaurants

Institutional buildings, health facilities (including hospitals and nursing homes)

Space Requirements

Parking Criteria	**Details**
Size Requirement	30% of maximum permissible FSI
Notes	1. Parking area must exclude marginal space and built-up plinth areas, subject to other regulations 2. 20% of ground-level parking must be reserved exclusively for **visitors**
Reservation	50% of total parking space must be reserved for **cars**

Regulation Clause – Marginal Space for Parking

Marginal space of **4.5 meters or more** may be allowed for parking if it forms part of the parking layout as required under clause 21(2)

Regulation 21(2) – Parking Layout Requirements

General Conditions:

Visitor parking must be provided **only on ground level**

Design Specifications:

Minimum access width to street from parking: **3.0 meters**

Parking spaces over **300 sq.m** must have **two independent street accesses**

If not at street level, **ramp gradient** must be ≤ **1 meter rise per 7 meters** horizontal

Minimum clear headroom in all access areas and parking zones: **2.8 meters**

Basement (Cellar) Provisions

Permitted Use:

Parking

Safe deposit vault

Air conditioning plant

Non-inflammable storage

Specifications:

Basement area excluded from margin calculations (can be single or double level)

Clear height: **≥2.4 meters** and up to **2.8 meters**

Note: Basement area used solely for parking is exempt from FSI computation.

Regulation 29 – Tree Plantation

(i) For any **building unit of 1000 sq.m or more**,

A minimum of **3 trees per 200 sq.m** of building unit **must be planted**.

These should be shown in the **site/layout plan** and properly **maintained**.

Regulation 32 – Percolating Well & Rainwater Harvesting

Applicability Based on Building Unit Area:

Building Unit Area	Requirement
Above 500 sq.m to 1500 sq.m	Must implement water harvesting system as specified by the authority
Above 1500 sq.m up to 4000 sq.m	(Clause continues — feel free to upload next portion for full text)

Percolating Wells

Mandatory Provision:
One percolating well required for every **4000 sq.m** (or part thereof) of building unit area
To be constructed along with the rainwater harvesting system by the developer/owner

Conservation & Harvesting Guidelines (Plinth ≥ 750 sq.m)

Infrastructure must include:

Percolation Pits

Installed around building per recommendations

Filled with **pebbles**, **brick jelly**, or **river sand**

Covered by **perforated concrete slabs**

Terrace Water Collection

Connected to a **sump or bore** via filtering tank

Includes **PVC pipe system** and **valve mechanism**
Allows initial runoff to be discarded if dirty

Open Ground Treatment

Surface topsoil removed and replaced with **river sand**

Any effective alternate method of water harvesting is encouraged

2.2 HOTEL AND MIXED USE DEVELOPMENT REGULATIONS

PLANNING PROVISIONS

The mixed-use building must have a minimum area of **3500 sq.mt.**, abutting a road **30 mts or wider** (excluding heritage hotels).

FSI (Floor Space Index) regulations, regardless of zoning FSI:

Total FSI = Global FSI (GFSI) + Premium FSI (PFSI)

GFSI:

Either **0.6** in any area

Or as per the permissible FSI in a specific zone

PFSI: Permitted at **40% of the jantry rate**

The following built-up areas are **excluded** from FSI calculation:

Basements and floors used for parking

Refuge areas per NBC norms

Entrance porch / guest drop-off canopy

Atrium

Fire escape stairways

Service floors

Parking ramps

Swimming pool on any floor

Control rooms for security and fire control

STP / ETP units

AHU or equipment rooms for ventilation and A/C

Guest drop-off canopy, porch, and lift access to parking at ground level are **permitted**

For emergency safety:

Provide escape routes and refuge areas at appropriate design locations

Designed to **hold occupants** during emergencies (fire, terrorism, etc.) until rescue

Each floor must have **at least one service corridor**, with:

Minimum width: 2.5 meters

Access: From each floor

Connection: Must link to the lift

Lifts – Planning and Design

Design and planning must comply with the **National Building Code of India**

2.3 MINISTRY OF TOURISM GUIDELINES:

Facilities & Services Table – Star Classification Standards

Legend:

- **D** = Desirable / Recommended
- **N** = Not Applicable or Not Required

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
Health – Fitness and Barber's Shop	D	D	D	D	N		Indian system of treatments should preferably be offered
Beauty Salon and Barber's Shop	D	D	D	D	D		
Health – Fitness	D	D	D	D	N	Optional	Indian system of treatments should preferably be offered
Beauty Salon and Barber's Shop	D	D	D	D	D	Optional	
Full-time operation, 7 days/week during season	N	N	N	N	N		
All required trading licenses and permissions	N	N	N	N	N		
Public liability insurance	D	D	D	D	D		
24hr lifts in buildings above ground + 2 floors	N	N	N	N	N		Mandatory; relaxations per local law. Must be accessible for differently abled guests.
Daily servicing of bedrooms, bathrooms, public areas, and kitchen	N	N	N	N	N		

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
Clean, well-maintained floor surfaces	N	N	N	N	N		Any type of flooring acceptable.
Guest Room Requirements							
Min. 10 rooms, all with outside windows / ventilation	N	N	N	N	N		
Min. room size (sq.ft.)	120	120	130	140	200		Vestibule included; balcony excluded. Single rooms may be 20 sq.ft smaller.
Air conditioning – % of rooms	25%	25%	50%	100%	100%		Depends on climate and architecture; maintain 20–28°C room temp.
Clean change of linen (bed & bath) daily and between check-ins	N	N	N	N	N		Daily change required for 3★+; alternate days for 1★ & 2★.
Guest linen	N	N	N	N	N		Should be of good quality.
Min. bed width: single – 90 cm, double – 180 cm	D	N	N	N	N		
Mattress thickness min. 10 cm	D	D	N	N	N	.	Coir, foam, or spring foam mattress options.
Minimum Bedding (2 sheets, pillow, blanket, etc.)	N	N	N	N	N	N	Blankets seasonal in non-A/C rooms. Mattress protector desirable in 1★ & 2★; necessary in higher stars
Suite (bedroom + sitting area + powder room)	D	D	D	N	N	N	Minimum one suite, sold as a single room
Hairdryers	D	D	D	N	N	N	Must be available on request in 1★ & 2★; complimentary in 3★+
Safe keeping / In-room safe	D	D	D	N	N	N	1–3★: safe at reception; 4★+ must have in-room safes
Mini Bar / Mini Fridge	D	D	N	N	N	N	3★: mini fridge required; 4★+ mini bar required; must follow local laws
Drinking Water (1 glass per guest)	N	N	N	N	N	N	All stars must provide 2 sealed bottles of

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
							500ml/day/person — UV-treated water not acceptable
Guest Linen	—	—	—	—	—	—	Good quality linen to be provided
Shelves / Drawer Space	N	N	N	N	N	N	Wardrobe required for 1–3★ hotels
Wardrobe (4 hangers per bedding)	N	N	N	N	N	N	In 1★ or 2★, doors optional
Sufficient Lighting (1 lamp per bed)	N	N	N	N	N	N	
Power Socket	N	N	N	N	N	N	Required
Bedside Table / Drawer	N	N	N	N	N	N	Shared table okay for twin beds
TV Cable	D	D	D	N	N	N	Provision required for 1–3★
Writing Surface & Chair	N	N	N	N	N	N	Suitable chair & writing surface per bed
Waste Paper Basket	N	N	N	N	N	N	Required
Curtains / Window Coverings	N	N	N	N	N	N	All windows must be covered
Mirror	N	N	N	N	N	N	Minimum half-length
Stationery Folder	—	—	—	—	—	—	Desirable in all categories
'Do Not Disturb' Notice	D	D	D	N	N	N	Required 3★ and above
Night Spread / Bed Cover	—	—	—	—	—	—	Desirable in all categories
Energy Saving Lighting	—	—	—	—	—	—	Required across all stars
Linen Room	—	—	—	—	—	—	Desirable across all stars
Bathroom Specifications							

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
Attached Bathroom (min. rooms)	10	10	20	100	100	All	Remaining must be nearby
Bathroom Size (sq ft)	30	30	36	36	45	45	Legacy buildings before 1.1.2012 can have 10% size relaxation
Western-Style WC	D	D	N	N	N	N	At least 25% in 1★ & 2★ rooms
Bath towel & hand towel per guest	N	N	N	N	N		
Bath mat	D	D	N	N	N		
Minimum 1 new guest soap per person	N	N	N	N	N		Quality to match star level
Bottled toiletry products	D	D	D	D	N		
Clothes hooks (≥2 in bath/shower room)	N	N	N	N	N		Mandatory across all categories
Covered sanitary bin	N	N	N	N	N		Must be covered
Western WC with seat + toilet paper	N	N	N	N	N		
Water sprays / bidets / washlets (post-toilet hygiene)	N	N	N	N	N		Modern hygiene expected
Non-porous floor & wall surfaces	N	N	N	N	N		

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
Hot & cold running water (24 hrs)	N	N	N	N	N		
Shower cabin or curtain	N	N	N	N	N		Curtain acceptable where cabin unavailable
Bathtub	N	N	N	D	D		
Water-saving taps and showers	N	N	N	N	N		
Energy-efficient lighting	N	N	N	N	N		
Public Area Standards – Lobby & Lounge							
Lounge or seating in the lobby	N	N	N	N	N		Lobby must include seating (chairs, sofas, tables, floral display). Doorman mandatory in 4★ and 5★; staff presence 24/7 required in lower stars.
Reception facility	N	N	N	N	N		Manned ≥16 hrs; 24/7 call service; local maps available
Valet parking	D	D	N	N	N		Optional for 1★ & 2★ only
Display of room, F&B, and other tariffs	N	N	N	N	N		Transparency essential
Heating / cooling in public areas	–	–	N	N	N		Indoor temps: 20°C–28°C; exemptions for nature resorts
Public restrooms with mirror, sanitary bin, hot/cold water	N	N	N	N	N		Separate facilities for all genders
Accessibility – Facilities for Differently-Abled Guests							
At least one accessible room	N	N	N	N	N		The room shall have low height furniture, low peep hole, cupboard with low clothe hangers, audible and visible (blinking light) alarm

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
							system and doorbell. The almirah / cupboard doors in the differently abled room should be sliding to enable opening the same by the differently abled person. Blinking light in the room and bathroom should also be connected with the door bell for the hearing impaired. Cordless telephone in the room. Direct calling facility to the front desk or operator.
Bathroom	N	N	N	N	N		Door width for room of the differently abled persons and bathroom of such rooms should allow easy accessibility of wheel chair made available by the hotel). 21 | Page For new hotels coming up after 01.04.2017, the minimum door width of such rooms and their bathroom shall be minimum 90 cm. The door width of the room and bathroom for differently abled persons in existing hotels shall be 90 cm. with effect from 01.04.2023 Bathroom for the differently abled guest shall have suitable fixtures like low wash basin with wheel chair accessibility, low vanity unit, Wall mounted seat in shower area, hand shower, Grab bars net to the WC and shower area.
Ramps with anti-slip floors at the entrance. Minimum door width should be one meter to allow wheel chair access	N	N	N	N	N		Fixed and anti – slip ramp to be provided in all public areas. Free accessibility in all public areas, and to at least one restaurant in 5 star and 5 star deluxe hotel.

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
Public Restrooms	N	N	N	N	N		All star category hotels should have a public restroom for differently abled guests (unisex) with minimum door width which allows easy accessibility of wheel chair (made available by the hotel). Low height urinal with grab bars. For new hotels coming up after 01.04.2017, the minimum door width of such public rest room (unisex) shall be minimum 90 cm. For existing hotels, the minimum door width of public restroom (unisex) shall be mandatory after 01.04.2023
FOOD & BEVERAGE OUTLETS							
1 Star & 2 Star							1 & 2 Star categories should have minimum one dining room serving all meals.
3 Star Category							One Multi – cuisine Restaurant cum Coffee Shop open from 07.00 am. To 11.00 pm. And 24 hr. Room Service.
4 Star category (with alcohol service or with no alcohol service)							Grade A cities: One Multi – cuisine Restaurant cum Coffee Shop open from 07.00 am. To 11.00 pm., one specialty Restaurant and 24 hr. Room Service. The specialty Restaurant may either be indoors with air conditioning, or outdoors. The Specialty Restaurant must serve specific form of cuisine. The Specialty Restaurant may be open for lunch / dinner. Cities other than grade A cities: One Multi – cuisine Restaurant cum Coffee Shop open from 07.00 am. To 11.00 pm. and 24 hr. Room Service.

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
5 Star category (with alcohol service or with no alcohol service) and 5 Star Deluxe							Grade A cities: One 24 hour Multi Cuisine Restaurant cum Coffee Shop, one Specialty Restaurant and 24 hr. Room Service. The Specialty Restaurant may either be indoors with air – conditioning, or outdoors. The Specialty restaurant must serve specific form of cuisine. The Specialty Restaurant may be open for lunch / dinner. Cities other than Grade A cities: One 24 hour Multi Cuisine Restaurant cum Coffee Shop and 24 hr. Room Service. One Specialty Restaurant would be desirable.
Grade A: Delhi, ** Mumbai, Kolkata, Chennai, Bangalore, Pune, Hyderabad, Secunderabad. Note: The Ministry of Tourism may review and revise the cities falling under the Grande 'A' from the time to time. ** Delhi would include the hotels falling Gurgaon, Faridabad, Ghaziabad, Noida, And Greater Noida"							
Crockery and glassware	N	N	N	N	N		Plastic ware acceptable in pool area.
Cutlery to be at least stainless steel	N	N	N	N	N	N	Good quality metal cutlery required; aluminum prohibited
Bar	D	D	D	D	N	N	Not mandatory where bar license is prohibited. Liquor shops/stores not considered. Must obtain license before classification.
Kitchen / Food Production Area							
Refrigerator with deep freezer	N	N	N	N	N	N	Capacity based on quantum of F&B operations
Segregated storage of meat, fish and vegetables	N	N	N	N	N	N	Separate freezers
Tiled walls, non-slip floors	N	N	N	N	N	N	

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
Colour-coded synthetic chopping boards	N	N	N	N	N	N	Wooden chopping boards
Head covering for production staff	N	N	N	N	N	N	
Daily germicidal cleaning of floors	N	N	N	N	N	N	
Good quality cooking vessels / utensils	N	N	N	N	N	N	Aluminum prohibited (except bakery)
Food-grade equipment containers	N	N	N	N	N	N	
Drinking water	N	N	N	N	N	N	UV+ filtered
Ventilation system	N	N	N	N	N	N	
Garbage segregation – wet and dry	N	N	N	N	N	N	Encourages recycling
Wet garbage area to be air-conditioned	D	D	N	N	N	N	
Receiving areas and stores distinct from garbage area	N	N	N	N	N	N	With sink, table surface, and weighing machine
STAFF							
Six monthly medical check-ups for production staff	N	N	N	N	N	N	
First aid training for all kitchen staff	N	N	N	N	N	N	
Pest control	N	N	N	N	N	N	
Staff uniforms for front of the house	N	N	N	N	N	N	Uniforms must be clean and in good condition
English-speaking front office staff	D	D	N	N	N	N	May be relaxed outside metros / sub-metros for 1★ and 2★ category hotels
Percentage of Supervisory Staff	20%	20%	40%	40%	80%	80%	Hotels of 4★ and above should have qualified Heads of Departments; training or

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
							skill certification recommended
Percentage of Skilled Staff	20%	20%	30%	30%	60%	60%	Supervisory/skilled staff may have degree/diploma from IHMs or skill certification per Ministry guidelines
STAFF WELFARE FACILITIES							
Staff Rest Rooms	D	D	N	N	N	N	Separate rooms for male and female; well-lit and ventilated with bunk beds
Staff Locker Rooms	D	D	N	N	N	N	
Toilet Facilities	N	N	N	N	N	N	Includes full-length mirror, hand dryer, and liquid soap dispenser
Separate Dining Area	D	D	N	N	N	N	
CODE OF CONDUCT FOR SAFE & HONOURABLE TOURISM							
Display of pledge	N	N	N	N	N		To be displayed prominently in staff/back areas or office premises of all Heads of Departments (HODs)
Training for 'Code of Conduct for safe & Honourable Tourism'	N	N	N	N	N		To be included at time of joining (orientation and ongoing in-house training)
Maintenance of Action Taken Report regarding compliance of provisions of the Code	N	N	N	N	N		Signatories must maintain records of actions taken to comply with the code provisions
Focal points / Nodal officers	N	N	N	N	N		Hotels with >25 personnel: 2 officers (HRD and Security); Hotels with
GUEST SERVICES							
Provision for wheelchair for differently abled guests	N	N	N	N	N		Complimentary availability in hotels of all categories

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
Valet (parking) service availability	D	D	N	N	N		
Dry cleaning / laundry	D	D	D	N	N		In-house for 5★ Deluxe; may be outsourced for 5★ and below
Tea / coffee making facility in the room	D	D	D	N	N		Complimentary in-room facilities required for 4★, 5★, and 5★ Deluxe hotels
Iron and ironing board facility	N	N	N	N	N		Up to 4★: 20% of room count; 5★ & 5★ Deluxe: required in every room
Paid transportation on call	D	D	N	N	N		Guest must be able to travel from hotel
Shoe cleaning, shoe horn, & slippers	D	D	D	N	N		Free facility to be provided for in-house guests
Ice (from drinking water) on demand	D	D	N	N	N		Complimentary upon request
Acceptance of common credit cards & digital payment infrastructure	N	N	N	N	N		
Assistance with luggage on request	N	N	N	N	N		
A public telephone on premises	D	D	N	N	N		Should be accessible for differently abled guests; one phone ≤24" from floor in 5★ & 5★D hotels
Wake-up call service on request	N	N	N	N	N		
Messages for guests to be recorded and delivered	N	N	N	N	N		A message board suffices for 1★ & 2★ category hotels
Name, address & telephone number of doctors	N	N	N	N	N		

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
available at front desk							
Stamps and mailing facilities	D	D	D	D	D		
Newspapers available	D	D	D	N	N		For 1★ to 3★, may be placed in lounge/common area
Access to travel desk facilities	N	N	N	N	N		Not required onsite for 1★–3★ hotels
Left luggage facilities	D	D	N	N	N		4★–5★D hotels must have secure luggage racks; should be clearly stated on website and during check-in
Provision for emergency toiletries / first aid kit	D	D	N	N	N		
Personal Care and Utility Services							
Health – Fitness and Barber's Shop	D	D	D	D	N		Indian system of treatments is recommended
Beauty Salon and Barber's Shop	D	D	D	D	D		
Florist	D	D	D	D	D		
Utility shop / kiosk	D	D	D	D	D		Utility shops/kiosks are optional; separate bookshop not required for classification
Money changing facilities	D	D	D	D	D		Must be available across all categories
Security Infrastructure							
Metal detectors (door frame or handheld)	D	D	N	N	N		
CCTV at strategic location	N	N	N	N	N		
X-Ray Machine	D	D	D	D	N		5★ Deluxe: Necessary at guest entrance for baggage screening; manual checks for staff/suppliers at designated entry points

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
Under belly scanners to screen vehicles	D	D	D	D	N		
Verification of staff/suppliers	N	N	N	N	N		Antecedent verification by police or private security required
Staff trained in firefighting drill	N	N	N	N	N		Periodic fire drills; disaster management, First Aid, and Fire Safety manuals mandatory
Security arrangements at hotel entrances	N	N	N	N	N		
Each bedroom door with lock, peephole, and internal securing device	D	D	N	N	N		Safety chain/wishbone latch acceptable substitute for viewport
Smoke detectors	N	N	N	N	N		Battery-operated acceptable
Fire/emergency alarms with audio & visual signals	N	N	N	N	N		
First aid kit at front desk	N	N	N	N	N		Should include over-the-counter medicines
Fire exit signs with emergency/backup power	N	N	N	N	N		Located on guest floors
Communication Facilities							
Telephone within arm's reach of toilet seat	D	D	D	D	N		
Two multi-purpose sockets	N	N	N	N	N		Must support US, EU, and Japanese plugs at or above table level Required in all new hotels post 01.04.2016 Hotels operating before 31.03.2016 must comply by 01.04.2022 or provide multi-socket adapters on request

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
A telephone for incoming & outgoing calls in the room	D	N	N	N	N	N	4★ and above: Direct dialing with STD/ISD 1★–3★: Through hotel exchange
PC available for guest use with internet access	D	D	N	N	N	N	Can be paid service; For 1★–3★, PC may be in executive office
Email service	D	D	N	N	N	N	Subject to internet availability
Fax, photocopy & printing services	N	N	N	N	N	N	
In-room internet / Wi-Fi connection	D	D	D	N	N	N	Wi-Fi where possible; subject to local internet access
Business Centre	D	D	D	N	N	N	Dedicated area; relaxable for resorts, pilgrimage centers, tourist destinations
Other Facilities							
Swimming Pool	D	D	D	D	N	N	Mandatory trained lifeguard; must display pool depth, "No Diving" sign, rules LED wall clock (3" numerals) near pool for 4★+
Parking Facilities	D	D	N	N	N	N	Should be adequate per room count and hall capacity; accessible parking for differently abled guests
Conference Facilities	D	D	D	D	N	N	
Eco-Friendly Practices							
Sewage Treatment Plant	N	N	N	N	N	N	**Exemption**: Hotels with completion certificate before **01.04.2012**
Rainwater Harvesting	N	N	N	N	N	N	
Waste Management	N	N	N	N	N	N	
Pollution Control (air, water, light)	N	N	N	N	N	N	
Non-CFC refrigeration & air conditioning	N	N	N	N	N	N	Other eco-friendly initiatives encouraged

Facilities & Services	1★	2★	3★	4★	5★ / 5★D	Yes/No	Comments
Rain Water Harvesting	N	N	N	N	N		
Waste Management	N	N	N	N	N		
Pollution control methods for air, water, and light	N	N	N	N	N		
Non-CFC equipment for refrigeration, air conditioning, and other eco-friendly initiatives	N	N	N	N	N		

Note:
There is *no relaxation* in the "Necessary" criteria of the Checklist of Services and Facilities (Annexure III), *except* as specified in the comments column of said checklist.

2.4 GUIDELINES FOR SECURITY MEASURES IN HOTELS:

External Access Control

Aspect	Design Guideline
Limiting Access Points	Limit to 2–3 monitored entries; integrate CCTV coverage with recording across all access points
Perimeter Security	- Tiered system at outer boundary – Car boot check & underbody inspection with mirrors – Discourage door-front drop-offs; guests alight at a distance – CCTV at drop zone & main entrances
Road Barriers	Install automated hydraulic barriers or retractable bollards; embed humps for vehicular speed control
Landscape Design	Avoid dense shrubs/vines near the building façade; maintain low-growth landscaping for clear visibility
Security Patrols	Deploy enhanced guard teams; schedule perimeter and internal patrolling across high-risk zones

Material Access Control

Item	Specification
Baggage Screening	Design separate drop-off zone for luggage away from lobby; integrate baggage scanning system
Handbag Checkpoints	Ensure checkpoint near guest entry for inspection of personal items

People Access Control

Area	Implementation Strategy
Walk-In Restrictions	Do not allow walk-ins without reference or pre-booking
Guest Profiling	Install guest record management system linked to Ministry databases (Watch Lists etc); Capture full identification attributes
Employee Verification	Mandatory antecedent verification for all staff and third-party providers; prefer vetted contractors
Visitor Management	All visitors must be issued digital visitor passes with entry-time, host, and contact logged

Internal Access Control

Feature	Application
Zoned Access	Restrict general entry to high-risk internal zones (boiler, mail, control, server rooms) using smart locking systems
Proximity Cards	Staff access governed via RFID-enabled proximity cards linked with role-based permissions
Key Management	Implement a digital key tracking system (timestamp logs, access audits)
Lift Access Restriction	Guests access only their own floor using card swipe; prevent lobby-to-floor free rides

Advanced Security Technologies

Device	Purpose
Room Key Scanners	Install spectrometry-based scanners (detect trace explosives on guest cards)
Snifex Detectors	Use portable directional explosive sniffers for mobile surveillance
Trash Protocol	Assign supervised, vetted staff for trash management; secure waste zones with access controls

Crisis Management Plan

Component	Description
Emergency Protocols	Maintain ready-to-activate SOP for fire, terror, or bomb threats; conduct regular mock drills
Crisis Command Team	Establish a nodal executive & internal response group; ensure 24/7 readiness
Information Dissemination	Allocate media liaison personnel; prepare a guest-safe inquiry desk with global connectivity during crisis

2.5 TIME SAVER STANDARDS (BUILDING TYPES)- HOTEL:

Circulation Planning

In a luxury hotel, **front-of-house** (guest areas) and **back-of-house** (staff/service areas) must remain strictly **separated**. Their paths should never intersect, yet be efficiently **interconnected** for seamless operations. This segregation ensures privacy and preserves the elite guest experience.

Guest Comfort & Environment

The hotel must offer a refined physical environment—**color schemes, lighting, temperature control**, and **furnishings** all contribute to comfort. A **calm and welcoming atmosphere** is essential, making design aesthetics a core part of the architectural strategy.

Back-of-House Layout

The back-of-house, though hidden, is vital. It must prioritize **efficiency and control**. Deliveries should occur at a **covered loading dock**, connected to a secure **receiving department**. Supplies must follow designated routes, minimizing loss and exposure.

Waste Management

Install **garbage rooms** near receiving areas, ideally **refrigerated** and monitored by staff. Include **trash chutes** from every guest floor for centralized disposal. Use **destructors or compactors** in larger hotels to maintain hygiene and control.

Employee Access & Locker Facilities

Staff should enter through **monitored entry points** shared with supply access. Provide **separate locker rooms** for different roles, equipped with **showers and toilets**. Design pathways to minimize travel time from lockers to workstations.

Linen & Laundry Flow

Ensure a vertical system for **linen transport** via dedicated chutes. Soiled linen connects to service floors and leads to the **laundry room**, which links to **housekeeping** and **uniform distribution**. Place **service elevators** near chutes under steward oversight.

Construction & Investment Considerations

Budget planning should factor in **construction costs, furnishing, and land acquisition**. Design decisions must balance **operational needs** with **luxury appeal**, optimizing value without compromising on elegance or functionality.

.

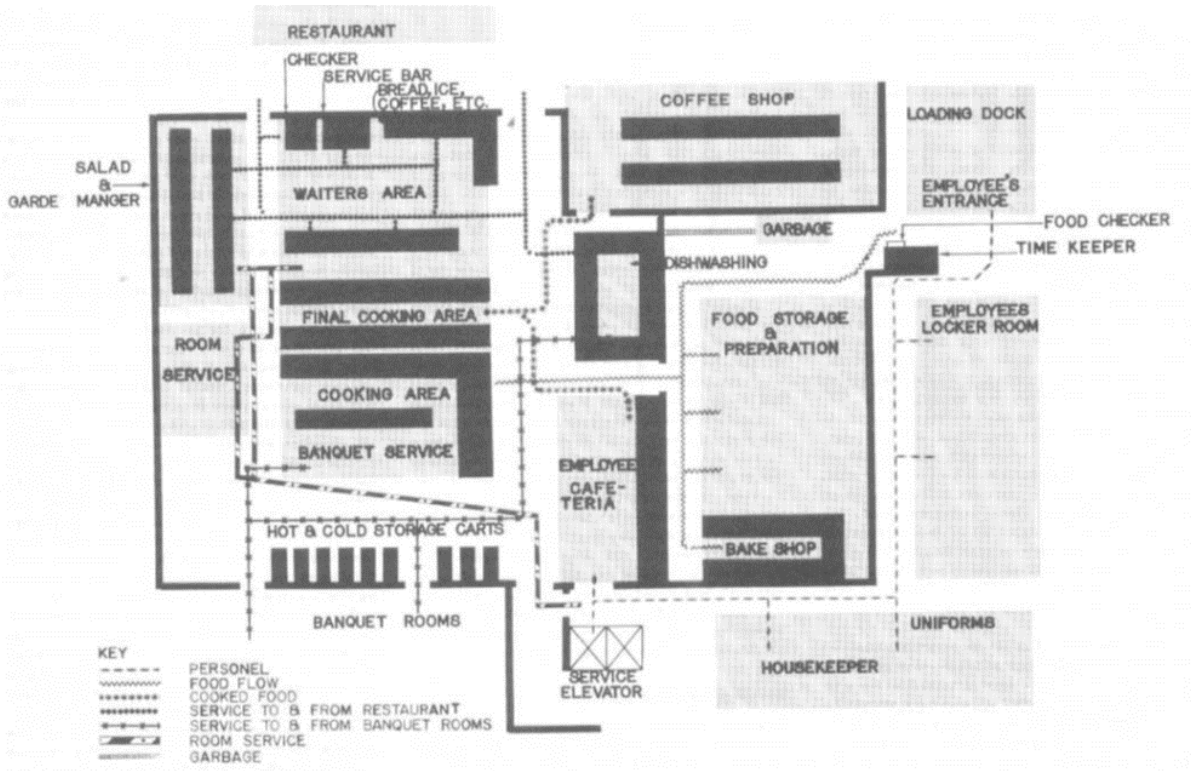


Fig. 1 Flow diagram of service areas.

2. LAUNDARY FACILITIES:

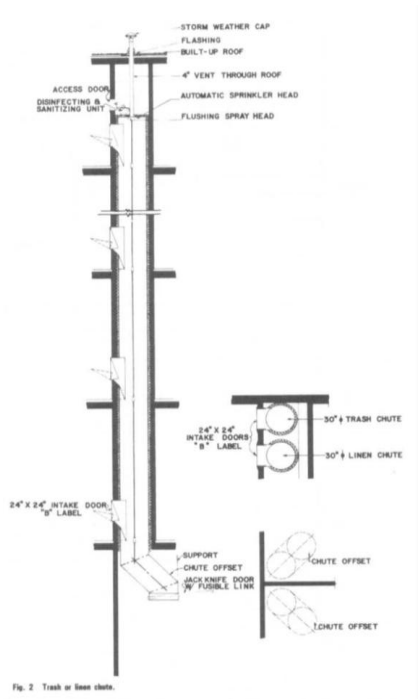


Fig. 2 Trash or linen chute.

Ø A laundry is a usual adjunct of most good-sized hotels.

Ø A hotel laundry that does its own uniforms and flatwork (sheets, pillowcases, linens, etc.) requires a good-sized space for washers, dryers, drum ironers, and various pressing machines-each suitable for its own type of flatwork, uniforms and guests' laundry, and men's and women's wearing apparel.

Ø Larger hotels will maintain their own cleaning department for dry cleaning and pressing of woolens and similar garments. Such a cleaning and valet service is usually a part of or close to the laundry area, and it is definitely under the supervision of the laundry manager.

3. HOUSEKEEPING DEPARTMENT:

Ø The housekeeping department, having several functions, is the province of the chief housekeeper, who will usually have assistant floor housekeepers. Under the housekeeper's strict control and supervision will be all the maids and porters

Ø The porters will deliver to the service areas on the guest-room floors all linen and soap as well as facial tissue, toilet paper, matches, room service menus, and ashtrays.

Ø The housekeeper's area is also a storage area, for here are kept all the supplies that become a part of housekeeping.

Ø It might be useful for the architect to know how many rooms a maid can make up during her daily tour of duty.

Ø It rarely goes beyond 15. One porter is usually assigned to each maid. In addition to the regular daytime maid, there will be, in most hotels, a night maid who will make up beds for guests ready to go to sleep.

4. FOOD AND BEVERAGE SERVICES:

Ø The flow of the raw food from the time it is delivered to the steward until it is finally cooked and ready to be picked up by the waiters or the waitresses.

Ø After the comestibles have been weighed in, checked, and signed for, they are sent to either dry storage or liquor storage (a room with a big lock on it) or to one of the various cold holding rooms or boxes. Canned food and other bottled or packaged food which does not need refrigeration will be sent to dry-storage rooms. In this storage space will also be kept the various condiments that the chef will need in the preparation of his food. Vegetables will be sent to an area where they will be stored ready for preparation. A refrigerator box of the

proper temperature will be needed, as well as work space, sinks, and cutting boards where vegetables will be prepared for the chefs as needed. Vegetable preparation area is needed.

Ø Dairy products will go to their own cold-storage boxes. Fish, fowl, and meat will go to a separate area where boxes must be arranged with proper temperatures for their storage.

Ø Freezer, refrigerator, and cold storage boxes require heavy insulation. Slab sinkage in these areas should be provided for.

Ø The bakery shop should be a separate entity, having its own refrigerator boxes as well as all the pertinent equipment that a baker will use in his art---and an art it is, indeed.

Ø Here again, one should be reminded that the bakery should be close to the actual food service area so that not too many of these goodies find their way into the locker rooms or out of the hotel entirely.

Ø KITCHEN- The food from the prep area is brought to the various points where it is to be used. One of the first areas to which a good part of the prepared food will go is the rough cooking area. Here we find the big soup kettles, the vegetable steamers, the ovens, and the hot tops where most of the bulk foods will be prepared.

Ø Pot washing area close to the rough or preliminary food cooking area. Rough cooking is usually backed up to the finished cooking area.

Ø Between the chefs' ovens, broilers, and fry- errs, which are aligned in a straight line, there will be an aisle for the chefs. On the other side of this aisle will be the serving tables from which the waiters will pick up the finished food. At the bottom of these tables will be plate. warmers which the waiter picks up and sets on the table so the chef can place the order of the specific dish that is required.

Ø This entire area is for self-service by the waiters, who will pick up the items they need on their way to the guest waiting for the delivery of his food.

Ø DINING ROOM- The dishwasher is usually placed close to the Dining room area so that the dishes can be disposed of as soon as the waiter or busboy enters the kitchen. The dishwashing area is, of necessity, not only noisy but also a rather untidy operation, SO it must be kept fairly isolated from the actual cooking and serving area.

Ø Then, before entering tire. dining room, Ire will usually go by a checker's desk where he presents a check indicating the items that he is taking out of the kitchen to the diner.

Ø One other space will usually occur in our ideal kitchen--a service bar with a bartender who will prepare tire drinks that the waiter has ordered.

Ø There will be a chef's office, which is set where the chef can observe all the activities in tire kitchen. His office is usually enclosed with glass to give him aural privacy but complete visual control. Here the chef will prepare and plan menus.

Ø Room-service area- Here there must be sufficient space for a fairly large number of room service rolling tables, which are set and ready to carry the dishes that have been ordered by the guest via telephone.

Ø The room-service area is always close to tire cooking and garde manger area.

Ø The room service area should, of necessity, be as close to the service elevators as possible.

Ø COOKING AREA- The cooking area, consisting mainly of griddles, will be manned by short-order chefs who are ready to prepare various hot breakfast dishes, and the garde manger section will be manned by a crew who are expert in the preparation of breakfast menus.

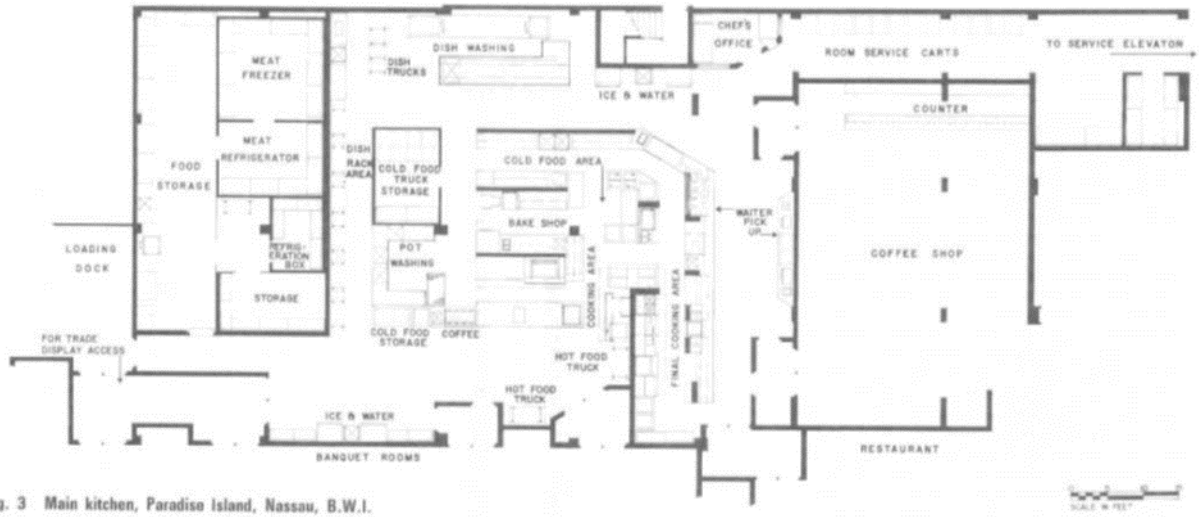


Fig. 3 Main kitchen, Paradise Island, Nassau, B.W.I.

Ø BANQUET HALLS- In the banquet area there will be mobile cabinets that take trays. These are electrified cabinets arranged to keep dishes either hot or cold. Those banquet cabinets can be stocked before a banquet for certain types of manes.

Ø A large banquet area in a hotel will require a separate banquet kitchen with its own cooking facilities as well as its own dishwashing area.

Ø One last observation: it is an excellent idea to have toilets and washrooms for kitchen help, so that it isn't necessary for them to return to their locker rooms, which may be at some distance. It is always advisable to keep the kitchen help within the kitchen during their stint of duty. Doors to dining rooms, and there may be several dining rooms serviced by the one kitchen, should be strategically placed and baffled so that the diners do not have a view of what goes on in the kitchen, and, what is more important, do not hear what is going on.

Ø The ideal plan would be to place the coffee shop backed up to the kitchen, so that certain finished dishes and prepared foods can be delivered to the coffee shop work area directly from the main kitchen under complete control and it passes from prep areas to kitchen to coffee shop.

Ø At the counter we will usually find a pickup area where the waiters can pick up the food prepared for them without disturbing the diners who are sitting at counters. Dirty dishes will be sent back to the dishwashing area through a pass-through, or they will be carried to the dishwashing area in the main kitchen.

Ø Employees' cafeteria- This space is usually planned to be close to the help's locker rooms and yet contiguous to the main kitchen.

Ø Beverage service area- This may be a bar room or a cocktail lounge. In any case, there will be a bar with stools (if local codes permit) and an area for cocktail tables and chairs. A cocktail lounge must be serviced just as the kitchen is serviced. To the bar must be brought not only liquor and bottled goods but also the usual crunchies.

Ø Ideally, the delivery should be made directly to the back bar through pass-throughs from the kitchen, so that we find once again another unit backed up to the ideal kitchen.

5. MECHANICAL SPACES:

Ø Another area that should be considered in designing the back-of-the-house spaces will be the boiler or mechanical room. In this area will be found the various pieces of equipment for heating and cooling as well as all the tanks and pumps to keep all the mechanical systems in operation.

Ø In this area will also be found all central switch gear that controls electric current for every purpose in the hotel complex. This domain belongs to the house engineer and, naturally, there should be provision for an engineer's office, with a mechanical repair shop close by.

Ø These would include a carpentry shop, an upholstery shop, and definitely an area for a locksmith. Somewhere in the area, where they are easily accessible, will be storage rooms in which will be kept a multitude of spare parts to service the hotel. be occupied by personnel that very often come in contact with the guests, and the strategic location of these back-of-the-house facilities will be controlled entirely by what happens in the front of the house.

Ø Included in these areas you will find accounting and bookkeeping offices (which back up the front cashiers); reservations offices (which back up to the front registration desk); and offices for management, which will include a reception area, a manager's office, and an assistant manager's office. Ø There is also a mail sorting room.

6. FRONT OF THE HOUSE:

Ø The guest or the paying customer sees only the front of the house, and this must be all that he desires.

Ø The front of the house comprises every area that the guest will see; lobbies, dining spaces, rest rooms, passenger elevators, corridors, hotel rooms, etc. These spaces must be handled and planned with one thought in mind: the convenience and continued approbation of the guests.

Ø The registration desk and the elevators should and must be immediately apparent. The registration area consists of a front desk, behind which is a registration clerk, behind whom is the key and mail rack, and behind that the various administration spaces.

7. GUEST REGISTRATION:

Ø A hotel registration desk must be located so that it is immediately visible as one enters the hotel lobby. The size of the desk will be determined by the size of the hotel.

Ø 2,000 rooms might have anywhere from four to six registration clerks, while a hotel of 100 to 200 rooms will have one or at roost two spaces at which guests may register.

Ø The simplest arrangement will call for a suitable file containing advance reservation cards requesting space, so that the clerk can quickly check what room has been reserved for what particular guest.

Ø Advance registration counter

8. MAIL AND KEYS:

Ø There are two other services that the front or registration desk must perform. The first and obvious one is to serve as the place where the room keys are kept.

Ø If the registration clerk handles the key, then obviously the key rack is directly behind the desk, easily accessible to the registration clerk. If the hotel is large enough to require separate area and separate personnel for handling of keys, this function will usually be alongside the actual registration desk.

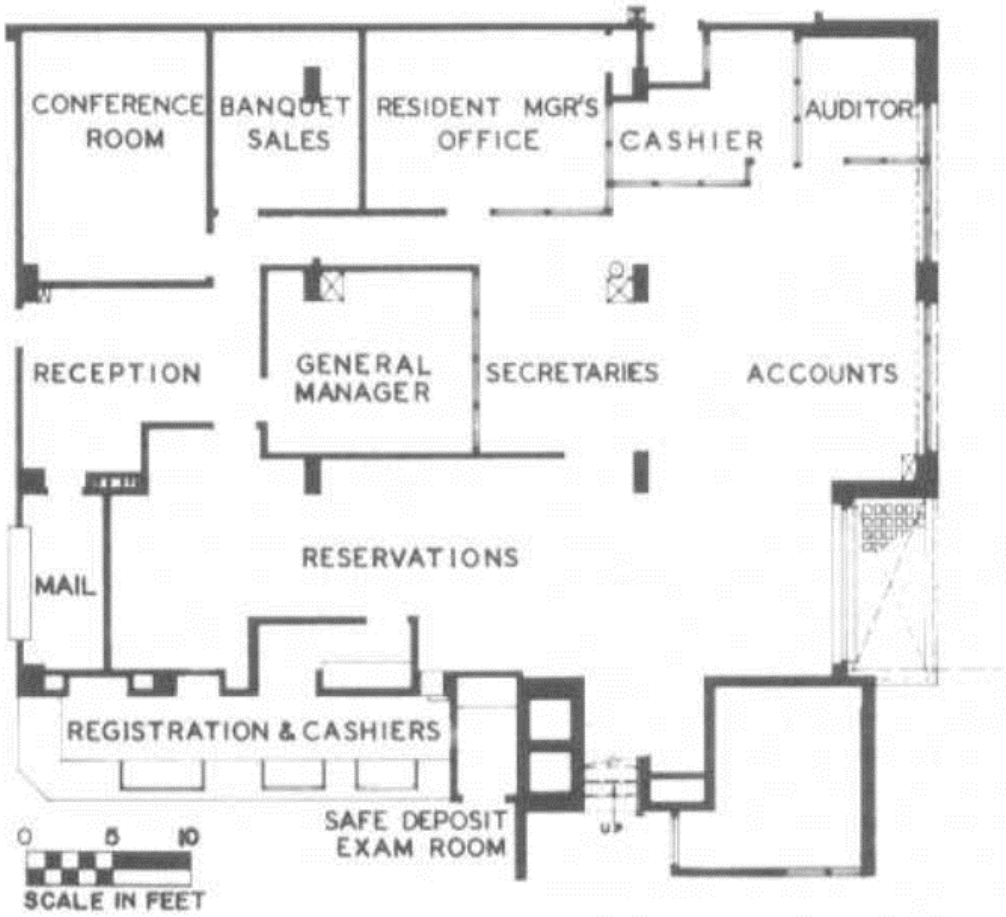


Fig. 4 The Churchill Hotel, London.

9. CASHIOR:

Ø The average hotel usually has the cashier's counter located adjacent to the registration desk.

Ø The larger hotels may place cashiers in the so-called "front desk" area but somewhat remote from the actual registration desk. There are times in large hotels, especially those catering to conventions, where one convention is checking out while another is checking in. This will make for traffic congestion and some confusion. Such a situation can be avoided by planning the registration and cashier facilities so that lines forming in front of the registration desk do not conflict with lines forming at the cashier's counter.

Ø Larger hotels will have a complete bookkeeping department. This will require more than just the actual cashiers, who remain at their stations, while the bookkeeping department handles all entries and bookkeeping for the guests. It is obvious that this bookkeeping department should be close to if not backed up to tire front desk cashiers, so that any

questions of charges can be quickly checked and adjusted by the cashier, who will contact the bookkeeping department for clarification or corrections in the guests' bills.

Ø Therefore, a small closed room is normally provided. The guest enters this room and gives the valuables to the cashier through a pass-through window. This pass-through window should have a view of the vault or the safe so that the guest can watch his valuables being deposited properly.

Ø In large hotels, where there are a number of restaurants and other facilities which entail cash payment, special arrangements should be made for the handling of this cash and, in some instances, safety deposit boxes or vaults are provided so that the money can be stored when it is brought to the cashier space at off hours.

10. ADMINISTRATIVE AREA:

Ø The administration of a hotel operation depends entirely upon its size.

Ø A larger, medium-sized hotel will have a manager and an assistant manager and, as a rule, there will be e reception office where one or two typist receptionists will be acting as a buffer between the public and the manager.

Ø Aside from the manager and the assistant manager, there may be an office for a food and beverage manager and a banquet manager. A larger hotel, with sizable convention facilities, will also have an office for the convention manager and his assistants.

11. RESTAURANT FACILITIES:

Ø Under normal situations there will be a cocktail lounge or beverage bar even in the smallest dining facility. The larger hotel will have a pleasant coffee shop for quick service and for simpler meals, whereas a restaurant, with its appropriate decor for more leisurely dining, will offer a more varied menu with probably higher cost per meal than in the coffee shop. The cocktail lounge will usually be found close to the dining room so that hotel guests can pause for a cocktail before lunch or dinner, or while waiting, before going to the dining room", to meet friends or other guests. Where convention facilities are offered within a hotel, it is wise to have a bar placed close to the convention facilities.

Ø Large convention and banquet facilities usually provide a fixed or portable bar arrangement in the pre-assembly or foyer areas to take care of pauses between meetings and seminars and to fill those pauses with a facility that will provide a "pause that refresh." There is no special requirement for the design of hotel restaurants, bars, cocktail lounges, and coffee shops which are in any way different from the standard requirements for any such facility.

Ø Wherever a rooftop restaurant is created, the architect must bear in mind that there will be increased traffic in the elevators taking diners from both in and outside the hotel to this specialized rooftop facility. And don't forget that, because of public assembly requirements, the stairs must be sized larger. Supper clubs or nightclubs will also be found in the larger hotels with this type of dining and entertainment area along with orchestra dressing rooms.

12. LOBBIES:

Ø Every hotel, regardless of its size, must have a public lobby. The size of the lobby is largely determined by the number of guest rooms as well as by the type of hotel that is on the architect's drawing boards.

Ø Furnishings, color, finishing materials, lighting, and decor must create the proper ambience regardless of whether the hotel is large or small, in a city or a resort, moderately priced or expensive.

13. ELEVATORS:

Ø Except for one- and two-story motels, every hotel and motel will use elevators to take guests from the point at which they have checked in up to the floor where the guest's room is located. Elevators should be located so that they are immediately visible, either from the entrance of the hotel or from the check-in or registration area. Another consideration in the planning of elevators is that of their location on the guest-room floors. It is advisable to place them centrally so that the distance walked by a guest in any direction is reduced to a minimum.

Ø The number, size, and speed of the required elevators is best determined by the elevator companies themselves.

Ø Service elevators are separate and apart.

Ø Each bank of elevators should be strategically located to best service the front of the house (guests) or the back of the house.

Ø The bell captain's station should be located so there is a commanding view of the hotel entrance, the registration desk, the cashier, and the elevators.

Ø Somewhere in the lobby there should be a rather large storage spare for luggage which may be left by guests after checking out but prior to departing.

14. GUEST FLOOR CORRIDORS:

Ø It is wise to remember that no guest-room doors should be placed opposite the elevators. Guests coming or going late at night, coming out or getting into the elevators, may talk loudly or may be too noisy, in which case they would be disturbing guests whose doors open off this area. The foyer should be further demarked from the guest-room corridor by its decor and lighting.

One of these appurtenances would be a small bench or some type of seat for guests who may want to wait in the foyer for the elevator or who may be waiting to meet someone else on the floor. It is also a thoughtful gesture to have a full-length mirror in this area; men as well as women guests appreciate the chance to have a look at themselves before descending to the main lobby floor. There Ø should obviously be a good-sized ash receiver for cigarettes, cigars, and other trash nuisances that the guest may want to get rid of before getting into the elevator.

Ø Good practice indicates that a corridor should, if at all possible, not be over 100 ft in length.

Ø There is very little choice in the width of a corridor. Normally, 6 ft is considered an adequate width, although some hotels have made do with only 5 ft.

Ø Another expedient, which may be used either in a narrow corridor (under 6 ft) or a standard-width corridor, would be the device of recessing the bedroom or guest-room doors. Setting doors back from the corridor wall 1 ft or even as much as 2 ft gives an apparent width to the corridor and, what is more important, it gives each room entrance its own sense of privacy and individuality.

Ø A flush panel door is the least expensive but also the least desirable type of door for a guest room. If only a flush door is used, strong color might be helpful,

Ø The lower portion of the wall, therefore, might well be designed as a dado made of a bruise- and shock-resistant material or merely marked off with a contrasting color or wall covering.

15. GUEST ROOMS:

Ø The length and width are determined by the amount of furniture that is to go into the room and by the degree of luxury that the hotel operator wishes to achieve.

Ø The most common room in the hotel field today is the twin-bedded room. Then we have the possibility of a single occupancy room, and, lastly, studio rooms or suites.

Ø The next consideration is the size of the beds themselves. There are single beds which are 3 ft 6 in. wide, a full-sized bed which is 4 ft 6 in., a queen-sized bed which is 5 ft wide, end a king-sized bed which is 6 ft wide. Presently, all beds are still being made in a 6-ft 6-in. length dimension.

Ø If at all possible, there should be a3-ft aisle and, if no furniture is placed opposite the bed (a very unlikely arrangement), then the width of the room would be a minimum of 10 ft 6 in.

Ø Where furniture will be placed on the wall opposite the bed, such furniture will most likely consist of a dresser or cupboard with drawers. Such a piece of furniture requires a minimum of 18 in. in width and most likely an optimum width of 24 in.

Ø The most common arrangement found in most hotels consists of two comfortable armchairs with a cocktail table between them. A comfortable chair will require a depth of least 30 in. and another 30 in. of leg space in front of it, which means that we need at least 5 ft from the wall before we encounter the first piece of furniture, which will probably be a bed.

Ø In talking of lighting, we must bear in mind that we want not only a lamp or a ceiling fixture over the sitting area but also adequate reading lights for the beds. The most often used arrangement is a twin-headed lamp sitting on the night table between the two beds.

Ø Another piece of fixed furniture that is desirable is a luggage stand.

Ø This could be a straight-backed chair or a stool placed in front of the writing-makeup table.

Ø Between a pair of twin beds, the ubiquitous nightstand with its small storage space below is standard.

Ø SUITES: Another popular arrangement in hotels is that of the so-called "studio room." Dual sleep pieces have been developed which are comfortable sofas during the day and perfectly comfortable beds at night.

Ø The purpose of a studio arrangement is to enable the guest to use his room as a true sitting room.

Ø Another reason for having these studio rooms is that they may double as sitting rooms for suites by having one room, which is a normal bedroom or guest room, adjoin another room which is furnished as a studio room. Thus, the hotel can provide a two-room suite (obviously, connecting doors must be provided between these two accommodations).

Ø Every hotel should have arrangements for suites of a permanent nature as opposed to a combination of a studio room with a typical guest room. Suites will be furnished like fine sitting rooms. They are used not only by the affluent traveler because he can afford it but also by travelers who do a good deal of entertaining, especially business travelers who entertain clients and customers on their arrival in any given city.

Ø These suites are also often used by two couples or by a large family, in which case the sitting room of the suite may be used for sleeping at night. In this case, dual sleep pieces will be required, but they will usually be the type that is referred to as a "davenport," or the type of sofa which opens out to become a comfortable double bed (never as comfortable as a true bed). These suites should have a good-sized dining table with a sufficient number of chairs, provision for an adequate desk (since some business may be carried on in that room), a sufficient number of comfortable lounge chairs, and an accessory table.

Ø It is a good practice to arrange the sitting room of a suite so that it connects with at least two bedrooms and, if at all possible, three and sometimes even four bedrooms.

Ø Suites will usually be found in the corner of a building, which makes it possible for the planner to join up several bedrooms.

Ø There are times when suites are not used, and the hotel should be able to rent each of the rooms in the suite separately.

Ø A foyer which connects the bedrooms and the sitting area makes this separate keying of rooms possible.

Ø A complete bathroom should be planned for each of the sitting rooms of a suite to make it possible to rent the rooms out singly.

Ø Since this room will be used for entertaining (either business or private), a bar with water connection becomes a pleasant adjunct.

Ø Obviously, these rooms will be placed on the lowest floors so they can be close to the public spaces for the convenience of those who are going to use them for meetings or seminars in connection with a larger convention or meeting taking place in the hotel.

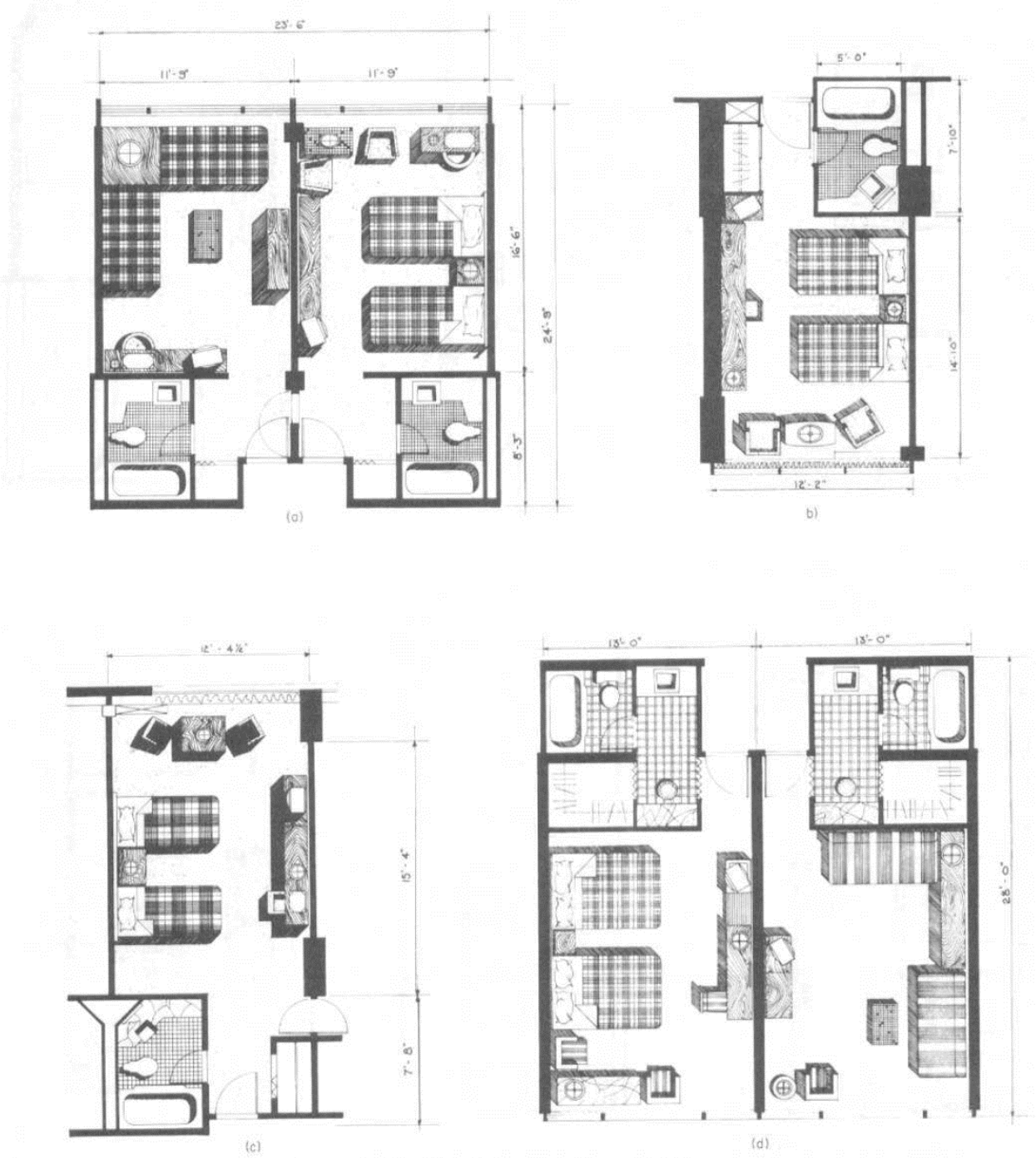


Fig. 5 (a) Uris Brothers Hotel, New York. (b) Americana Hotel, New York, typical tower room. (c) Loews N.Y. Motel, typical room. (d) Causeway Inn, Tampa, Florida.

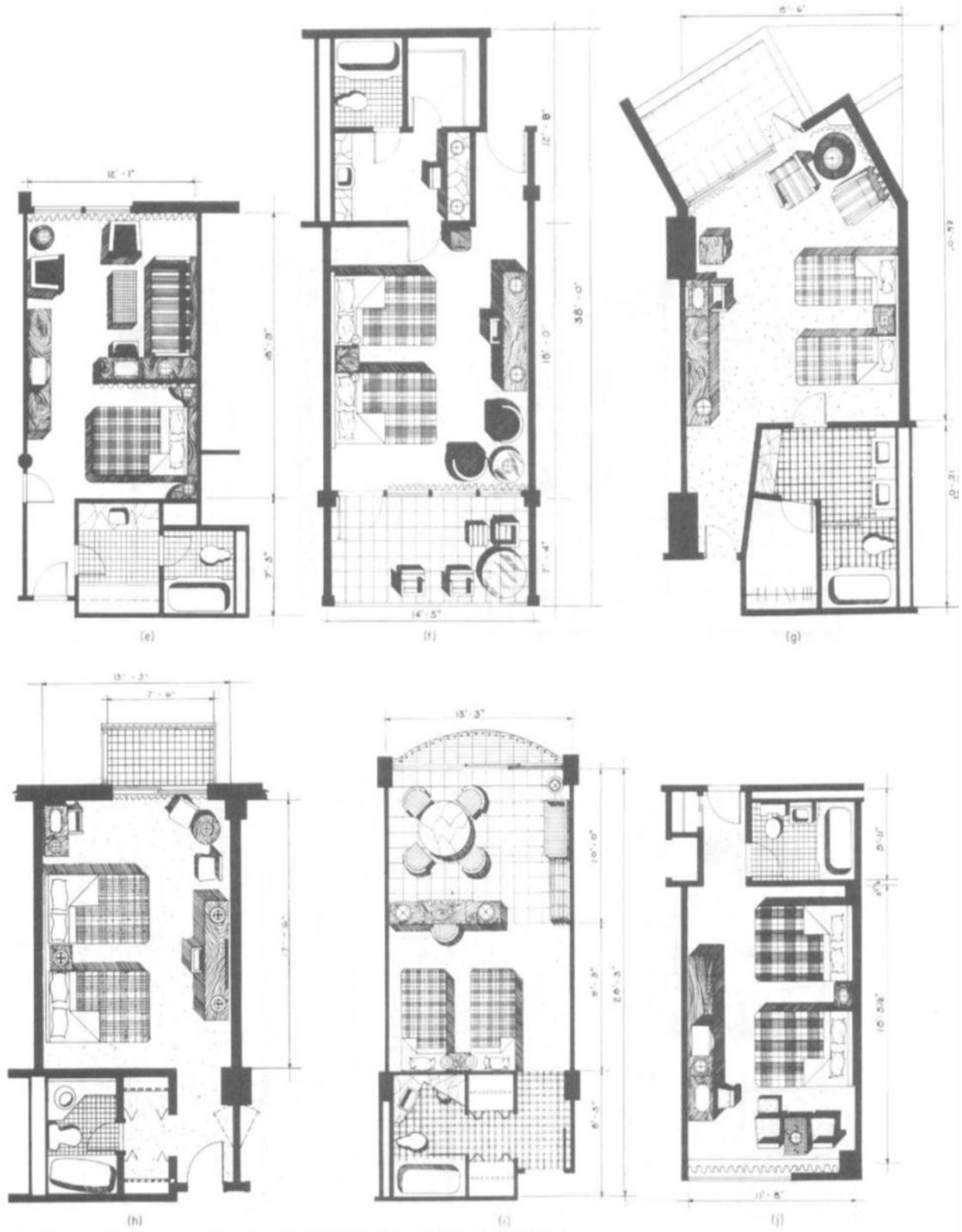


Fig. 5 (cont.) (e) Tampa International Inn, Tampa, Florida. (f) Indies House, Duck Key, Florida. (g) Americana Hotel, Bal Harbour, Florida. (h) Paradise Island Hotel, Paradise Island, Bahamas. (i) Americana of Puerto Rico, typical room layout. (j) Massena Motor Inn, Massena, N.Y.



Fig. 5 (cont.) (k) Chicopee Motor Inn, Chicopee, Massachusetts. (l) and (m) Thomas Circle Motor Hotel, Washington, D.C. (n) Riverview Motor Hotel, New York.

16. GUEST BATHROOMS:

Ø The minimum bathroom will have a combination tub-shower, a lavatory, and a water closet.

Ø An innovation devised by the writer's firm was the introduction of two lavatories in the bathroom facilities. These two lavatories may be right in the bathroom itself, they may be pulled out into a dressing area, or one lavatory may be placed in the bathroom and another outside the bathroom.

Ø Bidet is being introduced. Obviously, this additional feature is found only in the most luxurious hotels.

Ø A wall-hung unit makes cleaning of hotel bathrooms easier for the maid, but again, its economics will determine whether this fairly expensive type of installation is warranted. The tub in a guest room is normally a 5-ft tub.

Ø The normal shower head becomes standard in all hotels, although there is a growing tendency to using the so-called "telephone shower head."

Ø The normal wall shower head, and by using two movable shower-head supports, one at the normal hand level and one at the higher level where a fixed shower head normally would occur, the guest has the option of allowing the hand type shower head to remain in a standard position or to remove it and use it as he pleases.

Ø It is preferable to have a ledge on which toiletries may be placed, where they are conveniently reached, and where, obviously, they will not be left when the guest checks out.

Ø If a ledge is used, the toilet tissue holder can be placed within the recess of the ledge, es can be the tumbler holders and the toothbrush holders. Obviously, an electrical convenience outlet must be placed in this area for electric shavers, electric toothbrushes, and other electrical gadgets that today's traveler takes with him. A slot receptacle for used razor blades should not be forgotten. Towel bars must be strategically placed so that the guest can reach for a towel regardless of whether he is stepping out of the tub or whether he is washing or shaving et the lavatory.

Ø Another nicety which might be provided is some form of clothesline. With today's wash-and-wear apparel, many guests, especially women, like to do their washing at night and hang their garments in the bathroom.

Ø A number of hotels are installing a wall-hung mirror which is an enlarging mirror on one side and a normal mirror on the other, a very nice touch for both men and women guests.

17. GUEST CLOSETS:

Ø The size of a closet will be determined by the type of hotel.

Ø Having the open hanging arrangements obviates this possibility. The longer the guest-room stay that is anticipated, then the larger the closet.

Ø It should be possible to store the luggage out of sight in the closet without diminishing the available hanging space, the shoe-rack space, or shelf space for hats and other apparel and paraphernalia. Whether the closet is a flat reach-in type or a walk-in type, the door should be such that, when the closet is opened, there are no hidden recesses where clothing may be forgotten because it cannot be readily seen by the departing guest.

Ø A good closet will have a hang rod with sufficient space to comfortably hold men's and women's clothes, a shelf for packages, hats, etc., and a shoe ledge or rack for placing shoes.

18. GUEST FLOOR SERVICE SPACES:

Ø Every guest-room floor will have a service area.

Ø Primarily, it is a place where linen is stored and where the maids' carts are kept. We must bear in mind that each maid will handle anywhere from 12 to 15 rooms and that each maid will need a cart. The number of rooms on the floor will, therefore, determine the number of maids and, in turn, the number of carts.

Ø A closed storage area should be provided for the storage of linens. In addition to the maids', porters', and linen supplies, sufficient space should be left for the storage of room-service carts.

Ø They may have to remain on the floor for some time waiting for the service elevator or elevators. Obviously, the service elevators will open out to this service area, so that all this activity takes place out of the sight and hearing of the hotel guests.

19. BANQUETING FACILITIES:

Ø Larger hotels will have a more diversified arrangement for meetings, luncheons, dinners, and banquets. The largest hotels are usually designed with a full banqueting and convention facility.

Ø The normal meeting room requirements are rather simple. The rooms will vary in size to accommodate anywhere from 10 to as many as 100 people. In most instances, wherever it is feasible, the meeting rooms will be arranged in a straight line, so that the walls separating one room from the other can be made movable.

Ø Thus, if two meeting rooms which normally might seat 25 people are thrown open to one, we would have a meeting room to take 50 people; and if another wall is opened, we would be able to seat 75 people, and so on.

Ø In larger rooms, which normally qualify for conventions or large banquets, it is also possible to subdivide the space by the use of movable walls to create smaller rooms when a large room is not required. A large space which might seat 1,000 people when all folding wells have been moved back can be cut up into anywhere from four to six spaces, allowing for meeting rooms that can accommodate 150 to 250 people.

Ø Of course, in the really large convention halls, it will not be unusual to seat 3,000 or more people in one large convention banquet hell. Realizing that food must be brought to all these rooms, their juxtaposition to serving kitchens is highly important in arranging the plan.

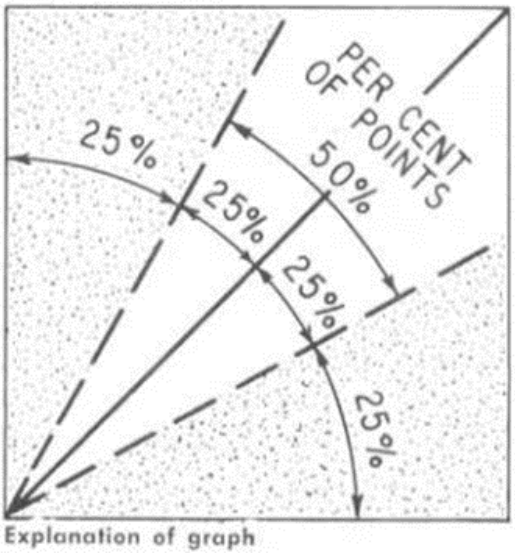
Ø For the most part, food should be brought directly from banquet kitchens to the banquet spaces. In subdividing these spaces, the subdivision must be so planned that each space is contiguous to the kitchen and has its own doors to enable waiters to come and go between the banquet spaces and the banquet kitchen.

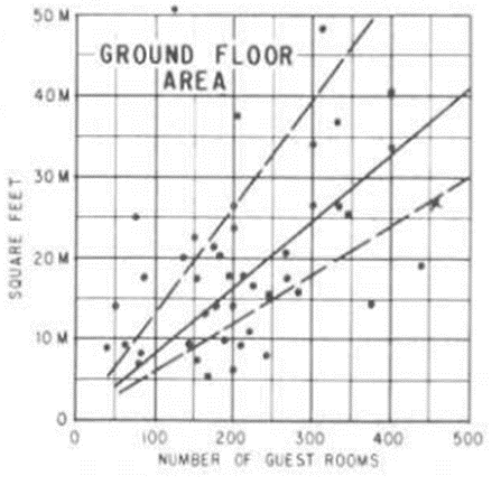
Ø Sound isolation is of the greatest importance, and this applies not only to the decibel rating of the panels themselves but also the arrangement of the joints between the sections or panels of the movable wall.

Ø In fairly large meeting, banquet, and convention facilities, space must be provided which is normally called "preconvention assembly space.'

Ø Since most of the people who are standing are those who will eventually be seated, the proportions of the preconvention foyer space will be determined by the number of people who will be eventually seated. As a rule of thumb, a person standing in fairly close quarters will take up approximately 5 sq ft. A person seated at a table will take up anywhere from 10 to 15 sq ft. A person seated for a seminar or a meeting will require 8 or 9 sq ft. It thus becomes apparent that the ideal preconvention, pre-banquet, or assembly space should be at least one-third of the area of tire actual dining and meeting spaces.

SPACE ALLOTMENTS





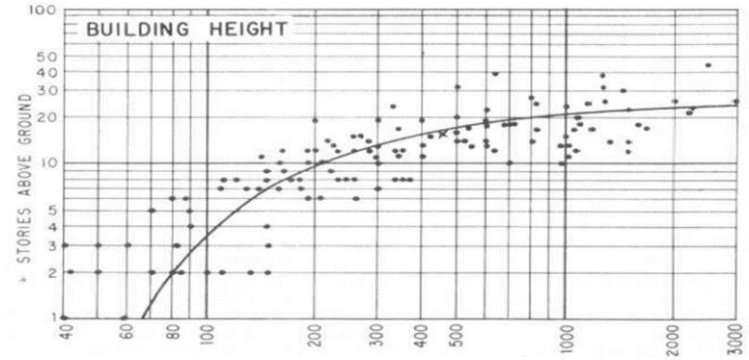
Hotel has six main space divisions, classified according to function :

2.6 Public space
2.7 Concession space
2.8 Subrental space
2.9 Food and beverage service space
2.10 Guest-room space
2.11 General-service space

at least 50 per cent of the total area should be productive space .

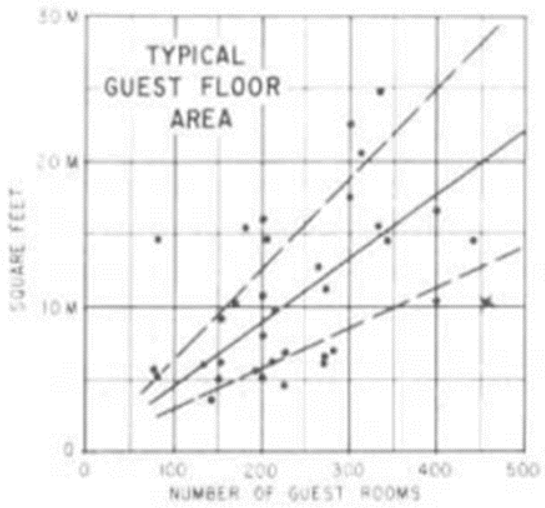
Ground floor

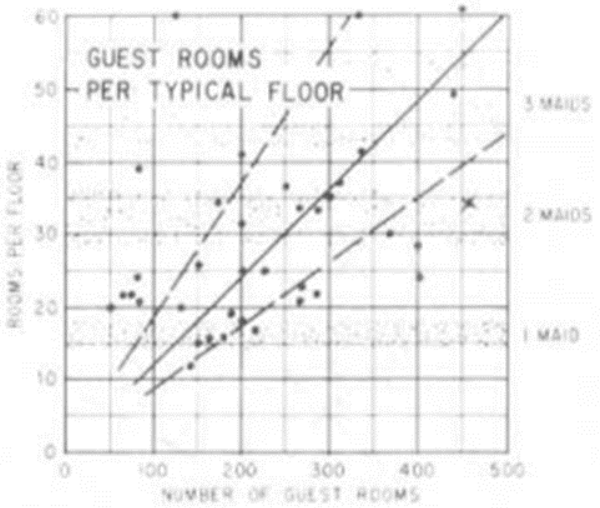
Height-



Guest-floor area –

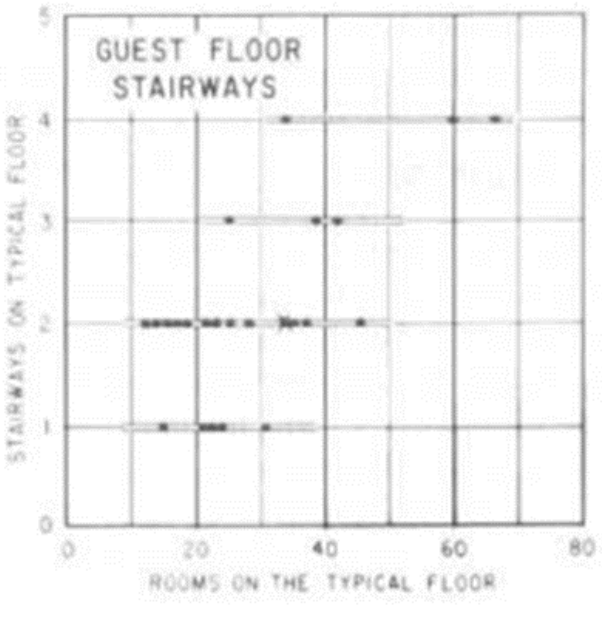
Typical guest-floor area usually covers about 55 per cent of the ground-floor area. Usually, each maid is assigned to about 16 rooms. If feasible, the number of guest rooms on the typical floor should be a multiple of 16 or quite close to it. On the graph, the horizontal bands indicate that one maid would handle from 14 to 18 rooms.





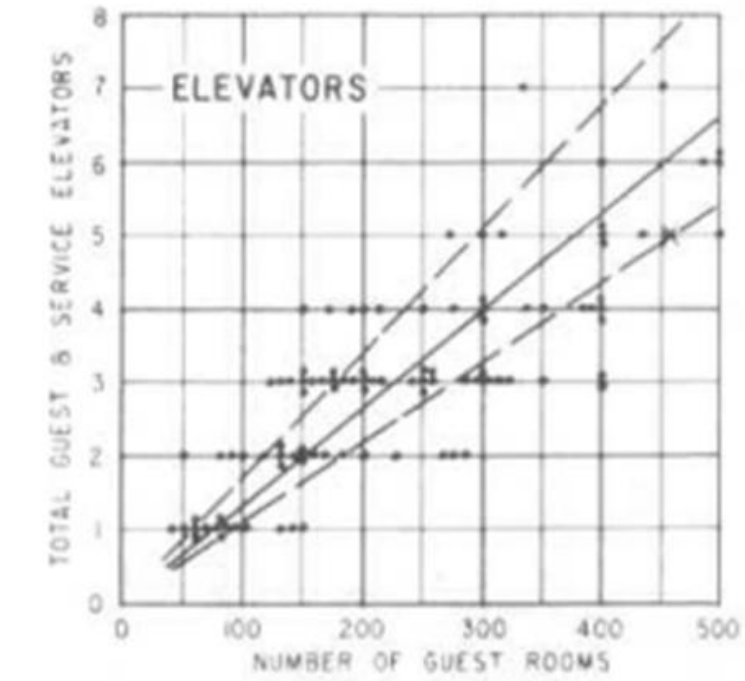
Guest-floor stairways –

Guest-floor stairways tend to increase in number with the number of guest rooms on the typical floor. guest-room door to the nearest stairway entrance usually require a minimum of two stairways on the typical floor. two stairways are usually enough if there are no more than 40 guest rooms per floor In general, there are about 15 to 20 rooms per stairways.



Elevators-

Elevators are provided according to the number of guest rooms, also influenced by other factors such as the height of the building, the speed of the elevators, and the desired average frequency of service. 60 per cent of the elevators are guest cars and about 40 per cent are service cars.



PUBLIC SPACE

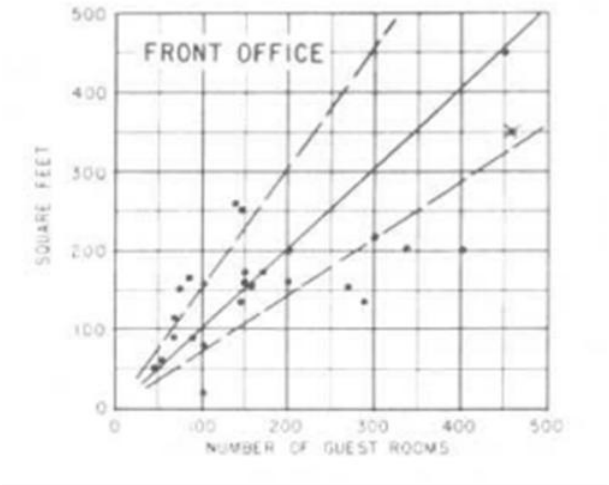
Public space comprises those areas that are open to the public as necessary auxiliaries. Promoting guest convenience ore, the lobby, lounge, public toilets, and entertainment rooms.

· Lobby –

The lobby including front office is usually assigned about 11 sq ft per guest room. now 9 sq it is often considered ample.

· Front office

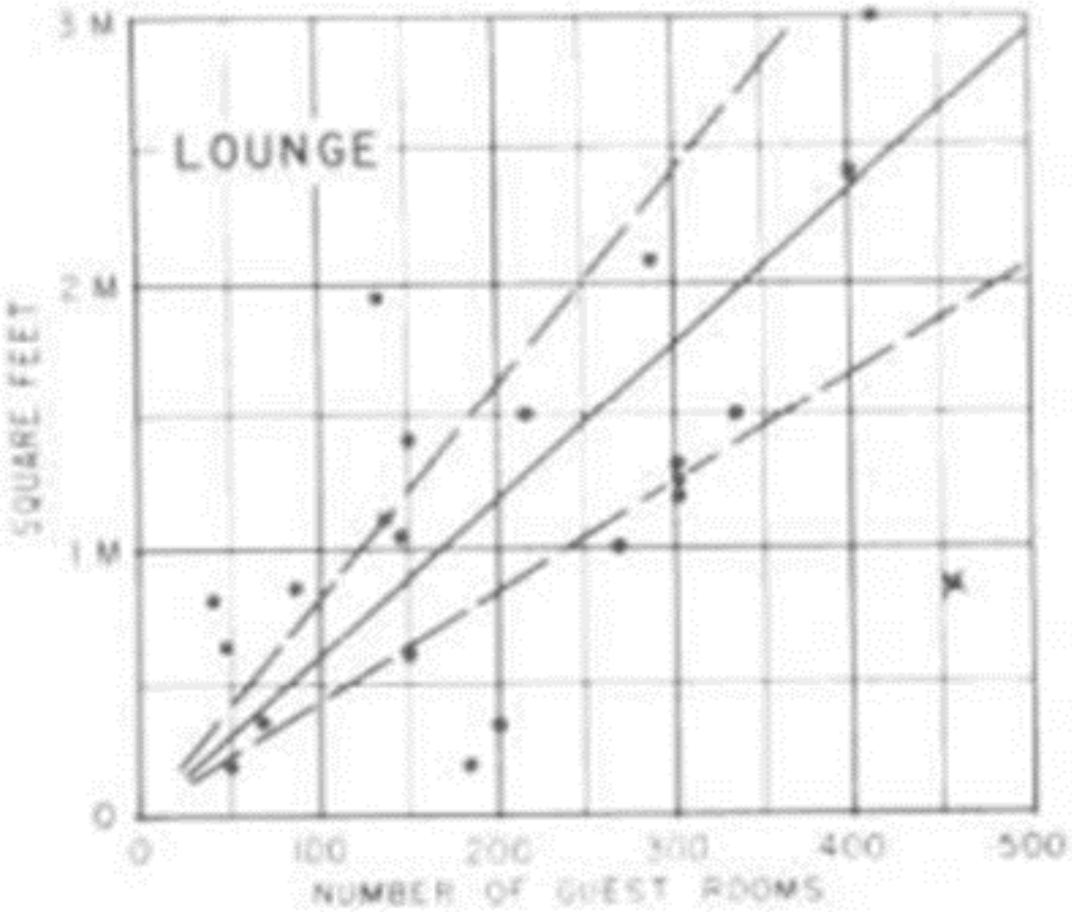
The front office, or front desk, has guest-contact stations for the registry, cashier, information, and mail the average allotment is 1 sq it per guest room. A straight-line counter is generally preferred, with a length of 10 ft for a 50-room hotel, 15 ft for 100 rooms, 20 ft for 200 rooms, and 26 ft for 400 rooms.



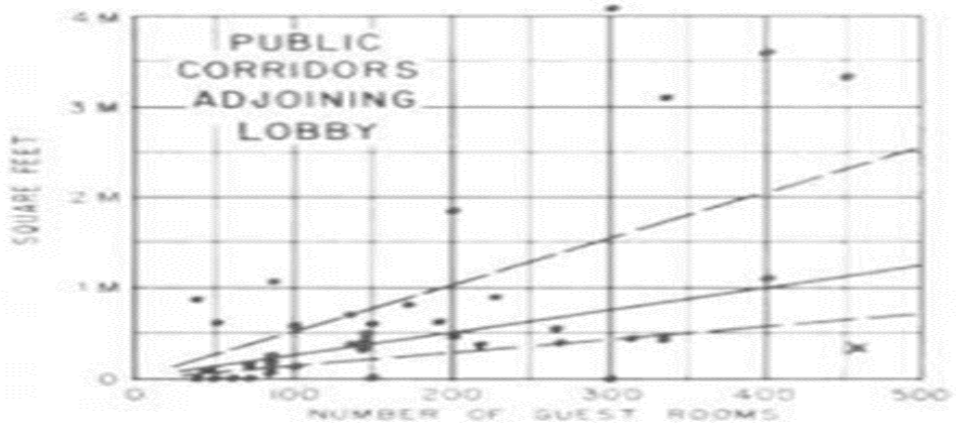


· Lounge-

The lounge is usually allotted about 6 sq 1t per guest room. half the hotels studied use only 4 sq ft and a few even cut this area to 2 sq ft per guest room.

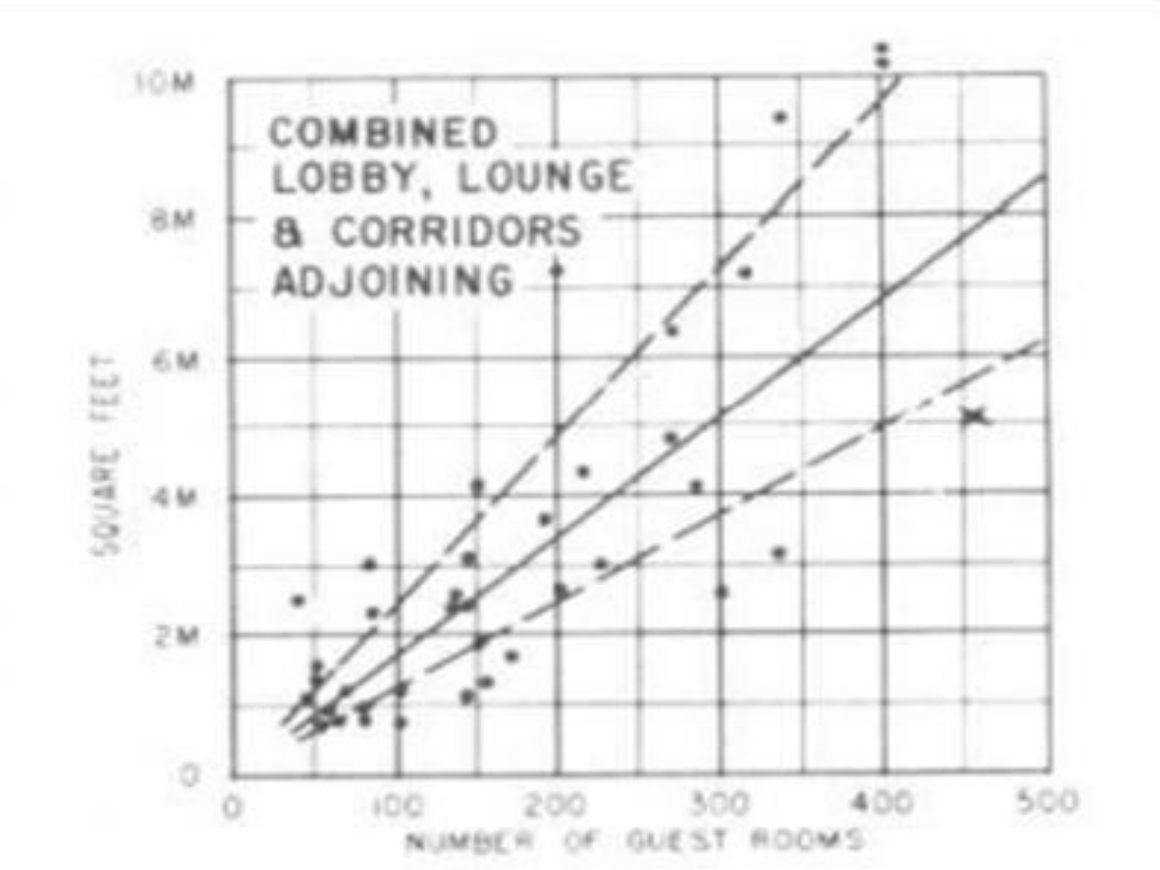


· Public corridors adjoining the lobby-

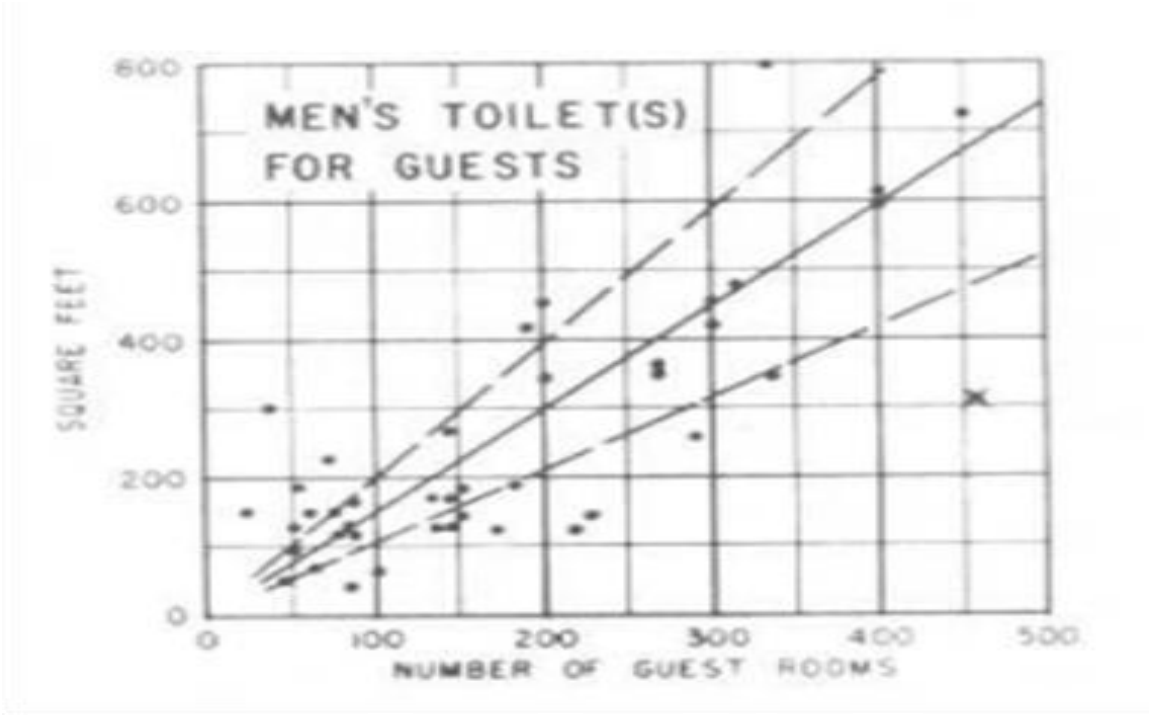


· The combined lobby, lounge, and adjoining corridors-

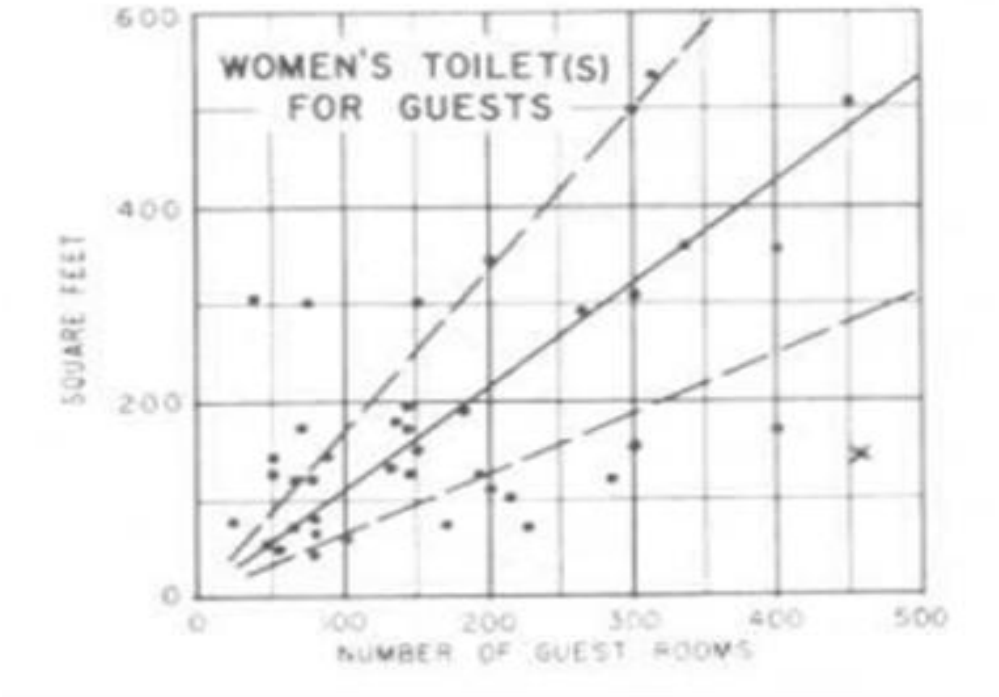
The combined lobby, lounge, and adjoining corridors are quite flexible in the allotment of space. average allotment of about 16 sq ft per guest room. Some hotels, however, have reduced this nonproductive area to 12 sq ft per guest room.



men's toilet(s)-

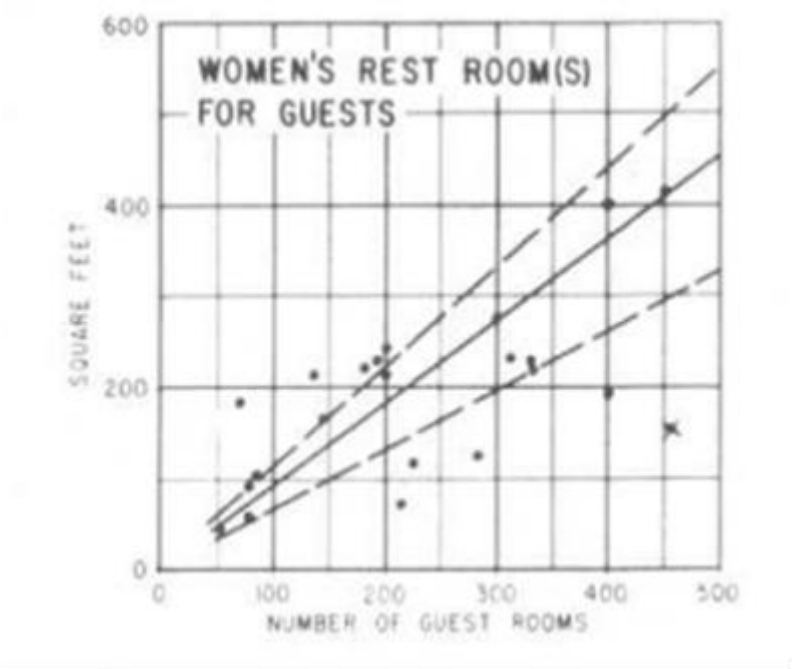


· women's toilet-



· women's toilet and restroom-

The combined allotment for the women's toilet and restroom is typically 1 sq ft per guest room.

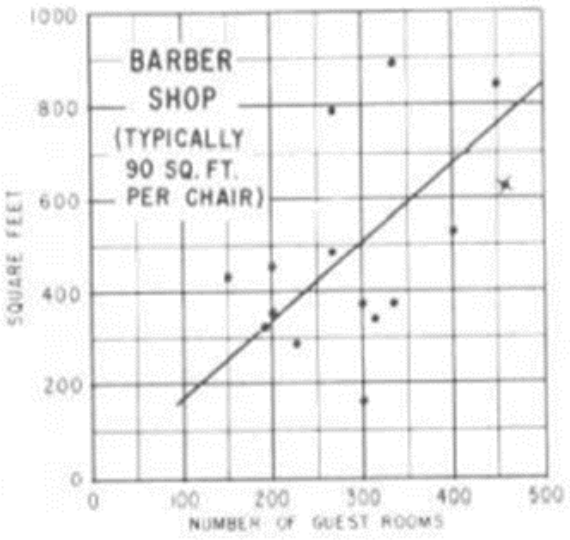


CONCESSION AND SUBRENTAL SPACE

include a barber shop, beauty parlor, cigar and news stand, and valet shop. Subrental space is for services that are not normally provided under hotel operation, such as stores, permanent exhibits, travel agencies, offices, and club quarters.

· barber shop-

the allotment area for barber is about 1 .5 sq ft per guest room. Typically, the barber shop requires 90 sq ft per chair and a minimum of 4 chairs. beauty parlor if provided, usually has about half as many chairs as the barber shop in some hotel. The required area, including space for manicure tables and lockers and toilet for employees, is about 200 sq ft per chair.



· telegraph office-

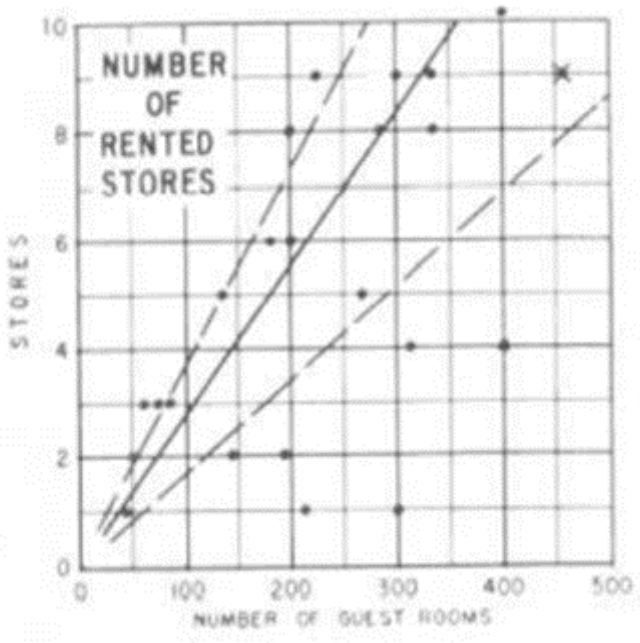
telegraph office, requiring 40 to 60 sq ft, may be desirable in the larger hotels.

· valet shop-

The valet shop is generally located adjacent to the laundry in the larger hotels and is allotted about 1 sq ft per guest room.

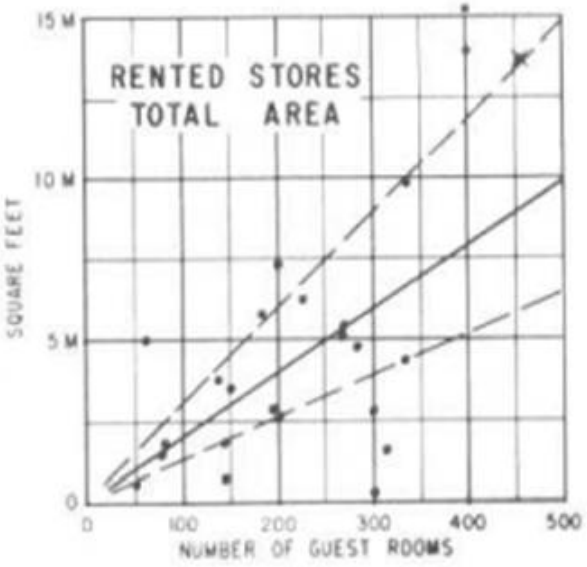
· number of rented stores-

one store for every 35 guest rooms

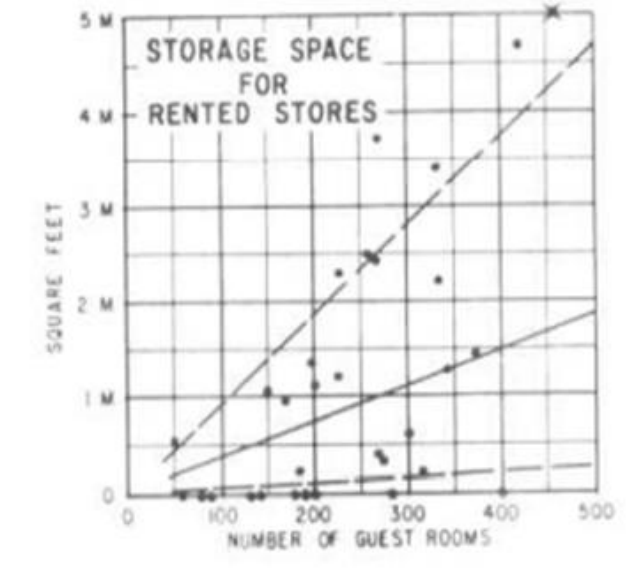


· Rented stores area-

Rented stores are well advised to have a direct entrance from the street. stores are provided, 20 sq ft of store area per guest room is the average allotment. Some designers increase the income potential by raising this figure to 30 sq it of store area per guest room.



· Storage space-

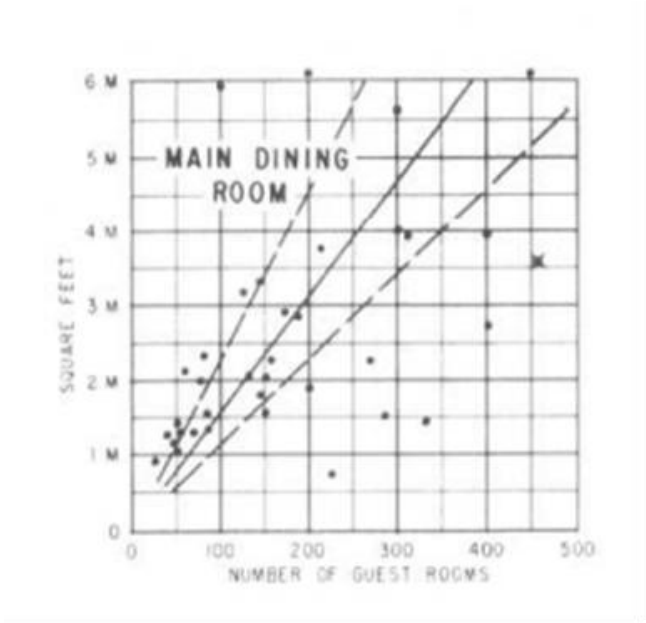


FOOD AND BEVERAGE SERVICE SPACE

Used for the receiving, storage, preparation, and service of food and beverages for guests, the general public, and employees. It includes the receiving area, storerooms for food and beverage supplies, China glassware, and silver, and also the kitchen, restaurants, banquet hall, private dining rooms, employees' dining area, food service pantries bar, cocktail lounge, and garbage room (sometimes with an incinerator).

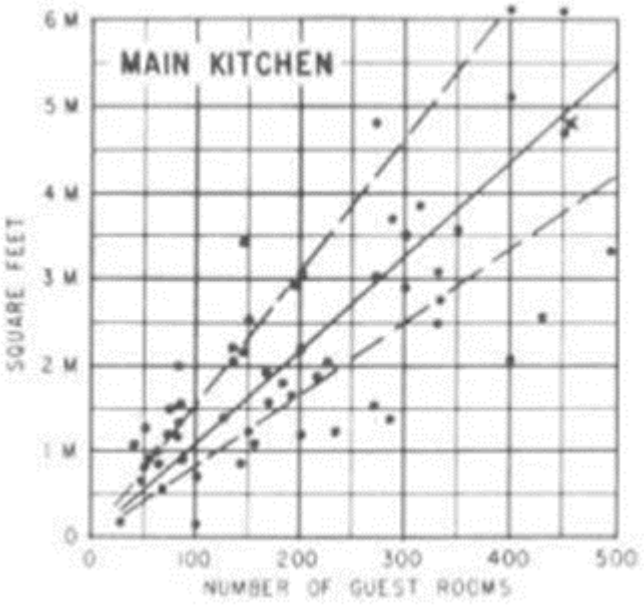
· Dining room-

About 16 sq it per seat is required for the dining room. The allotment varies from 18 sq ft for de luxe dining rooms to 14 sq ft for popular priced places.



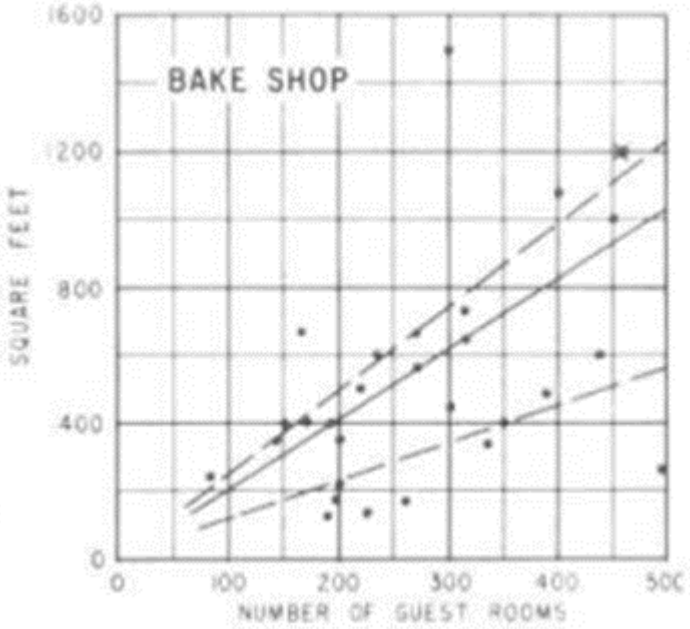
· Main kitchen-

kitchen is is customarily 40 to 45 per cent of the dining room area.



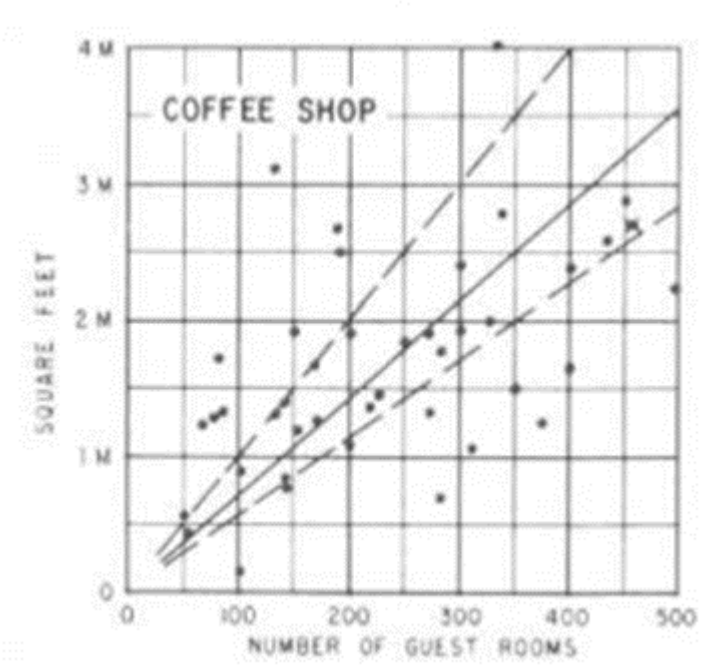
· Bake shop

The typical allotment is 2 sq ft per guest room. If a separate bake shop is provided, its area is usually equal to 20 per cent of the kitchen area.



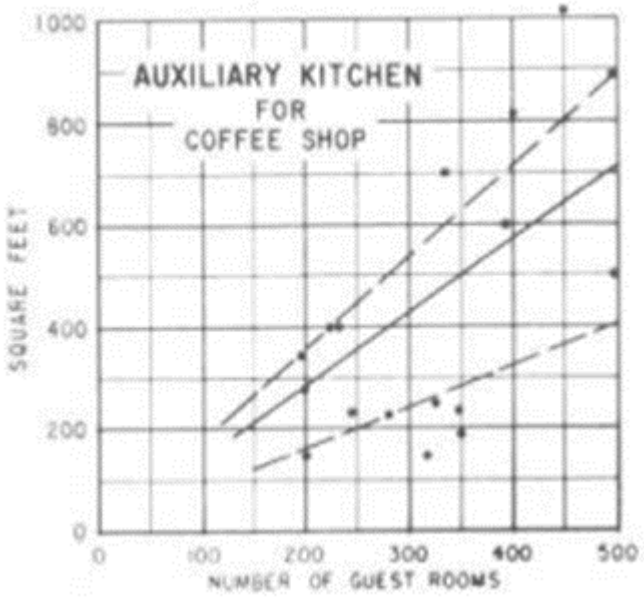
· Coffee shop-

Coffee shop provides quick food service at moderate prices. 7 sq ft per guest room is the usual allotment. area required per seat in coffee shops is about 18 sq ft per seat for counter service only, (this area includes the counter), 16 sq ft per seat for both counter and table service, and 14 sq ft per seat for table service only.



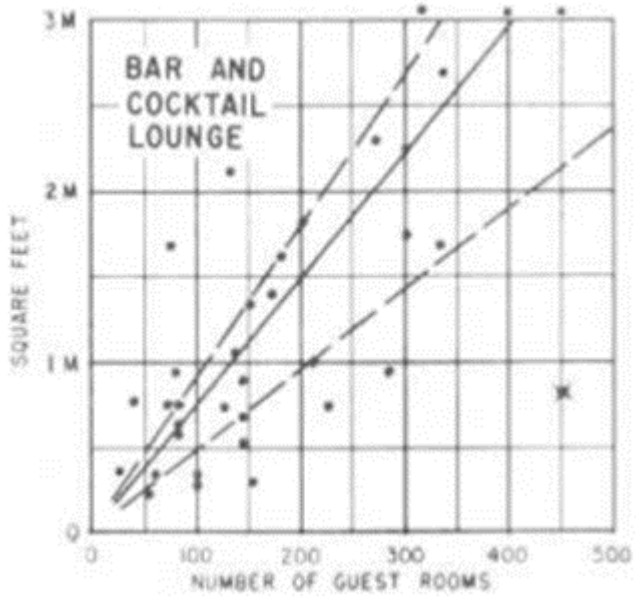
· auxiliary kitchen-

The auxiliary kitchen may be "backed-up" by the main kitchen, which prepares such heavy-duty items as roast meats. The auxiliary kitchen is generally from 20 to 25 per cent of the area of the coffee shop.



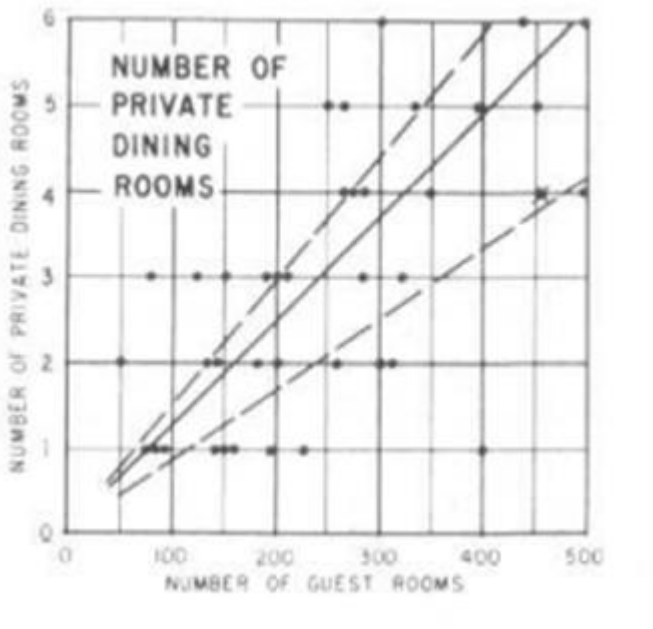
· bar and cocktail lounge-

The bar and cocktail lounge may be separated, adjoining, or combined. The area is provided, 7 .5 sq ft per guest room is the typical allotment.



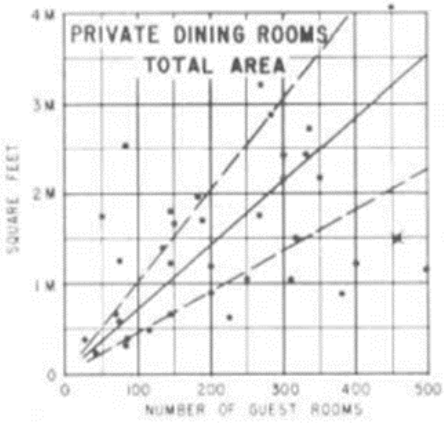
· Number of private dining room-

private dining rooms, with an average of one room for 80 guest rooms.



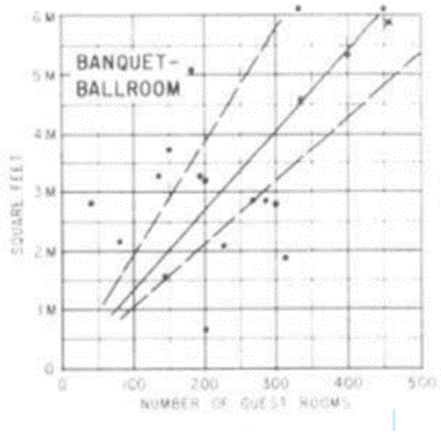
· Area of private dining rooms-

area of private dining rooms is typically 7 sq ft per guest room, but variations are extremely wide .



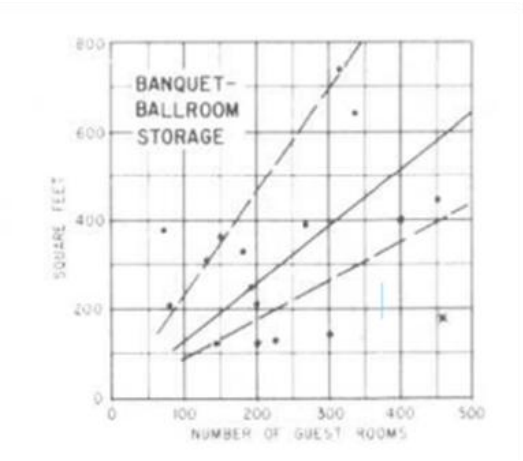
· Banquet-bathroom-

the allotment is usually from 10 to 20 sq ft per guest room.



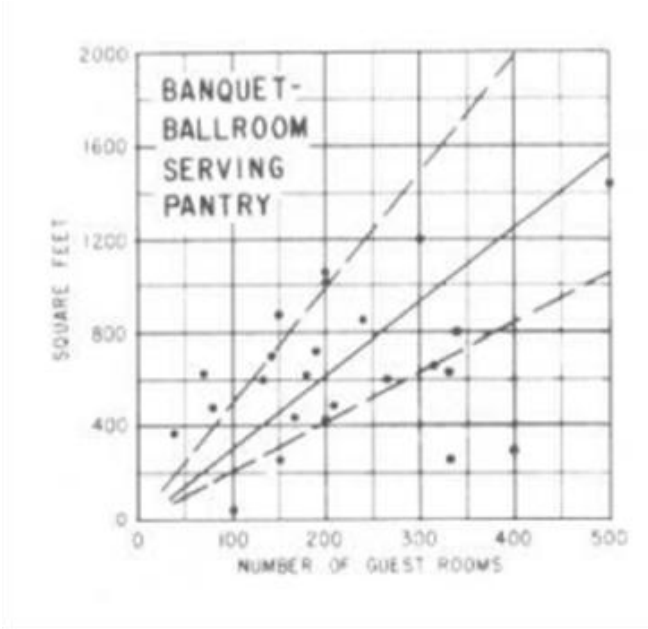
· Banquet-ballroom storage-

Storage area is typically about one-tenth of the size of the banquet hall.



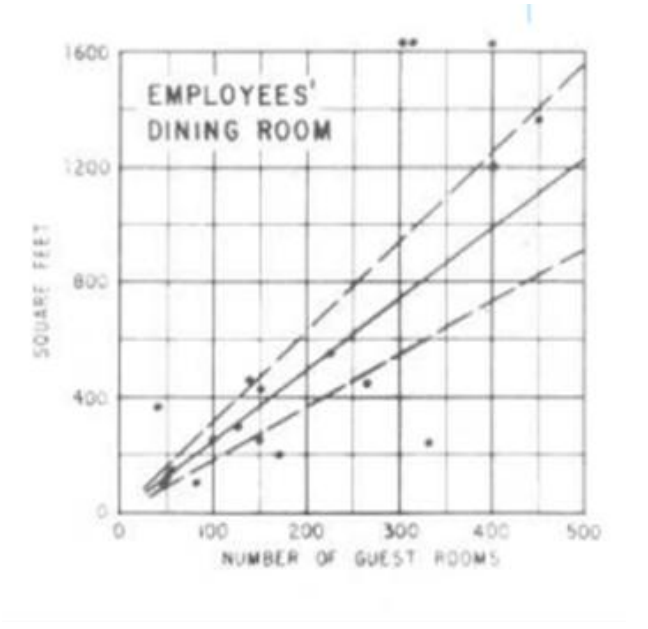
· Banquet-ballroom serving pantry-

A separate room is provided adjacent to the banquet hall, with plate warmers, hot-top serving tables, refrigerators, serving counters, coffee urns, and sometimes dishwashing facilities. the requisite space allotment per 100 banquet seats varies with the function of the pantry. the requisite space allotment per 100 banquet seats varies with the function of the pantry.



· Employees' dining room-

An employees' dining room is provided for the bellmen, maids, elevator operators, and the like other employees such as the staff from the front office and the accounting department usually eat in the coffee shop. the basis of 18 sq ft per sent and the number of employees to be seated at one time.



· Beverage storeroom-

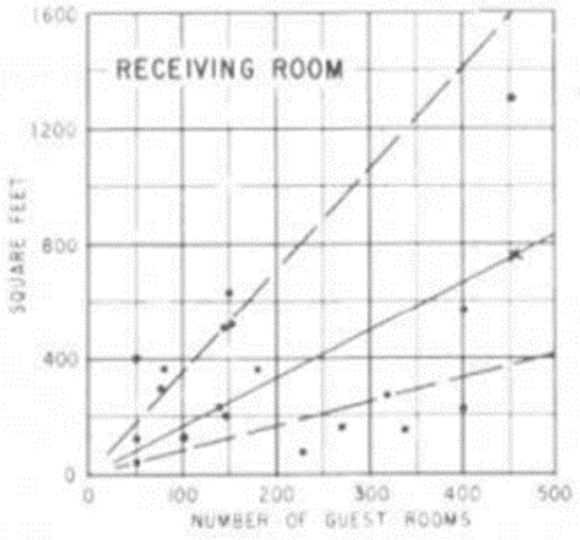
Beverage storeroom(s) should be provided separately from general food store-room. Beer and soft drinks are desirably, but not necessarily, stored in separate rooms. The typical allotment

is 1 .4 sq it of beverage storage area per guest room was only for wine and liquor . Probably 2 sq ft of total beverage storage should normally be allotted per guest room.



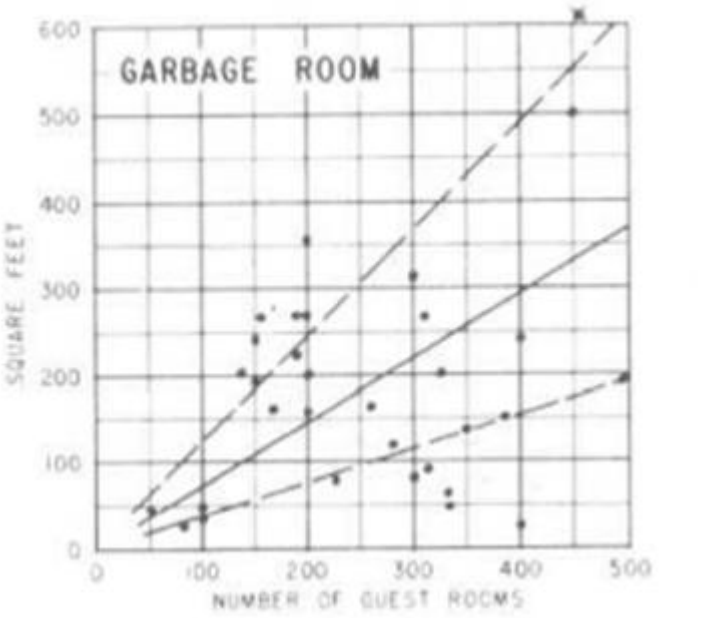
· receiving room-

receiving room is provided for food, beverages, linen, and other supplies which, upon arrival, are customarily checked against delivery slips, weighed, counted, and inspected. The typical allotment for the receiving room is 1.6 sq ft per guest room.



· garbage room-

The typical allotment for the garbage room of 0 .75 sq ft per guest room is generally satisfactory.



GUEST-ROOM SPACE

This division includes the guest rooms together with guest bathrooms, clothes closets, and entrance vestibules, the sum of which is the area that the guest rents. Also included are the necessary auxiliary areas found on the typical floor, such as guest corridors, stair wells, elevator shafts, and maid's closets.

GENERAL SERVICE SPACE

Non-productive space, includes those areas for general administration, operation, maintenance, and storage that are not otherwise classified. They include executive and administrative offices; areas devoted to the handling and storage of linen; help's quarters; maintenance shops; rooms for housing the mechanical equipment for heat, light, power, ventilation, and refrigeration; and also certain storerooms.

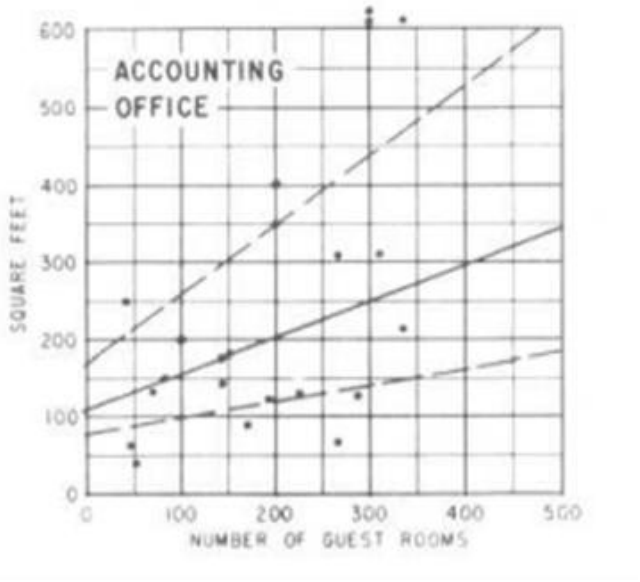
· Manager’s office-

manager's office requires a minimum area of about 100 sq ft. The activities in this office seldom justify more than 200 sq ft About 140 sq ft is the most common space allotment, regardless of the size of the hotel.



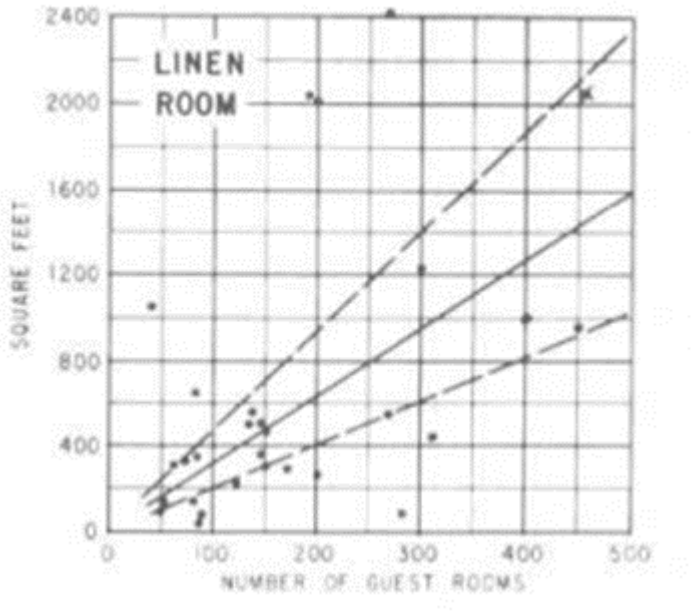
· accounting office-

The accounting office should have a minimum area of about 100 sq ft to accommodate one person at a desk with appropriate record-keeping and filing equipment. typical area of the accounting office for a 200-room hotel is shown on the graph as 200 sq ft, whereas for a 400-room hotel it is 300 sq ft.



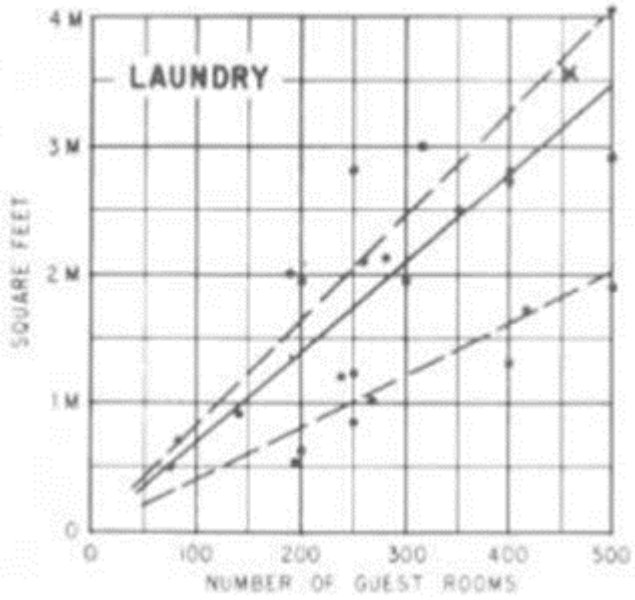
· linen room-

A linen room is necessary to accommodate the housekeeper's office and the shelves of neatly stacked linens, together with the counter over which the maids receive their supplies. allotment for the main linen room is usually from 2 to 4.5 sq ft per guest room.



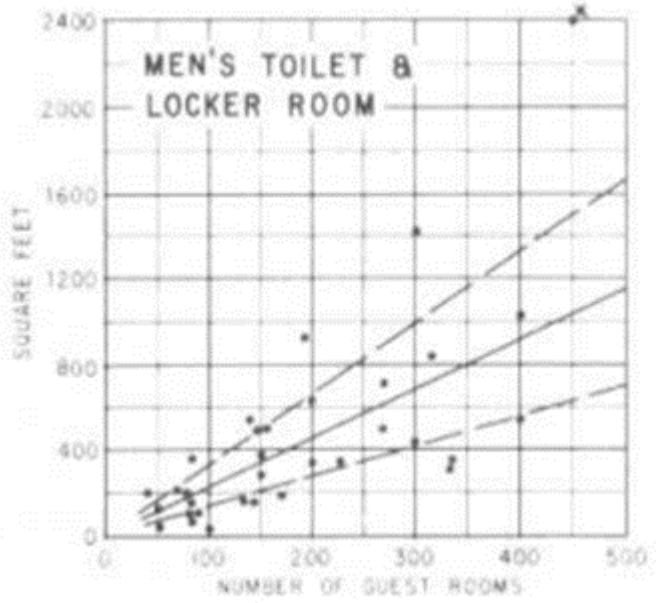
· laundry-

A laundry is sometimes operated by the hotel. allotted 7 sq ft per guest room. In a few cases, the allotment is only 4 sq ft per guest room.



· men's & women toilet and locker room-

assume that they will be employed in approximately equal number. toilet and locker room in the employees' quarters is generally allotted 2.4 sq ft per guest room. Thoughtful planning justifies 3.6 sq ft per guest room. About 35 per cent of the area is allotted for the toilet facilities and 65 per cent for the locker room.





· Maintenance shops-

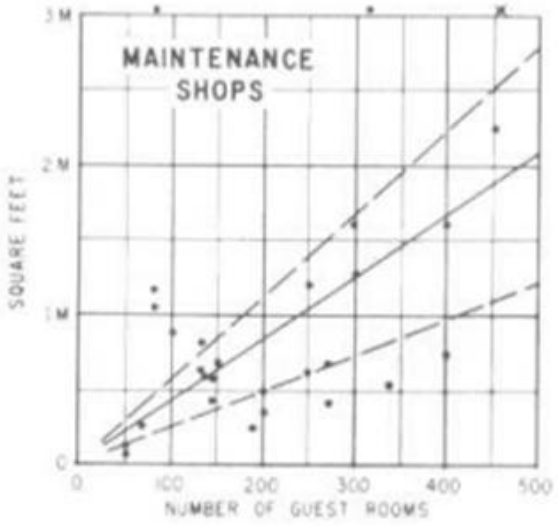
Maintenance shops are necessary to keep the hotel running There should generally be a minimum of three separate rooms:

(1) Plumbing-and-electric shop

(2) Carpentry-and-upholstering shop

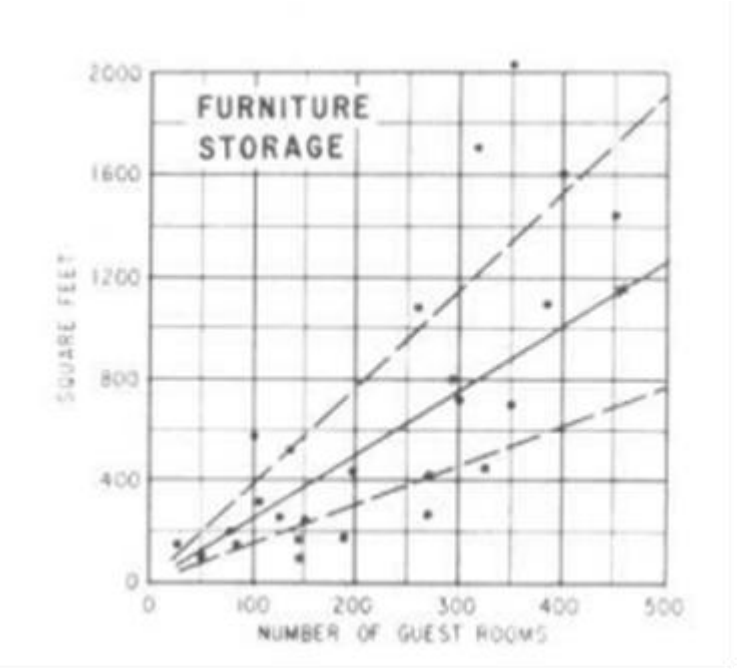
(3) Paint and varnish room

The typical allotment for maintenance shops is 4 sq ft per guest room.



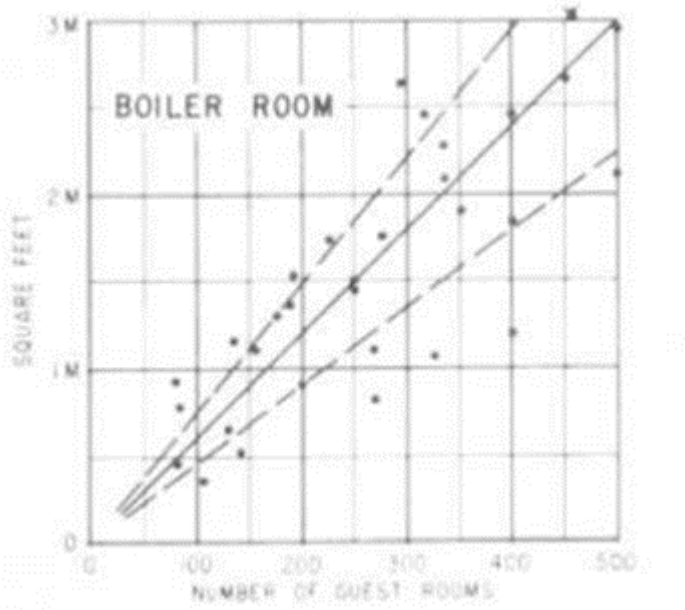
· Furniture storage-

Furniture storage is required for extra items of furniture and broken pieces awaiting repair. They should not be placed in basement corridors. The typical allotment for furniture storage is 2.5 sq ft per guest room.



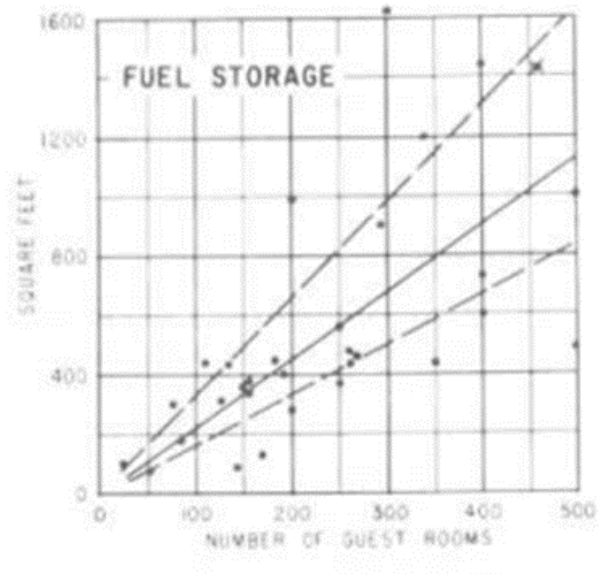
· boiler room-

boiler room space allotment is determined by many factors, such as the climate, the various uses of steam, the type of boilers, and the capacity of the, standby boiler. the typical allotment for the boiler room of 6 sq ft per guest room.



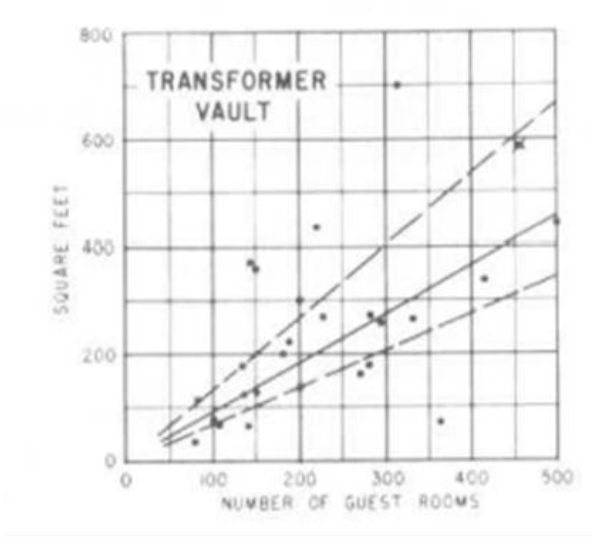
· Fuel storage-

Fuel storage is not required if gas or district steam is used exclusively. If coal or oil is the only fuel or reserve fuel used, however, then storage space is needed. The typical value for fuel storage is about 2 .2 sq ft per guest room.



· transformer vault-

A transformer vault is a necessary part of the hotel's electrical system. The electric energy used goes through a bank of transformers, which are sometimes located outside the hotel but more frequently in the basement in a specially constructed vault. An allotment for the transformer vault of 1 sq ft per guest room.



SPACE ALLOTMENTS AND FLOOR ASSIGNMENTS FOR TYPICAL HOTEL OF 100 ROOMS

General data and approximations

Height of building above ground (ground floor plus 6 typical guest floors)	7 stories
Ground-floor area	10,000 sq ft
Typical guest-floor area	6,000 sq ft
Guest rooms per typical floor,	17 rooms
Stairways on the typical floor,	2 stairways
Elevators (1 guest and 1 service car)	2 elevators

The first four factors listed above are of course all interrelated and must be organized as a compatible group.

	Productive area, sq ft	*Nonproductive area, sq ft*
Public space		
Lobby and front office		1,100(G)
Lounge		600(G)
Corridors adjoining (total of above, 1,900 sq ft)		200(G)
Men's toilet for guests		150(G)
Women's toilet for guests		100(G)
Women's restroom for guests		100(G)
*Coat checkroom		120(G)
*Bellman's checkroom		40(G)

	Productive area, sq ft	Nonproductive area, sq ft
Concession space		
Barber shop	180(B)	
*Valet shop	100(B)	
Subrental space		
3 rented stores, (each 800 sq ft)	2,400(G)	
3 storage rooms (each 200 sq ft)	600(B)	
Food and beverage service space		
Main dining room (90 seats)	1,500(G)	
Main kitchen		1,100(G)
Bake shop		200(G)
?Coffee shop (50 seats)	800(G)	
Bar and cocktail lounge	750(G)	
Private dining rooms (250 + 500 sq ft)	750(G)	
?Banquet-ballroom	1,400(B)	
?Banquet-ballroom foyer		450(B)
?Banquet-ballroom storage		140(B)
?Banquet serving pantry		350(B)
Employees' dining room		220(B)
Steward's storeroom		400(G)
Beverage storerooms		180(B)
*China, glass, and silver storage		300(B)
Receiving room		180(G)
Garbage room		80(G)

	Productive area sq ft	Nonproductive area sq ft
Guest-room space		
102 rooms (each 250 sq ft; including bath, closet and vestibule)	25,500(T)	
Auxiliary space (add 40 per cent of above for corridors, stairs, elevators, maid's closets, walls, and partitions)		10,200(T)
General service space		
Manager's office		140(G)
*Secretary's office		100(G)
Accounting office		150(G)
?*Sales and reservations office		140(G)
*Mimeograph room		40(G)
Linen room		350(B)
?Laundry (700 sq ft; omitted)		
Men's toilet and locker room		360(B)
Women's toilet and locker room		360(B)
Maintenance shops		400(B)
Furniture storage		250(B)
*Records storeroom		250(B)
*General storeroom		200(B)
Boiler room		600(B)
*Water-heater tank space		150(B)
Fuel storage		200(B)
Transformer vault		100(B)
*Refrigeration compressor room		400(B)
*Fan rooms, ventilation equipment		400(B)
Total productive area	33,980 sq ft	
Listed nonproductive area		20,800 sq ft
Add for basement corridors, walls, stairways, and elevators		2,500 sq ft
Add for ground-floor stairways and elevators		500 sq ft
Total nonproductive area		23,800 sq ft
Grand total of areas	57,780 sq ft	

6 typical guest floors, each 6,000 sq ft	36,000 sq ft
Ground floor, figured at 10,590 sq ft	10,500 sq ft
Basement, figured at 10,440 sq ft	10,500 sq ft
Total approximate floor area	57,000 sq ft

2.6 TIME SAVER STANDARDS (BUILDING TYPES)- RESTAURANTS:

SPACE REQUIREMENTS

· Adequacy of space will influence building and operating costs and efficiency. When space is too small, labor time end effort is likely to increase end the volume and quality of output decrease. When it is too large, building and maintenance costs are excessive.

· Calculate area requirements in terms of: (1) volume and type of service, (2) amount and size of equipment to be used, (3) number of workers required, (4) space for needed supplies, and (5) suitable traffic area. The dining area location and space allowance.

1. DINING ROOMS:

Space for dining areas is usually based on the number of square feet per person seated times.

Space requirements:

· The patron's size and the type and quality of service should be considered.

· A banquet seating allowance might be as little as 10 sq ft per seat and that for a deluxe restaurant as much as 20 sq ft.

TABLE 1 Square Feet per Seat Used for Various Types of Food Operations

Type of operation	*Square feet per seat*
Cafeteria, commercial	16-18
Cafeteria, college and industrial	12-15
Cafeteria, school lunchroom	9-12
College residence, table service	12-15
Counter service	18-20
Table service, hotel, club restaurant	15-18
Table service, minimum eating	11-14
Banquet, minimum	10-11

· All of the areas in a dining room used for purposes other than seating are a part of square footage allowed for seating.

· Service stations may be estimated in the proportion of one small one for every 20 seats or a large central one for every 50 to 60 places. The advisability of having a central serving station will be influenced by the distance of the dining area from the serving area.

· Small substations for silver, dishes, napery, beverages ice, butter, and condiments may measure 20 to 24 in. square and 36 to 38 in. high. The size of central stations varies from that for a small enclosed room to that of a screened section measuring approximately 8 to 10 ft long by 27 to 30 in. wide by 6 to 7 ft. high. Table size will influence patron comfort and efficient utilization of spaces. Smell tables, such as 24 or 30 in. square, are economical for seating but are uncomfortable for large people.

· The width of booths including seats and table is commonly 5h ft. A lunch counter will have a minimum width of 16 in. and a maximum width of 24 to 30 in. The linear feet are calculated on the basis of 20 to 24 in. per seat. The maximum area best served by one waitress is generally 16 ft of counter.

· U-shaped counters make maximum use of space and reduce travel. Space in depth of 8'/r to 11 ft will be required for every linear foot of counter. This will provide 3 to 4 ft of public aisle, 2j& ft for aisle space for employees. A width of 41h ft is desirable where employees must pass.

· A minimum passage area is 18 in. between chairs and, including chair area, tables should be spaced 4 to 5 ft apart. Aisles on which bus carts or other mobile equipment is to be moved should be sized according to the width of such equipment.

· Diagonal arrangement of square tables utilizes space better then square arrangement and yields a more trouble-free traffic lane.

Number of Persons Allowance:

· The number of persons to be seated at one time is the second point of information needed for calculation of the dining room size. The total number of seats required at one time, multiplied by the space required for each seat, will give the total number of square feet needed in the dining area.

· The number of times a seat is occupied during a given period is commonly referred to as "turnover."

· The turnover per hour, times the number of seats available, gives the total number of patrons who can be served in an hour. If peak loads, or number to be served at one time, are known, the number of seats required can be estimated.

· The table sizes used in the dining room will affect occupancy. It is often desirable to provide for groups varying from two to eight, with a predominance in most dining rooms of those for two people.

· Chairs with a "tablet arm" that will fold a tray have been used for fast turnover in crowded areas.

· One cafeteria line can serve four to eight patrons per minute depending on (1) the speed of the servers, (2) the elaborateness of food selection, (3) convenience of the layout, and (4) the type of patrons.

· Banquet seating requires planning because maximum seating potential means maximum profits. Folding tables 30 in. wide are popular. These are obtained in varying lengths, but 72 and 96 in. are commonly used. The spacing for the legs should be such as to allow for comfortable seating when the tables are joined end to end and place settings are laid on 24-in. centers.

· Separate rooms, folding doors, screens, or other attractive devices can be used to reduce size of an area during slack periods. Sections left open should be those easiest to serve. Balconies, back rooms, or other less desirable space can often be used for overflow numbers that occasionally require service.

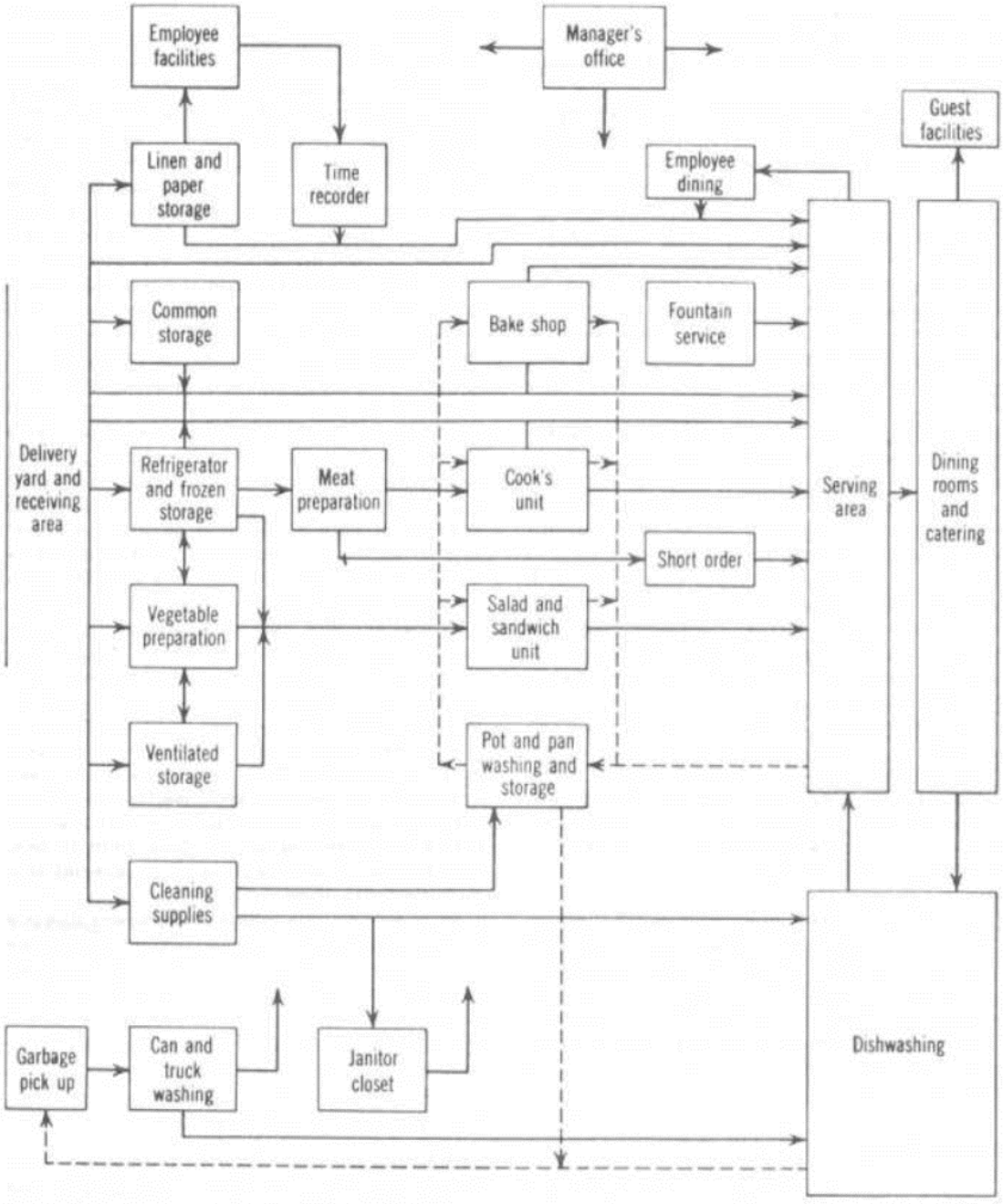


Fig. 1 Flow diagram showing functional relationships.

Production areas:

· A frequently used rule for allotting apace for the kitchen is that it should be one-third to one-half the area of the dining room.

· An analysis of specific needs is required. Many factors influence space requirements, such as:

1. Type of preparation and service

2. Amount of the total production done in the unit

3. Volume in terms of the number of meals served

4. Variety of foods offered in the menu

5. Elaborateness of preparation and service

6. Amount of individual service given, as in a hospital trey service

7. Seating and service plan, whether on one floor or many

· The equipment provided will affect the space needs. Garbage and refuse, for example, may require a sizable area for storage awaiting pickup. Disposal units for food garbage, incinerator for burnable refuse, and a crusher for tin cans will greatly reduce the amount to be held. Frequency of garbage collection will minimize the space needs.

· The shape of the kitchen, location of ventilation and elevator shafts, support columns and partitions should be considered in relation to an efficient layout for work. The location of entrances and exits for a good flow of traffic, window placement, suitable space, and relationship of sections need consideration. Eliminate partitions whenever possible; this will reduce space needs and also permit easier supervision of production areas.

TABLE 2 Variation in Space Needs in Relation to Numbers Served

Meal load	Square feet per meal	Variation in square feet
100-200	5.00	500-1,000
200-400	4.00	800-1,600
400-800	3.50	1,400-2,800
800-1,300	3.00	2,400-3,900
1,300-2,000	2.50	3,250-5,000
2,000-3,000	2.00	4,000-6,000
3,000-5,000	1.85	5,500-9,250

· The square footage given is to be multiplied by the maximum number of meals estimated per hour of service.

· The width of the table may be 24 to 30 in. unless dishes or food containers are to rest at the back of the table. Tables 36 in. wide are preferable when the back of the area is used for such storage. Where two workers work opposite each other, a table 42 in. wide may be used. A work area of 4 to 6 in ft will be within convenient reach of the average person. Tables 8 to 10 ft. long are used if two people are working side by side. A height of 34 in., commonly used as a working height, should be evaluated in terms of specific work done and equipment used.

· The minimum width for a lane between equipment where one person works alone is 36 and 42 in. where more than one is employed and where workers must pass each other in the progress of work. Where mobile equipment is used, 48 to 54 in. are recommended. At least 60 in. are needed for main traffic lanes where workers regularly pass each other with mobile equipment.

· Work centers at right angles to traffic lanes are efficient.

· A satisfactory layout may claim less than 30 percent of total space for equipment while work areas, traffic lanes, and space around equipment for easy operation and cleaning may require 70 percent or more.

TABLE 3 Square Feet of Kitchen Space per Meal for Food Facilities of Different Type and Size

	Estimated maximum meals per hour				
Type of facility	200 or less	200–400	400–800	800–1,300	1,300–7,500
Cafeterias	7.5–5.0	5.0–4.0	4.0–3.5	3.5–3.0	3.0–1.8
Hospitals	18.0–4.5	12.0–4.5	11.0–4.5	10.0–4.0	8.0–4.0
Hotels	18.0–4.0	7.5–3.0	6.0–3.0	4.0–3.0	4.0–3.0
Industrial lunchrooms	7.5–5.0	4.0–3.2	3.5–2.0	3.0–2.0	2.5–1.7
Lunch counters	7.5–2.0	2.0–1.5			
Railroad dining car	1.6				
Restaurants (service)	7.0–4.0	5.0–3.6	5.0–3.6	5.0–3.0	5.0–3.0
School lunchrooms	4.0–3.3	3.3–2.2	3.0–2.0	2.5–1.6	2.0–1.6

Serving areas:

· In cafeterias the counter length should be regulated by the variety and volume.

· An estimate that may be used for allotting width is 14 ft. This allows for 4 ft as patron lane space, 1 ft trey elide, 2 ft counter width, 4'/r ft for workers, and 2'/r ft for back bar.

· Some commercial cafeteria counters may be 70 to 80 ft long, but counters over 50 ft long are frequently considered inefficient. Twenty feet is usually thought of as a minimum but, under special conditions and where a limited menu is served, 6 to 8 ft may be sufficient.

· Some planners use, as a rough guide, one counter or line for every 250 to 300 patrons served, but arrival rate, speed of service, and turnover are more reliable factors to consider in establishing the number of lines required.

Receiving and storage areas:

· Although the average operation may find a dock 8 ft deep and 12 ft long sufficient for receiving items, this would not be sufficient for a large one. The space requirement in square feet for food storage for 30 days has been calculated by some

as approximately one half the total served or, if 1,000 are served, 500 sq ft may be used as a tentative figure for total food storage needs.

· COMMON STORAGE- The volume of canned food needed to serve 100 persona three meals daily for one month is estimated at approximately 45 cases of 6/10's or equivalent. The maximum stack height will be 8 or 9 cases or approximately 72 in.

· Storeroom aisles may be as narrow as 36 in., but 42 or 48 approximal. are preferred. Wider aisles may be required if trucks are used. A 3-ft skid on a hydraulic jack needs maneuvering room.

· Allow 1'/ to 2 in. as free space for ease of positioning. Add thickness of shelving to interspace when stating measurements between centers.

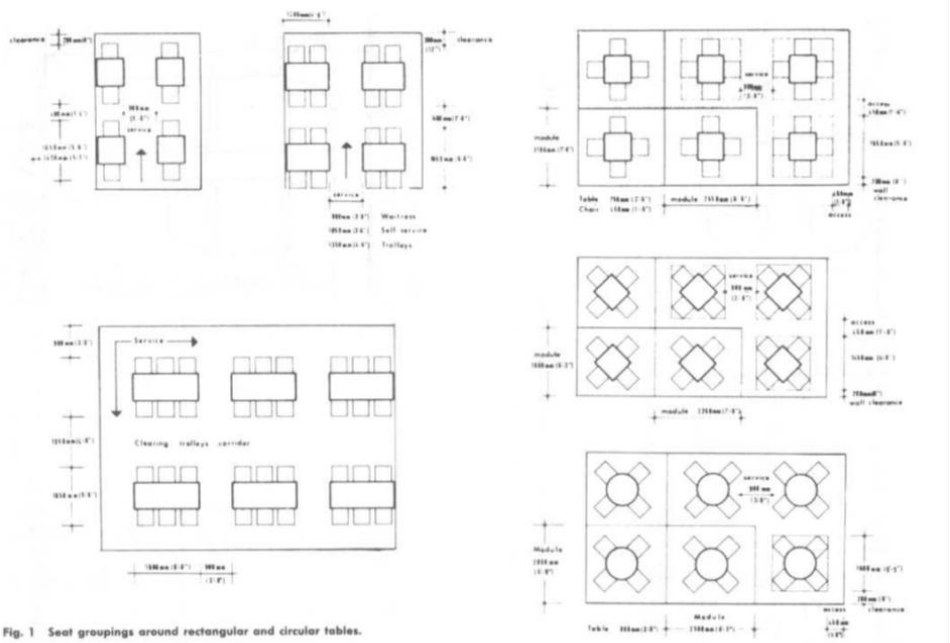


Fig. 1 Seat groupings around rectangular and circular tables.

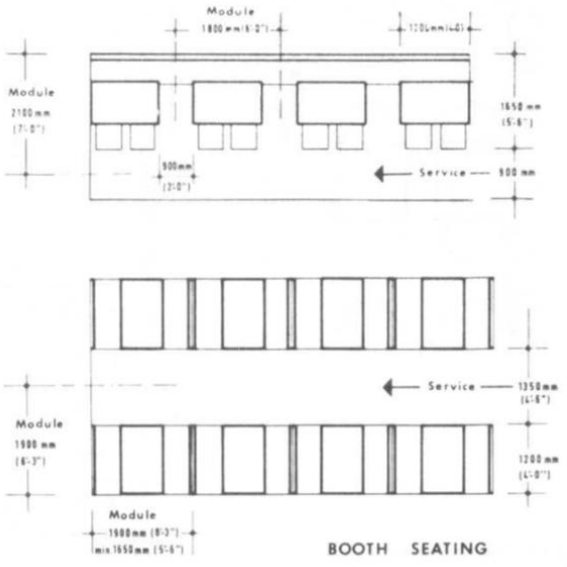
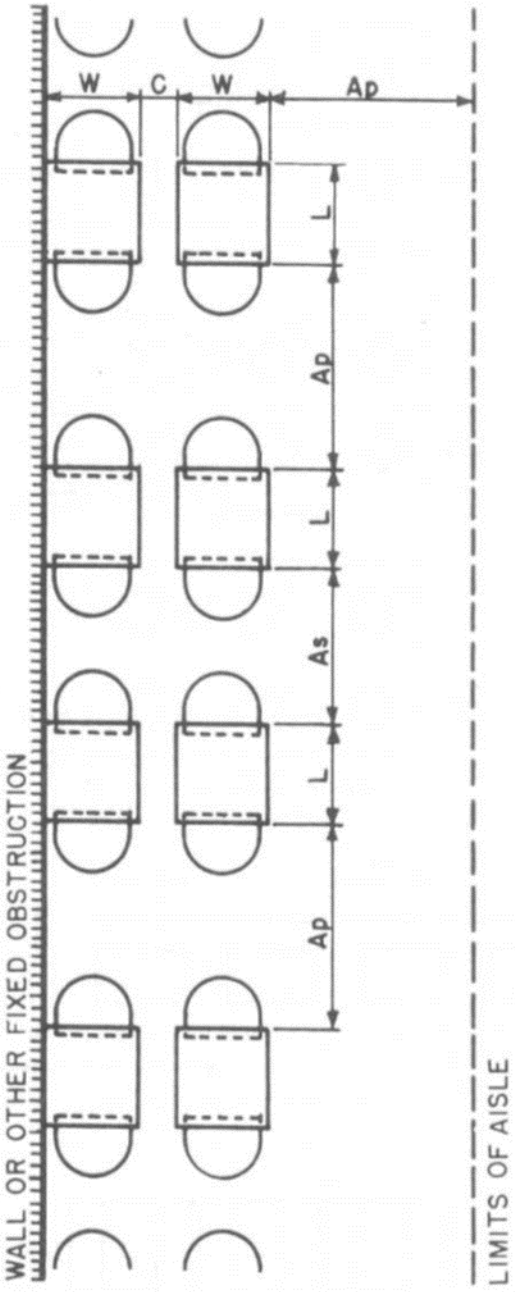
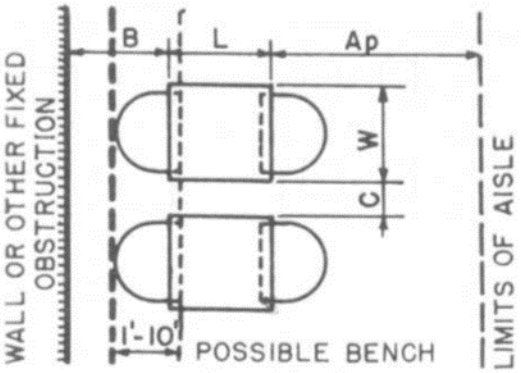


Fig. 2 Banquette seating arrangements and limiting dimensions including space for access and service.

Fred Lawson, *Restaurant Planning and Design*, The Architectural Press, Ltd., London, 1973.





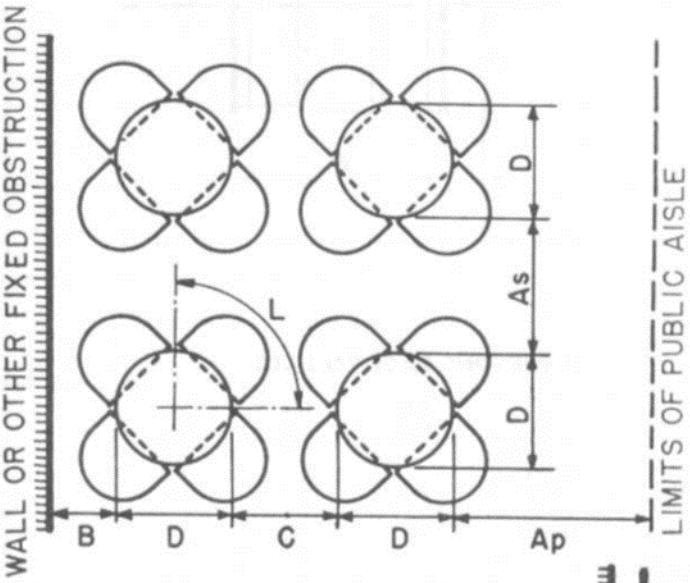
		Abs. Min.	Des. Min.	Comfort-able
Ap	Public circ'n	3–0 to 4–6	3–6 to 5–0	3–9 to 5–0
As	Service aisle	3–6 to 4–6	4–0 to 5–0	4–0 to 5–6
B	To wall	1–8 to 2–0	2–0 to 2–6	2–0 to 3–0
C	Between units	0 to 8	6 to 1–0	1–0
	Length	1–8 to 2–0	2–3 to 2–4	2–4 to 2–6
	Width	1–8 to 2–0	2–2 to 2–3	2–4 to 2–6

all dimensions in feet and inches

		Abs. Min.	Des. Min.	Comfort-able
Ap	Public circ'n	*1–10 to 4–6	2–3 to 5–0	3–0 to 5–0
As	Service aisle	3–0 to 3–6	3–6 to 4–0	3–9 to 4–0
C	Between units	0 to 3	4 to 6	6
	Length	1–8 to 2–0	2–3 to 2–4	2–4 to 2–6
	Width	1–8 to 2–0	2–2 to 2–3	2–4 to 2–6

*Lower range only if chairs, etc., do not project into aisle

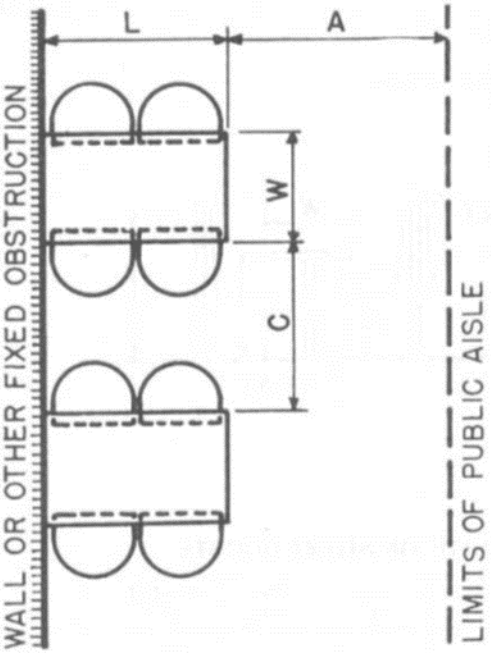
Fig. 4 Table and chair units.



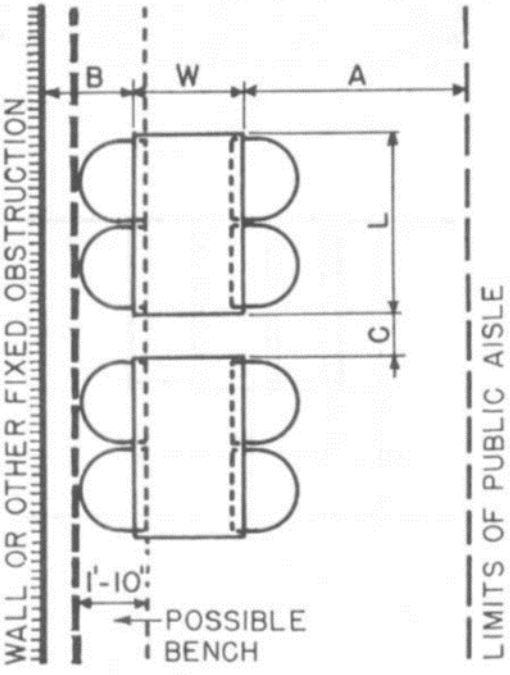
		Abs. Min.	Des. Min.	Comfort-able
Ap	Public circ'n	3-0 to 3-6	3-6 to 4-6	3-6 to 4-6
As	Service only	2-0	2-6	3-0
B	To wall	6 to 1-0	10 to 1-0	1-0 to 1-3
C	Between units	1-6	1-10	2-0
Diameter		2-8	2-10	2-10
*L	Perimeter per seat	1-10	2-0	2-2

*For seating units for more than 4 persons, round tables are usually recommended; diameter depending on perimeter necessary to seat required number.

all dimensions in feet and inches

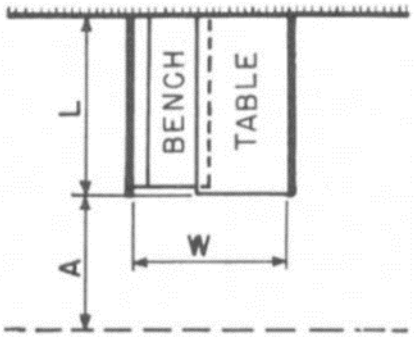


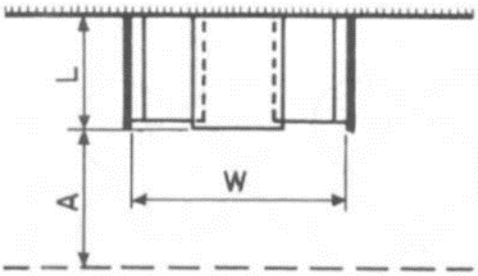
		Abs. Min.	Des. Min.	Comfort-able
A	Service or pub. circ'n	2-0 to 3-6	2-6 to 4-6	3-0 to 5-0
C	Between units	3-0 to 3-6	3-6 to 4-0	3-9 to 4-0
Length		3-6	3-10 to 4-0	4-0
Width		1-8 to 2-0	2-0 to 2-3	2-4 to 2-6



		Abs. Min.	Des. Min.	Comfort-able
A	Service or pub. circ'n	3-6 to 4-6	4-6 to 5-0	5-0 to 5-6
B	To Wall	2-0	2-0 to 2-6	2-0 to 3-0
C	Between units	0 to 1-0	1-0	1-6
Length		3-6	3-10 to 4-0	4-0
Width		1-8 to 2-0	2-0 to 2-3	2-4 to 2-6

Fig. 4 (continued) Table and chair units.





2 PERSONS SIDE BY SIDE

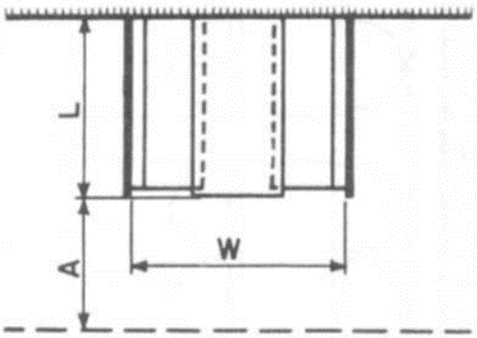
	Abs. Min.	Des. Min.	Comfortable
A Service and pub. circ'n	2–6	3–0	3–6
Length	3–6	3–9	4–0
Width	3–0	3–3	3–6

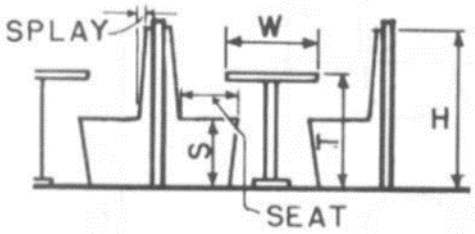
Note: This type not ordinarily recommended.

2 PERSONS FACE TO FACE

	Abs. Min.	Des. Min.	Comfortable
A Service and pub. circ'n	2–6 to 3–0	3–0 to 4–0	3–6 to 5–0
Length	2–0	2–2 to 2–6	2–6
Width	4–10 to 5–6	5–2 to 5–6	5–8 to 5–10

dimensions in feet and inches





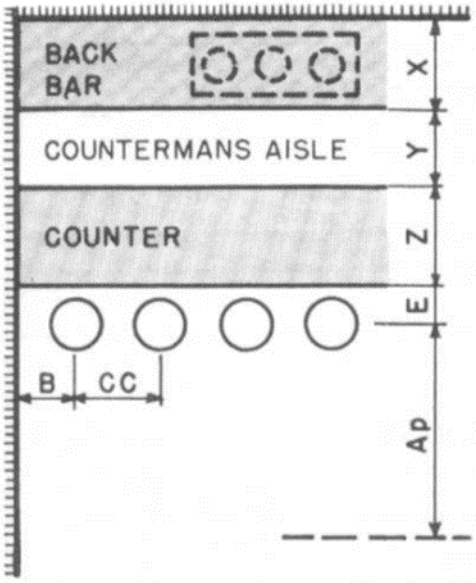
4 PERSONS

	Abs. Min.	Des. Min.	Comfortable
A Service and pub. circ'n	2–6 to 3–0	3–0 to 4–0	3–6 to 5–0
Length	3–6	3–9 to 4–0	4–0 to 4–2
Width	4–10 to 5–6	5–2 to 5–6	5–8 to 5–10

BOOTH FURNITURE HEIGHTS

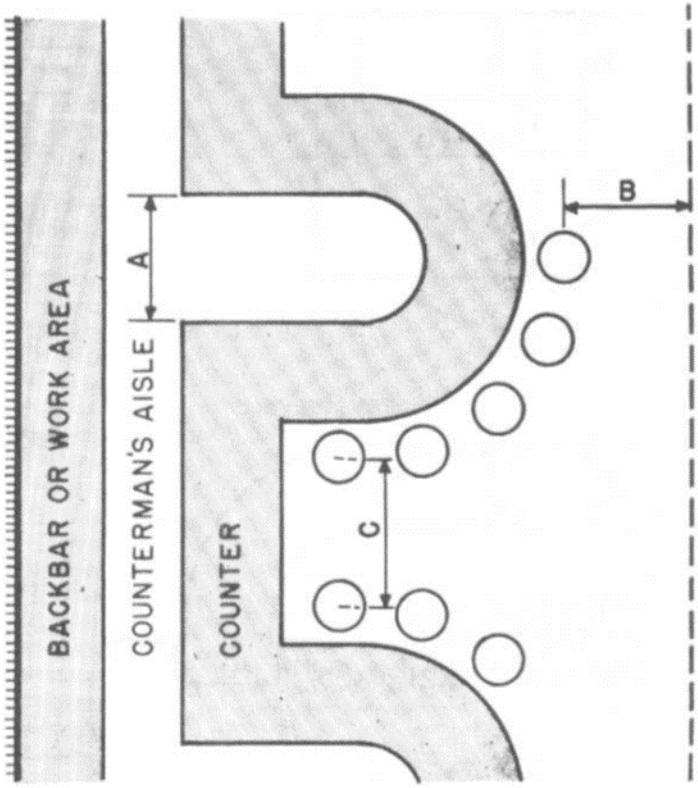
	Abs. Min.	Des. Min.	Comfortable
H	3–0 to 3–6	3–6	4–0
S	1–5 to 1–6	1–5 to 1–6	1–6
T	2–5	2–5 to 2–6	2–6
W	1–8 to 2–0	2–0 to 2–2	2–4 to 2–6
Seat	1–4 to 1–5	1–5 to 1–6	1–6 to 1–8
Splay	0 to 0–3	0–2 to 0–3	0–3½ to 0–4

Fig. 5 Booths.



STANDARD (straight) TYPE

		Abs. Min.	Desirable Min.
X	No cooking equipment	1- 6	2-0
X	With cooking equipt.	2- 0	2-6
Y	1 person	2- 0	2-3
Y	2 or more persons	2- 6	2-9
Z		1-10	2-0
E		9	1-2
Ap		3- 6	4-6
B		1- 0	1-2
CC		1-10	2-0

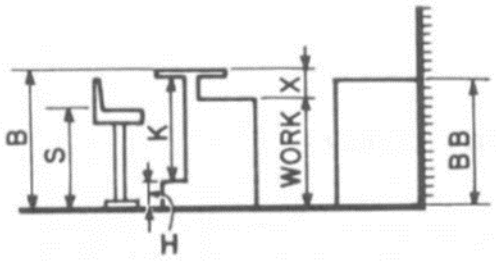


Variations in Shape

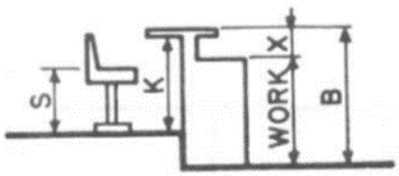
	Usual Minimum
A	2-6 to 3-6
B	2-6 to 4-6
C	2-9 to 5-6

dimensions in feet and inches

HEIGHTS



LEVEL FLOOR

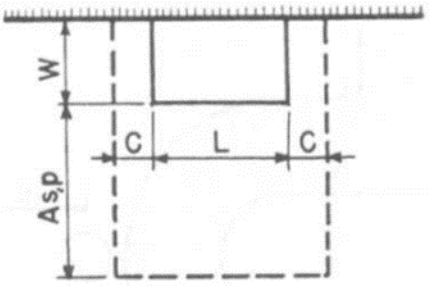


DROPPED FLOOR

	Range of Dimensions		Range of Dimensions
B	2-6 to 3- 6	X	1-2 to 1- 3
BB	3-0 to 3- 6	Work	2-4 to 2- 7
H	7 to 10	S	1-6 to 2- 6
K	2-4 to 2- 8		

	Range of Dimensions
B	3-0 to 3- 6
K	2-4 to 2-10
S	1-6 to 2- 1
X	1-2 to 1- 3
Work	2-4 to 2- 8

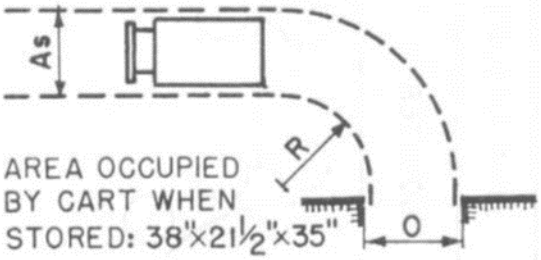
Fig. 6 Food bars.



SERVING TABLE (& sideboard)

		Abs. Min.	Des. Min.	Comfortable
As	Service only	2-6	3-0	3-6
Ap	Public circ'n	2-0	2-6	3-0
C	Clearance to adjacent units	2-0	2-3	2-6
Length / Width	30" x 20" x 42" is average.			

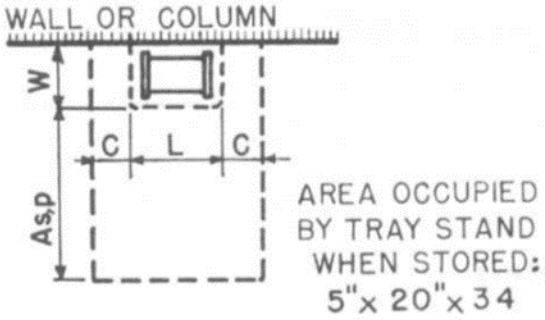
Display tables (hors d'oeuvres, etc.) usually 5' 0" x 2' 0"; (wines), 3' 0" round



SERVING CART

		Abs. Min.	Des. Min.
As	Service only	2-0	2-6
R	Turn radius	3-0	3-6
O	Door, opening width	2-0	2-6

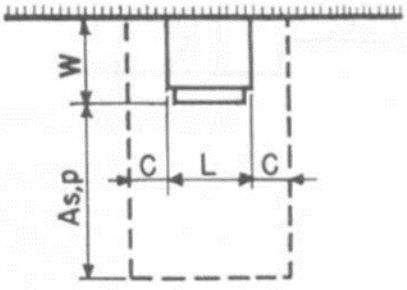
Approx. area when stored: 38" x 21½" x 35"



TRAY STAND

		Abs. Min.	Des. Min.	Comfortable
As	Service only	2-6	3-0	3-6
Ap	Public circ'n	2-0	2-6	3-0
C	Clearance to adjacent units	2-0	2-3	2-6
Length (tray) / Width (tray)	Depends on type of restaurant.			

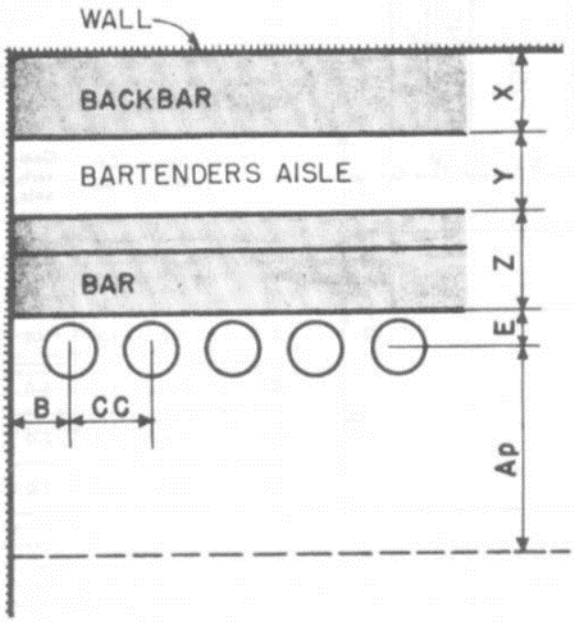
Approx. area of stand, stored: 5" x 20" x 34"



WATER COOLER

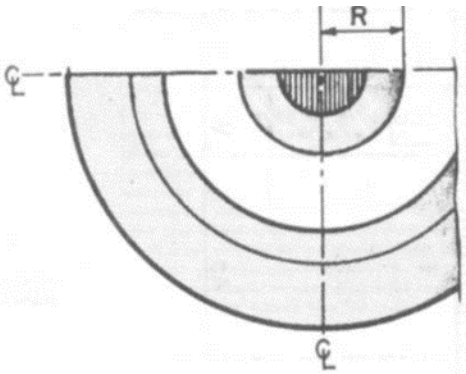
		Abs. Min.	Des. Min.	Comfortable
As	Service only	2-6	3-0	3-6
Ap	Public circ'n	2-0	2-6	3-0
C	Clearance to adjacent units	Can arrange on top or front		
Length / Width	Depends on capacity and if glass storage included.			

Fig. 7 Serving units.



STRAIGHT TYPE—with or without stools

		Abs. Min.	Des. Min.	Comfort-able
Ap	Public aisle	3-6 to 4-6	4-0 to 5-0	4-6 to 6-0
B	Stool to wall	1-0 to 1-6	1-2 to 1-6	1-4 to 1-6
CC	Stool, cent. to cent.	1-9 to 2-0	2-0	2-2 to 2-6
E	Stool to bar	9 to 1-0	1-0	1-1 to 1-2
X	Back bar	1-6 to 1-8	1-8 to 2-0	2-0 to 2-3
Y	Bartender's aisle	2-0 to 2-2	2-6	3-0
Z	Bar	2-3 to 2-6	2-5 to 2-6	2-8 to 2-9

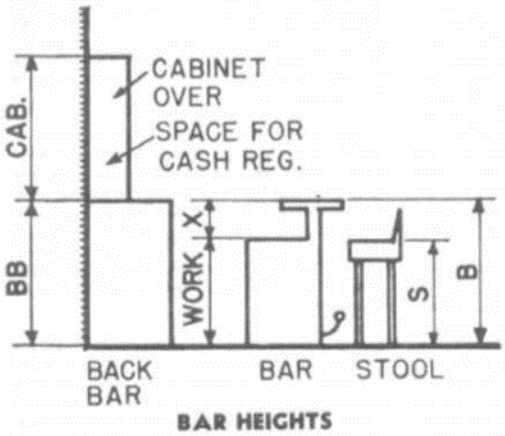


CURVED TYPES: Radius R should be at least 2 ft.; other dimensions as for straight types.

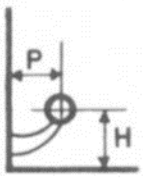
Bar length: Allow from 1 ft. 8 in. to 1 ft. 10 in. per person for standup bars; 2 ft. for each stool.

Bar depth: No increase in depth is needed for more than 1 bartender, as each man should be provided with his own "set-up" space in the work counter and back-bar.

Service bars: These are usually from 6 to 8 ft. long for 1-man service; from 10 to 12 ft. long if 2 bartenders are needed for peak service periods. No footrail, counter overhang, or stools are required. Location is often adjacent to kitchen and concealed from patrons; however, advertising values sometimes cause it to be set in public view. In the latter case, a rope rail or similar device, to discourage patrons from standing at the bar, is often advisable.



BAR HEIGHTS



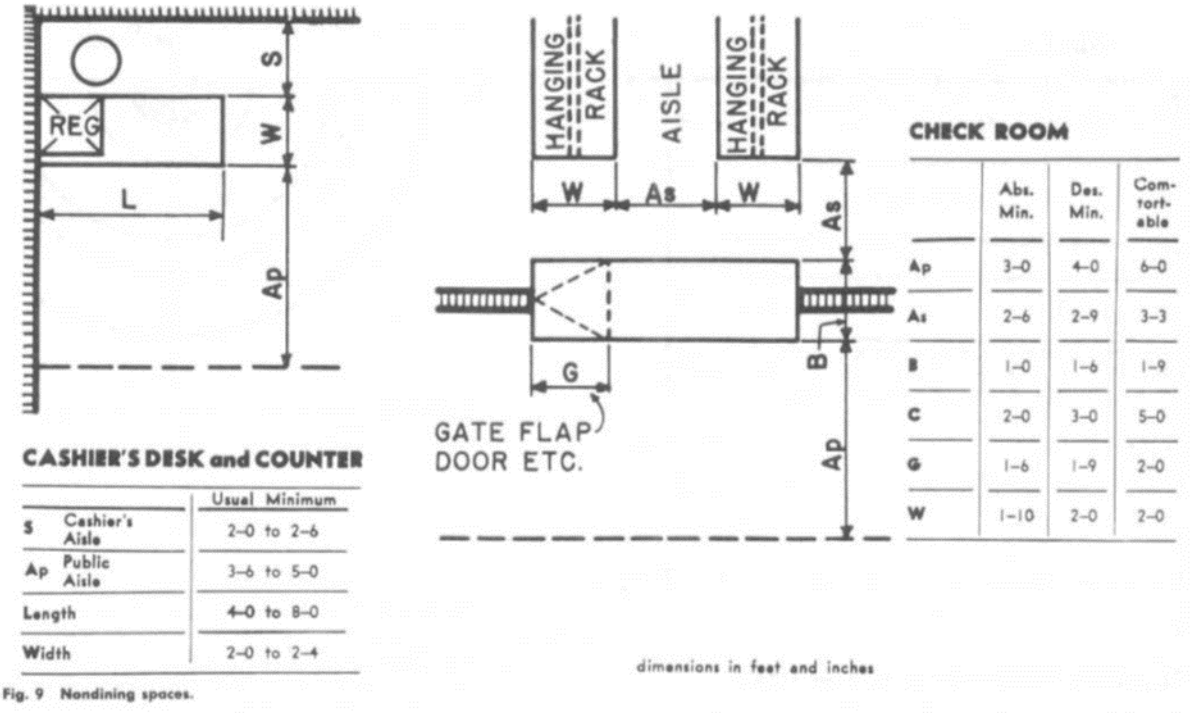
RAIL OR STEP

P = 7 to 10
H = 7 to 10

dimensions in feet and inches

	Usual Min.	Usual Max.
B	3-6	3-9
BB	3-6	3-9
Cab	3-0 to 3-10	5-0 to 5-7
S	2-4 to 2-6	2-7
Work	2-4	2-6
X	1-0 to 1-2	1-2 to 1-3

Fig. 8 Liquor bars.



CASHIER'S DESK and COUNTER

		Usual Minimum
S	Cashier's Aisle	2–0 to 2–6
Ap	Public Aisle	3–6 to 5–0
Length		4–0 to 8–0
Width		2–0 to 2–4

CHECK ROOM

	Abs. Min.	Des. Min.	Comfortable
Ap	3–0	4–0	6–0
As	2–6	2–9	3–3
B	1–0	1–6	1–9
C	2–0	3–0	5–0
G	1–6	1–9	2–0
W	1–10	2–0	2–0

Fig. 9 Nondining spaces.

Refrigerated and low temperature storage:

· Allocation in preliminary planning may be as follows: 20 to 35 percent for meat (portion ready meats require '/ to '/, less space than carcass or wholesale cuts); 30 to 35 percent for fruits and vegetables; 20 to 25 percent for dairy products, including those in serving areas; 10 to 25 percent for frozen foods; and 5 to 10 percent for carry-over foods, salads, sandwich material, and bakery products. A requirement of 15 to 20 cu ft of refrigeration per 100 complete meals has also been used by some planners.

· Approximately 0.25 to 0.50 cu ft of refrigerated walk-in space was provided per meal served, and frozen walk-in space.

· A walk-in becomes feasible for an operation serving 300 to 400 meals per day, and refrigerated pass-throughs can be added when from 400 to 500 meals are served per day

· Aisles of 30 in. are usually too narrow; 42 in. are desirable. If mobile equipment is moved in and out, aisles may have to be wider. Walk-ins that are 8 to 9 ft wide and about 10 ft long are minimum size. This allows for two storage areas 30 in. wide with a 3 to 4 ft aisle.

· Doors should be a minimum of 42 in. wide to admit large crates and containers or be sized to suit mobile equipment.

Sanitation areas:

· Dishwashing areas: The dimensions may be only 30 to 36 in. for a single tank machine, 60 to 72 in. for sinks, or 7 to over 30 ft for a conveyor-type machine.

· Pot and pan section: When allowing space for the pot and pan section, 40 sq ft is generally regarded as a minimum for the smallest unit. The free work aisle between the sinks and other equipment should be 4 ft wide. The space allowance above the minimum will vary widely depending upon the type equipment used and the volume of pots and pans handled.

Employee facilities:

· Facilities for employees may include locker and lounge area, toilets, showers, time-recording equipment, hand basins near work areas, and dining rooms. An employee entrance should be so located that the employees may go directly to the dressing rooms without passing through the dining room or production area.

· Locker and lounge area: Whether individual lockers or common cupboard, sufficient space should be allowed for personal clothing to hang without crowding or wrinkling.

The depth from front to back should be a minimum of 20 in.

Suitable size for an employee lounge depends largely on scheduling of workers and the policies of individual establishments.

A cot or daybed, 36 in. by 6 ft, should be provided in the women's room.

· Toilets and showers: They should be separated from food areas by a hallway or double entrance. Supply one wash bowl for every 8 to 10 workers, one toilet stool for every 12 to 15 women, and one urinal and one toilet stool for every 15 men. Toilet compartments measure approximately 3 by 41/, to 5 ft.

· Time recording management: Provide space for a recorder near and within view of the office. Wall hung card racks of sufficient capacity are recommended for the number of workers, both full and part time, who are likely to be employed during an accounting period. Estimated space for a clock recorder is approximately 18 in. wide by 12y. in. deep and 18 in. high, and a rack of 50 cards approximately 1 1/2, by 2 1/2 by 34 ½ in.

Guest facilities:

The size of the area should be based on probable need for waiting, type of service, and number of persons likely to congregate at one time. If there is a lounge or hallway adjacent to the dining room, this may provide some waiting space.

Cashier:

Preferred location for the cashier's desk or counter, is on the right-hand side of the door when leaving, in order to avoid cross-traffic and resulting congestion.

Coat- checking:

Use of coat trees in dining areas is formed "necessary but never desirable." These occupy approximately 20 by 20 in., are 72 in. high, and can accommodate 8 garments per costumer. Overshoe racks are considered undesirable; umbrella racks, desirable in check rooms.

2.7 TIME SAVER STANDARDS (BUILDING TYPES)- KITCHENS:

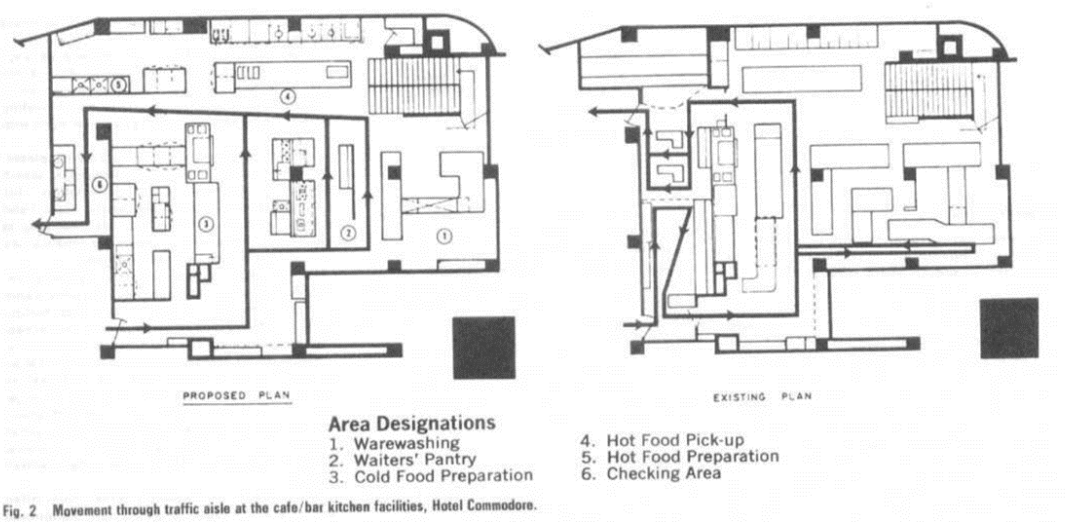


Fig. 2 Movement through traffic aisle at the cafe/bar kitchen facilities, Hotel Commodore.

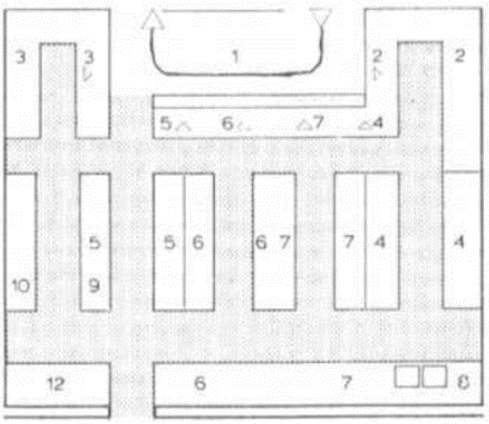


Fig. 1 Hotel or restaurant kitchen or French restaurant of high standard. Capacity for main meals: Hotel—100–200 persons / menu, 100 persons / à la carte. Restaurant—200–300 persons / mealtime from 11:30 to 1:30. Waiters' passageway: tangential. Kitchen: Linear arrangement with large installations in the rear. See Legend for explanation of numbers.

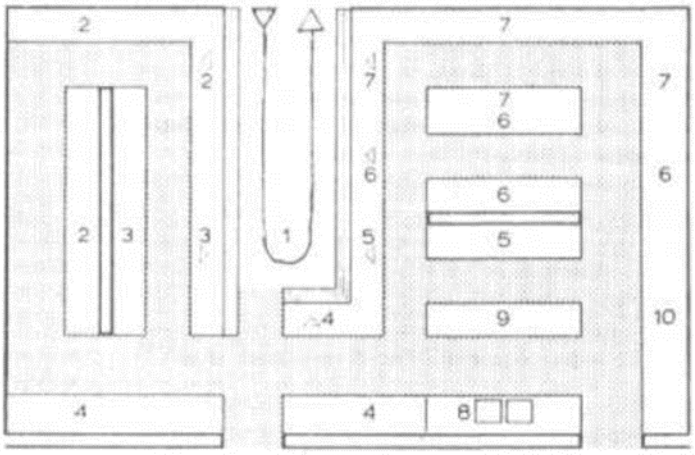


Fig. 2 Hotel or restaurant kitchen. Capacity: With this layout, a 200-seat restaurant will be able to handle three full sittings. This layout can also take care of a hotel with 100 guests and can also accommodate a restaurant open to the general public, an outdoor restaurant, and a private dining area for parties and conferences (altogether, 400 guests). Waiters' passageway: in the center. Kitchen: Linear arrangement with large installations in the rear. See Legend for explanation of numbers.

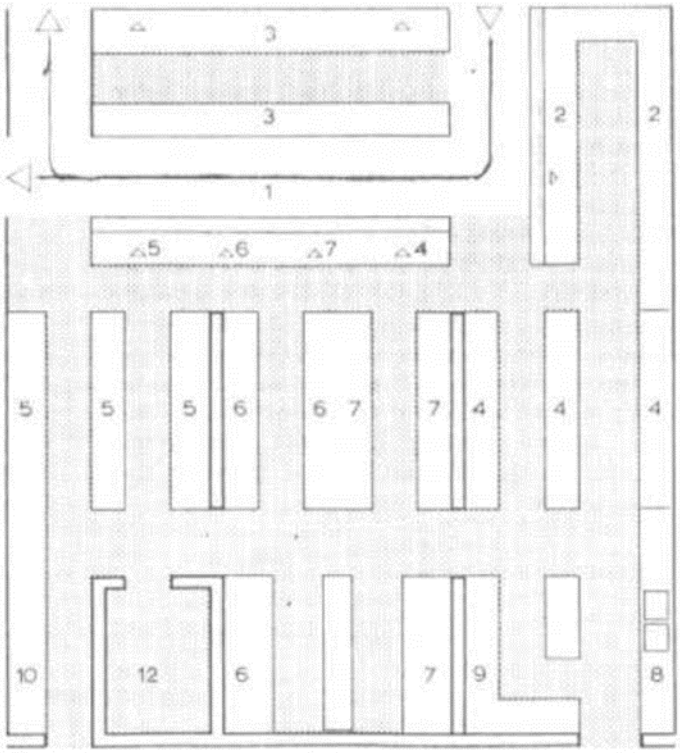


Fig. 3 Large restaurant kitchen for restaurants with many private party and conference facilities or with commissary and catering capacity for other businesses. Suitable also for large hotel with large restaurant for the general public. Capacity: 800–1,000 persons (e.g., 200 seats and fourfold reoccupancy). Waiters' passageway: tangential, with food buffet situated in front. The waiter has access to beverages and other items from the waiters' passageway in the kitchen and from the dining room side as well. The buffet looks over the dining rooms. Kitchen: Linear arrangement with fitted berths for large apparatus. See Legend for explanation of numbers.

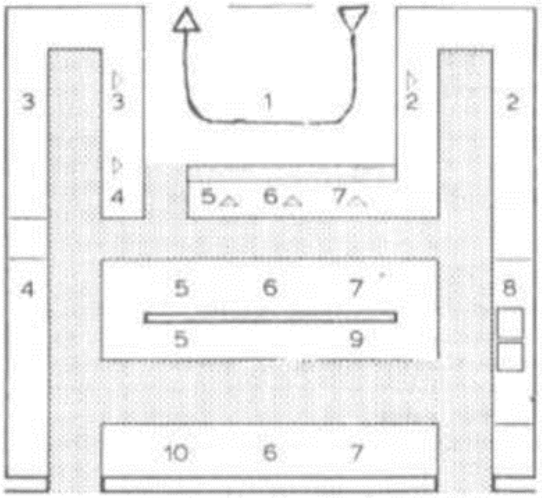


Fig. 4 Restaurant kitchen especially suited for city or excursion restaurants. Capacity: as in Fig. 1. Waiters' passageway: tangential. Kitchen: The cooking, roasting, grill, and frying apparatus are planned as wall structures. See Legend for explanation of numbers.

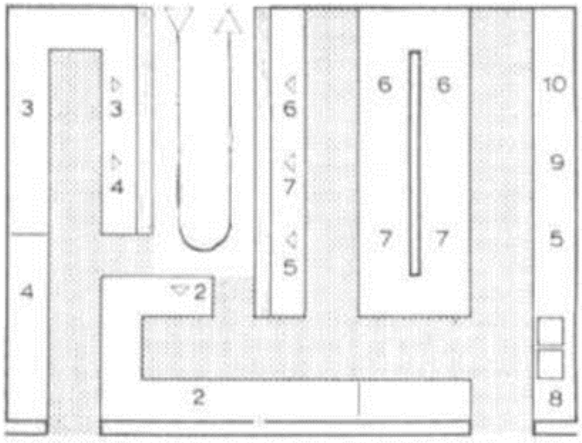


Fig. 5 Restaurant kitchen. Capacity: This arrangement is conceived for a very busy city restaurant of good quality (approximately 600 persons—e.g., 150 seats with fourfold reoccupancy). Waiters' passageway: in the center. Kitchen: The cooking, roasting, grill, and frying apparatus are planned as wall structures. See Legend for explanation of numbers.

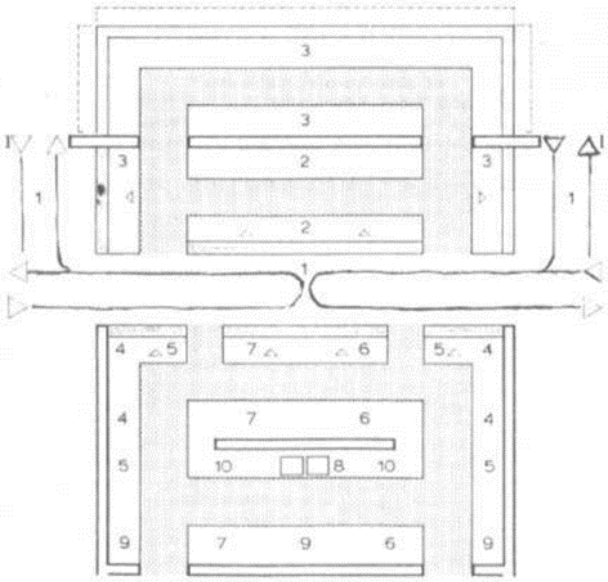


Fig. 6 Large restaurant kitchen for restaurants with many auxiliary rooms, bowling alleys, garden, and a snack bar projecting into the main dining room. Suitable for a highly frequented city restaurant or for an excursion spot with various conference rooms, etc. Capacity: 1,000–1,200 persons. Waiters' passageway: tangential. Buffet and washing-up zone (dish return) placed in front. The waiter can pick up drinks and other items at two places in the kitchen, the drinks coming partly from the bar. Kitchen: Warm kitchen as wall structure with central serving area; cold kitchen and pastry area divided with two serving areas each, symmetrically arranged. See Legend for explanation of numbers.

Legend for Restaurant and Hotel Kitchen Layouts (Figs. 1 to 6)

(Layouts: Scale 1:300)

1. Waiters' passageway—meal and beverage counter—dish return
2. Dishwashing area (dishes, glasses, silver)
3. Beverages—preparation and serving
4. Pastry (cookies, cakes, ice cream, dessert)—preparation and serving
5. Cold kitchen (cold appetizers, salad, fish)—preparation and serving
6. Warm kitchen—saucier/rôtisseur area (sauces, roasts, grill, fish)—preparation including large apparatus area and serving
7. Warm kitchen—entremétier area (soups, vegetables, entrées)—preparation including large apparatus area and serving
8. Pot and pan washing—casserolier area
9. Vegetable preparation
10. Meat preparation
11. Vegetable cold storage
12. Meat cold storage
13. Economat (dry storage)
14. Beverage cold storage
15. Linen, dish, cleaning supplies storage
16. Staple goods storage
17. Goods acceptance and control
18. Empty goods and garbage collecting rooms

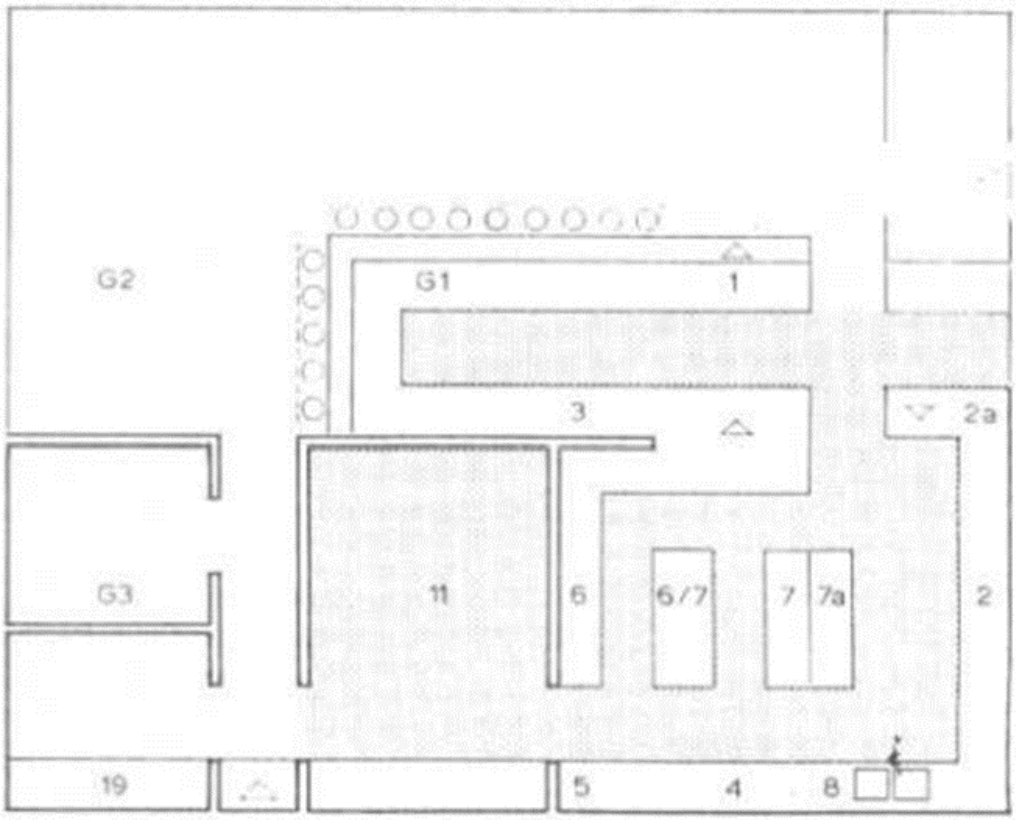


Fig. 7 Snack bar (Pub, tavern, bistro, café, or restaurant). Capacity: 55–60 seats (five- or six-fold reoccupancy over lunchtime, twofold in the evening; at other times, a well-run café, cake, and snack business). The kitchen deals primarily with ready-to-serve articles. In a city business with daily delivery, the storage space does not have to be especially large.

Legend:

1. Meal and beverage serving counter
2. Dishwasher
2a. Dish return
3. Beverage buffet with mixer, toaster, ice-cream container, etc.
4. Oven and small pastry station
5. Garde-manger
6. Saucier / rôtisseur
6/7. Range
7. Entremétier
7a. Cooking vat and high-performance steam cooker
6/7b. Warming cupboard and warm serving counter with warming lamps
8. Pot and pan washing
11. Storage, empty goods, office; instead of cold storage rooms—cold storage and freezer cupboards
19. Employees' toilets
G1. Bar counter—also for meals
G2. Dining room with table seating
G3. Guests' toilets / make-up room / telephone booths

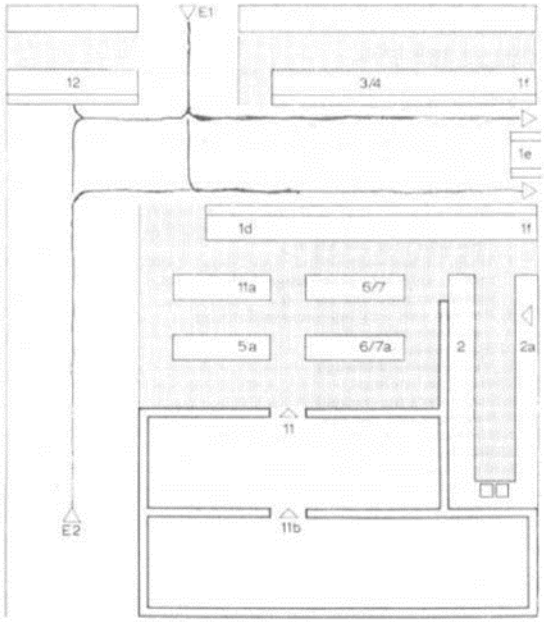


Fig. 8 Self-service restaurant suitable for department stores or office buildings. Kitchen: no independent production; outside delivery and preparation via deep-freeze, boiling-in-the-bag (Nacka), or Régéthermic methods.

Legend:

1d. Self-service buffet with grill and fry unit
1e. Salad dressings, spices, cutlery reserves
1f. Cashier
2. Dishwasher
2a. Dish return
3/4. Sandwich unit, cakes, ice cream, coffee, beverages; service available at an outdoor café
5a. Cold preparation table
6/7. Defrosting, warming-up apparatus front, serviceable on two sides (convection ovens, heating appliances for the Nacka system or Régéthermic ovens)
11. Cold storage and storage (varies in size according to system of servicing and rhythm of delivery)
11a. Refrigerator front, serviceable on two sides
11b. Delivery, empty goods, intermediary storage, personnel cloakroom
12. Kiosk—sales on the inside and to customers on the street
E1. Entrance from street
E2. Entrance from building (department store, office building, etc.)

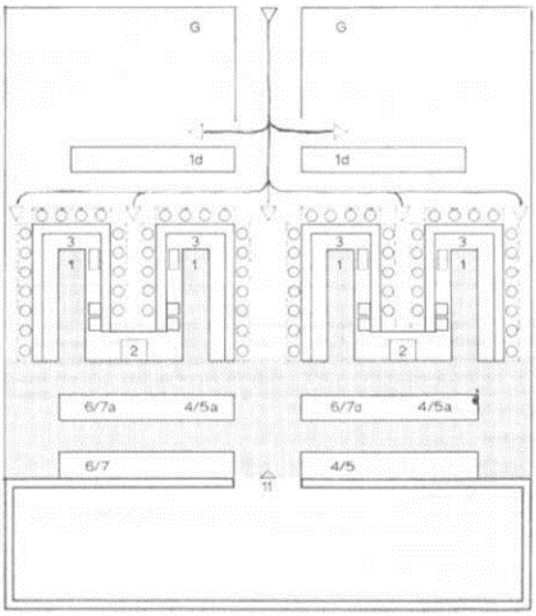


Fig. 9 Restaurant with finger-shaped bar and automats for quick lunch service in restaurants for passersby, cafeterias, department stores, highway restaurants. Capacity: 500 persons per hour. Kitchen: preparation of precooked meals, salads, and ice cream.

Legend:

1. Service passage for U-shaped or finger-shaped counter
1d. Automats for self-service
2. Connection of two fingers with dishwasher having two covers serviceable on both sides; adjoining are two sinks each
3. Coffee machine, refrigerators, soup vat storage
4/5. Salad and ice cream preparation
4/5a. Cold counter—salad, ice cream, dessert
6/7. Frying pan, soup cooker, and other cooking equipment
6/7a. Warm counter—bain-marie, fryer, grill plates
11. Economat, cold storage, and freezer space, staples room (delivery, empty goods room, office, personnel cloakrooms and washrooms not included)
G Guest rooms with standing room and seats (automat service with disposable dishes)

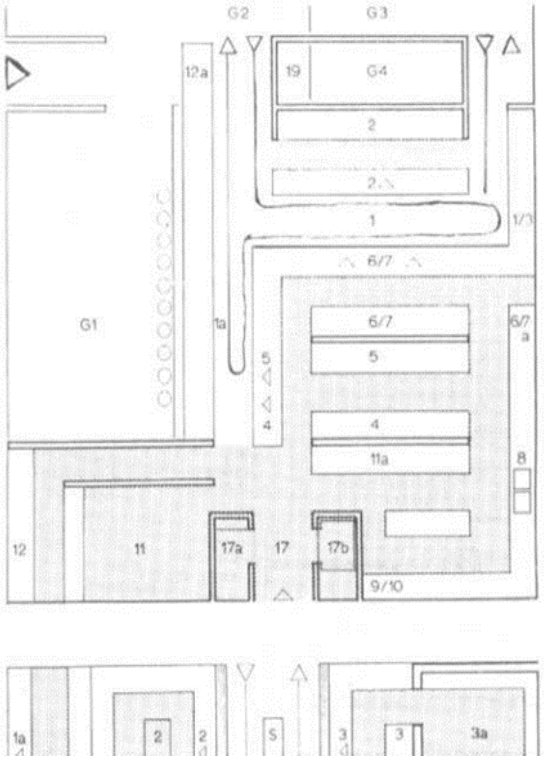
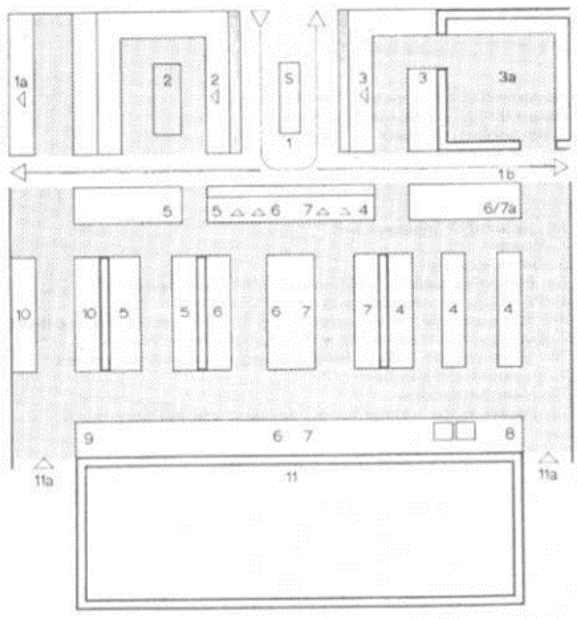


Fig. 10 Restaurant for travelers (Highway restaurant, or café-restaurant at a busy intersection in the city). Capacity:

- Snack—45–50 seats (200 persons every hour)
- Restaurant—80 seats—(two- or threefold reoccupancy during meals; at other times, coffee, ice cream, pastry, and sandwich service)
- Grill—40 seats (one- or twofold reoccupancy, high standard service) Kitchen: Linear-wall arrangement, approximately equal balance between freshly prepared meals and ready-to-serve meals. Storage, empty goods, and personnel cloakrooms in the cellar.

Legend:

1. Waiters' passageway
1a. Service corridor for snacks, and cold meal and pastry-serving counter for restaurant
1/3. Waiters—Beverage self-service
2. Dishwasher
4. Pastry
5. Cold kitchen
6/7. Warm kitchen (roast, grill, fry), bain-marie in the serving counter
6/7a. Cooking and frying apparatus (2 vats, 1 pan)
8. Pot and pan washing
9/10. Meat and vegetable preparation
11. Storage for the day
11a. Cupboard group, cooled and not cooled
12. Kiosk facing the street
12a. Cigarette machine
17. Goods delivery
17a. Office
17b. Elevator to cellar
19. Employee toilets
G1. Snack area with about 40 seats and seats at the bar
G2. Restaurant
G3. Grill restaurant, possibly with small bar for espresso coffee, aperitifs, whisky, and other spirits
G4. Guests' toilets



G2. Restaurant
G3. Grill restaurant, possibly with small bar for espresso coffee, aperitifs, whisky, and other spirits
G4. Guests' toilets

Fig. 11 Large hotel-restaurant kitchen also for large restaurants with some auxiliary rooms and with outside deliveries or production for other organizations (variant of Figs. 3 and 6). Capacity: 800–1000 persons. Waiters' passageway: in the center, with a special serving link to the garden (or, for instance, to a bowling alley) and directly connecting to the auxiliary rooms. Kitchen: Linear arrangement with rear side of large apparatus.

Legend:

1. Waiters' passageway
1a. Meal and beverage serving to garden
1b. Access to auxiliary rooms
2. Dishwashing area
3. Beverage serving area
3a. Beverage cold storage (day cellar)
4. Pastry
5. Cold kitchen
6. Warm kitchen—saucier / rôtisseur area
7. Warm kitchen—entremétier area
8. Pot and pan washing
9. Vegetable preparation
10. Meat preparation
11. Cold storage and storage rooms
11a. Accesses to delivery, empty goods room, and intermediary storage, office, personnel cloakrooms and toilets
S Service accessories (cash register)

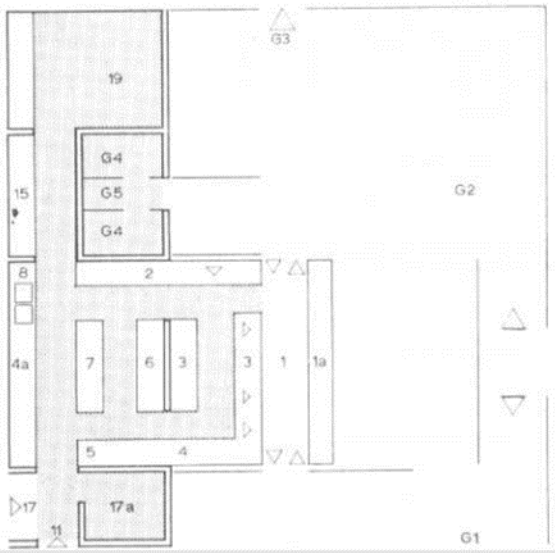


Fig. 12 Café-restaurant with tearoom, or a city restaurant in a busy district.

- Café: alcohol-free beverages, except for bottled beer; pastry and small meals—cold and warm
- Tearoom: alcohol-free beverages, pastry, sandwiches. Capacity: About 150 seats (continuous service from early morning to midnight or later). Kitchen: extensive use of precooked meals; little storage.

Legend:

1. Waiters' passageway
1a. Serving stations and cash register
2. Dishwasher
3. Beverage buffet with mixer, toaster, ice cream container, etc.
4. Pastry
4a. Pastry oven
5. Sandwich unit
6. Defrosting and heating equipment, soup vats
7. Oven, grill, frying apparatus
8. Pot and pan washing
11. Day stores, empty goods (staple goods in cellar)
15. Linen storage
17. Delivery
17a. Office
19. Employees' washrooms, cloakroom for waiters (cloakroom and washrooms for kitchen employees in cellar)
G1. Tearoom
G2. Café-restaurant
G3. Terrace or garden
G4. Washrooms
G5. Telephone booths

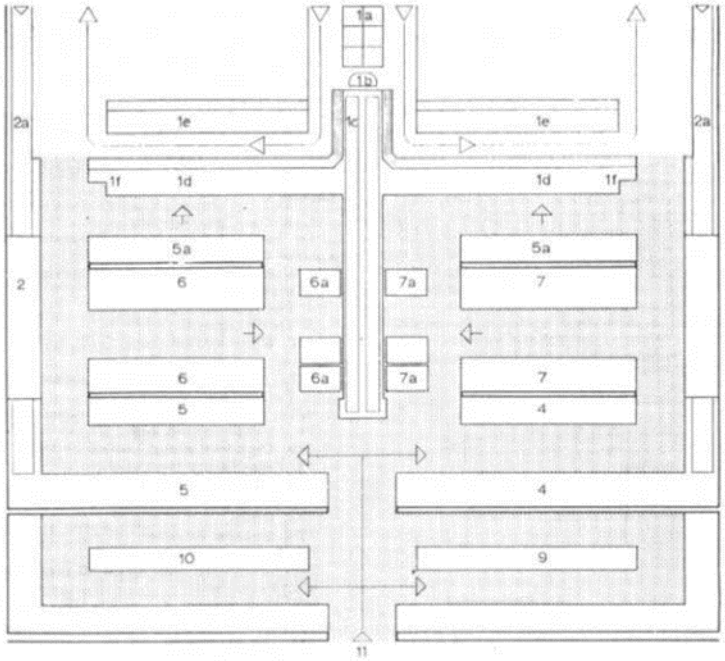


Fig. 13 Student dining hall or cafeteria with two-sided self-service buffet and conveyor belt. Capacity: 12 persons per minute × 2 = 24 persons. Without cash payment: hourly capacity, 1,400 persons. With cash circulation: hourly capacity, 1,100 persons. Seating: at least 340 seats. Kitchen: fully equipped linear arrangement, planned for automatic equipment.

Legend:

1a. Platter and cutlery trolley
1b. Distribution help, regulation of conveyor-belt speed, dietary food storage
1c. Conveyor belt for standard menu
1d. Self-service buffet—Menu:

1 soup of the day	various salads
1 stew	various desserts
1 standard menu	dairy products
1 dietary food	5 cold beverages (beer, wine, carbonated beverages, juice)
2 cold meals	

1e. Salad dressings, condiments, cutlery
1f. Cash register
2. Dishwasher
2a. Soiled-dish conveyor belt
4. Pastry
5. Garde-manger
5a. Portioning table for cold meals, salads, and desserts
6. Roast kitchen, possibly with roasting automats
6a. Warm-storage trolleys—portioning of meat, sauces, dietary foods
7. Cooking kitchen, possibly with automatic steam cookers
7a. Warm-storage trolleys for portioning of vegetables, entrées
9. Vegetable preparation
10. Meat preparation
11. Access to the storage rooms, delivery, and auxiliary rooms

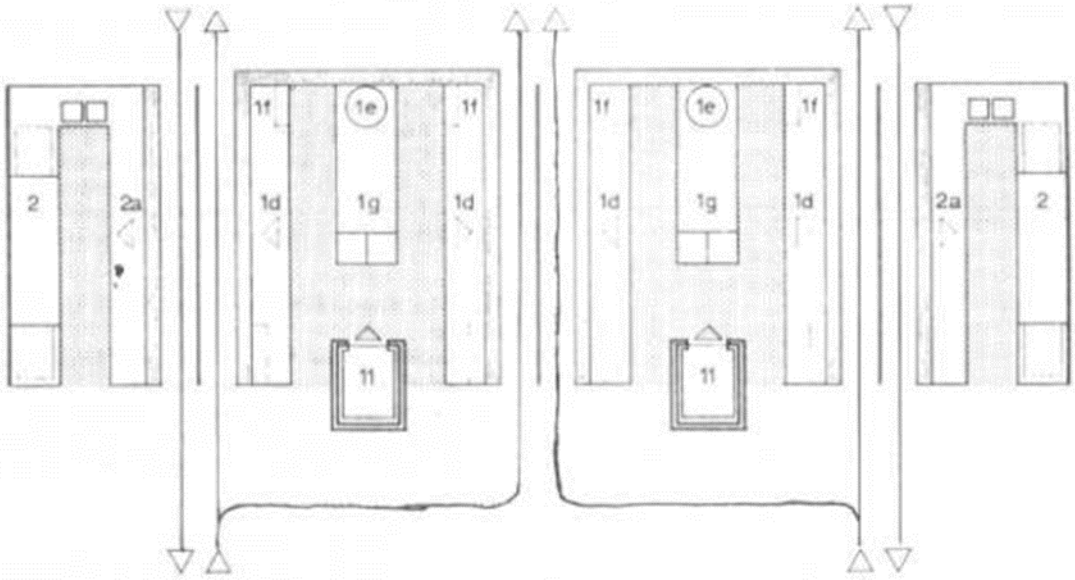


Fig. 14 Student dining hall or cafeteria with four self-service buffets. Capacity: at least 1,500 persons per hour. Seating: at least 400 seats. Kitchen: outside delivery of meals with standard or conveyor-type elevator.

Legend:

1d. Self-service buffet—menu as in Fig. 13
1e. Circular device for salad dressings, condiments, extra cutlery, etc.
1f. Cash register
1g. Preparation table with trolley stand
2. Dishwasher
2a. Soiled-dish return
11. Standard or conveyor-type elevator connection to meal-preparation kitchen

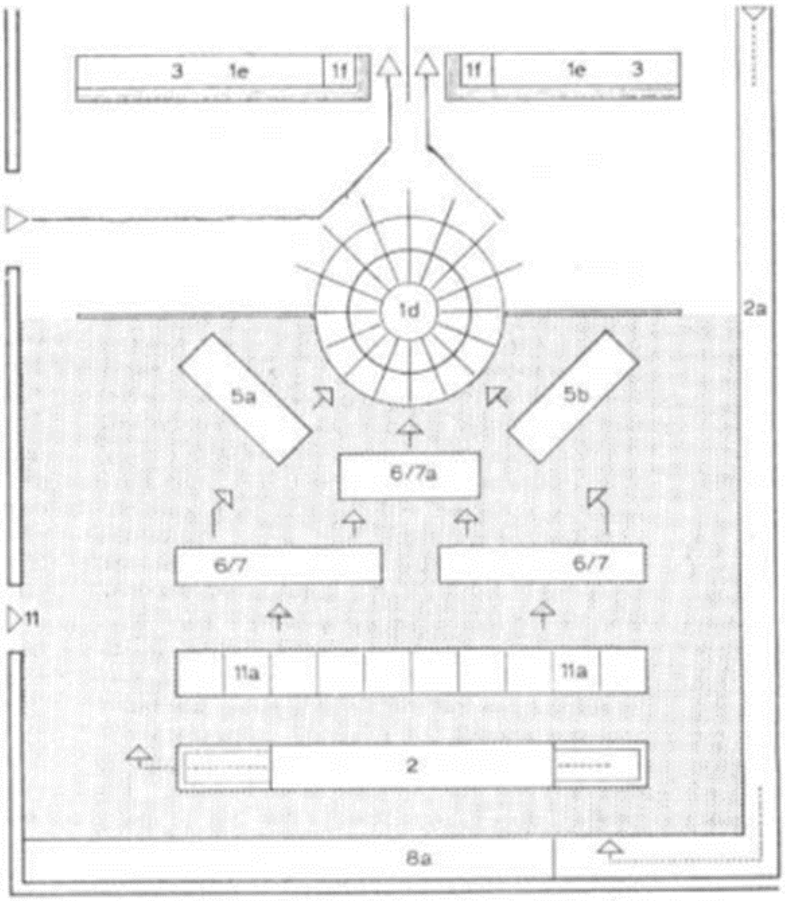


Fig. 15 Student dining hall or cafeteria with self-service carrousel. Capacity: after the initial phase, 1,400 persons per hour. Seating: at least 400 seats. Meal delivery from a central kitchen—deep-freeze, boil-in-the-bag (Nacka), and Régéthermic system.

Legend:

17. Linear-arrangement kitchen with automats. For large output, there are appropriate appliances for steaming and baking.

18. Linear-arrangement kitchen with transport-equipment system. In the foreground: dish washing; soup, vegetable, and entrée vats; stove for general purposes and dietary foods; sauces and meats.

19. Three-tier carrousel (Maison Tricault, Paris) of 2-meter diameter, with a tray slide.

1d. Self-service three-tiered carrousel
Below: 2 cold dishes, various salads, desserts (partly on ice)
Center: warm meals, 3 warm dishes, 2 grilled or fried dishes (with warming lamps above)
Above: sandwiches, pastry, etc.

1e. Salad dressings, condiments, extra cutlery, etc.

1f. Cash register

2. Dishwaster (stacking area, 3 tanks, drying zone)

2a. Soiled-dish conveyor belt

3. Beverage self-service area

5a. Portioning table for cold dishes and salads

5b. Portioning table for desserts, sandwiches, etc.

6/7. Warming and defrosting appliances

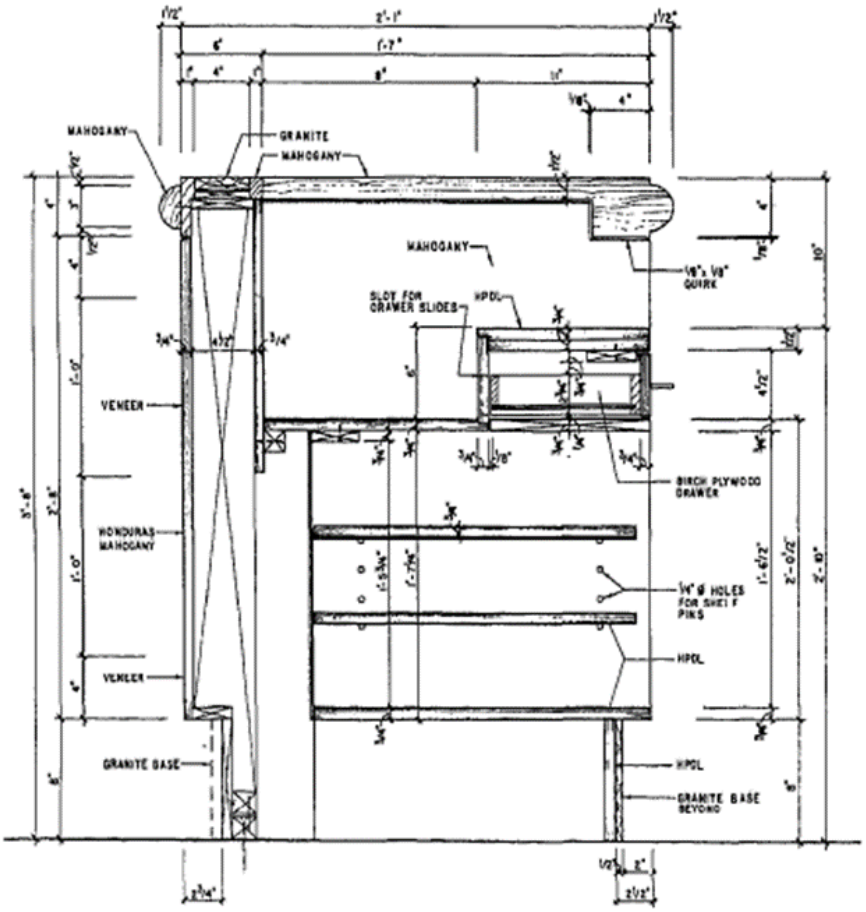
6/7a. Portioning table for warm meats

8a. Trolley storage

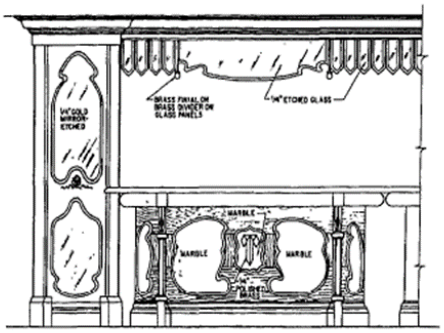
11. Meal delivery from the central kitchen, access to the supply and auxiliary rooms

11a. Storage cupboards for cold goods and other goods delivered from the central kitchen

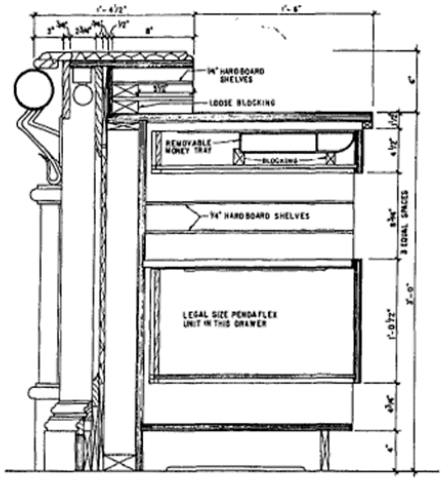
2.8 TIME SAVER STANDARDS (INTERIOR DESIGN):



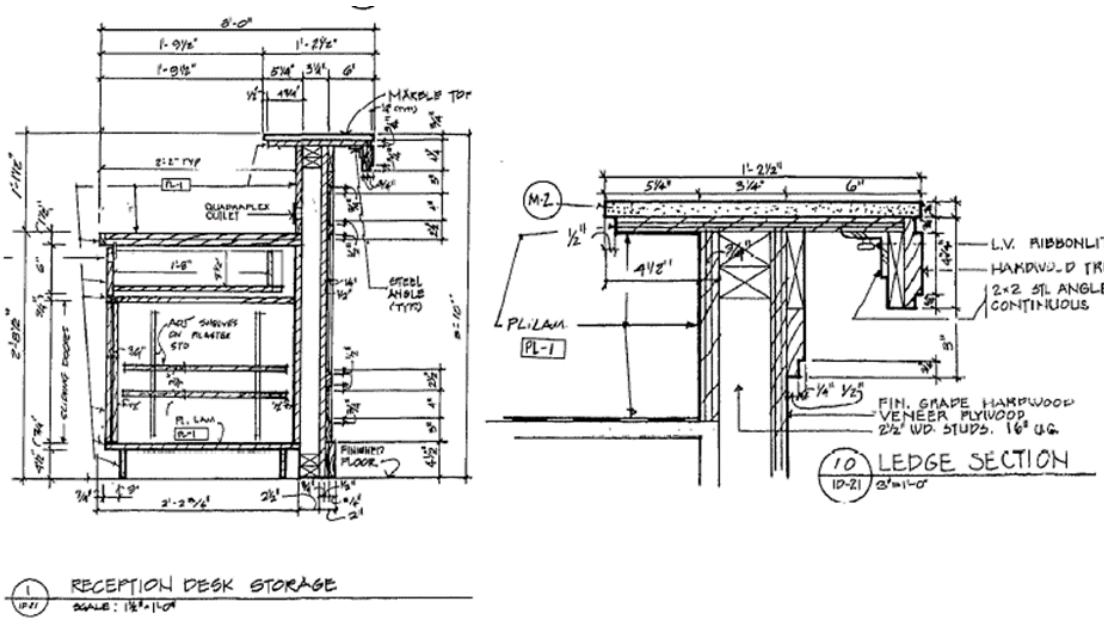
VERTICAL SECTION AT RECEPTION DESK

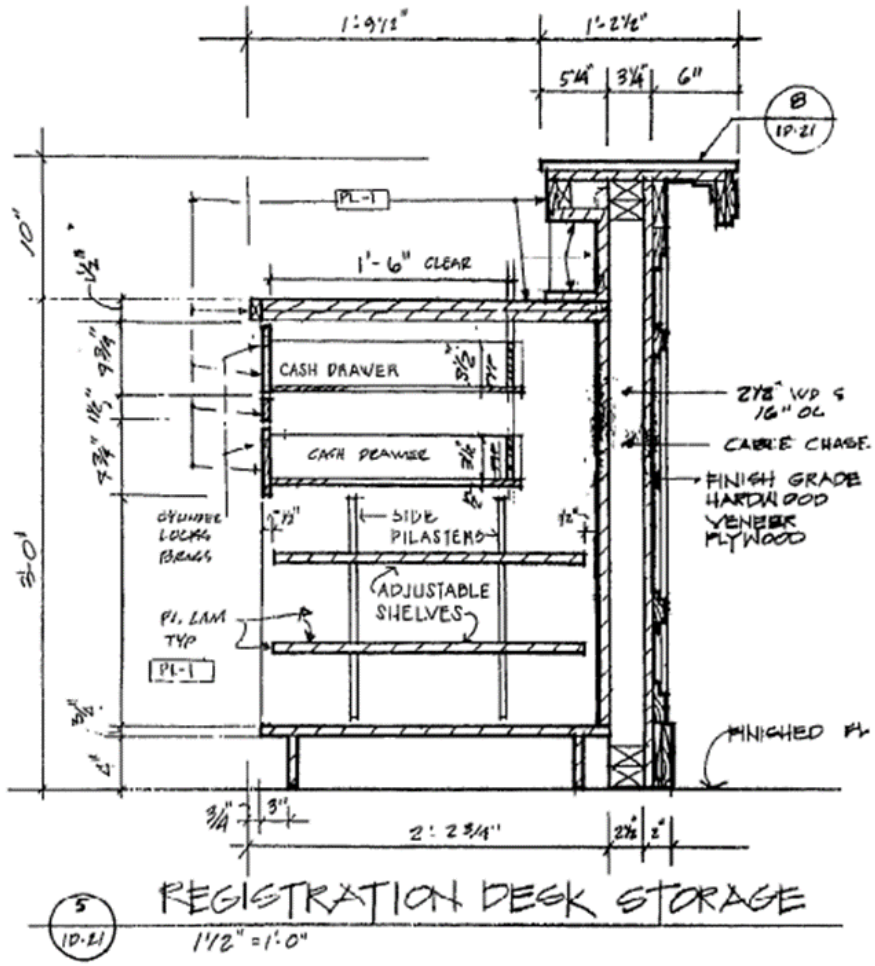


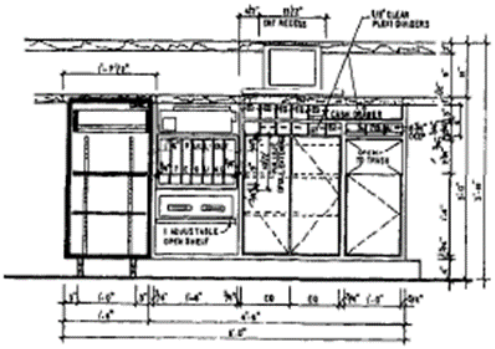
PARTIAL ELEVATION-FRONT DESK
TROPICANA HOTEL



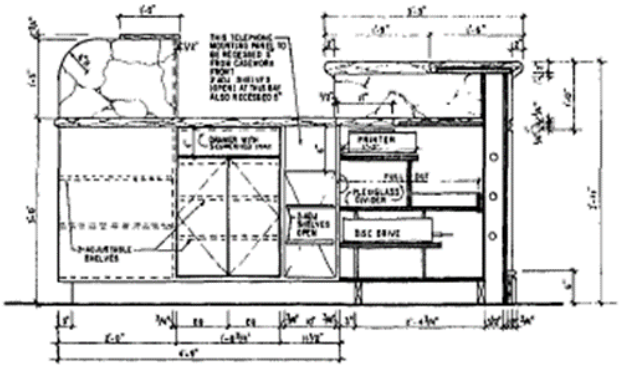
VERTICAL SECTION
REGISTRATION DESK TROPICANA HOTEL


MARBLE TOP
QUADRAPLEX OUTLET
STEEL ANGLE (TYP)
ADJ SHELVES ON PILASTER STD
PL. LAM
PL-1
FINISHED FLOOR
L.V. RIBBONLITE
HARDWOOD TRIM
2x2 STL ANGLE CONTINUOUS
PL. LAM.
FIN. GRADE HARDWOOD VENEER PLYWOOD
2½" WD. STUDS. 16" O.C.
10 LEDGE SECTION
10-21
3"=1'-0"
1 RECEPTION DESK STORAGE
1½"=1'-0"

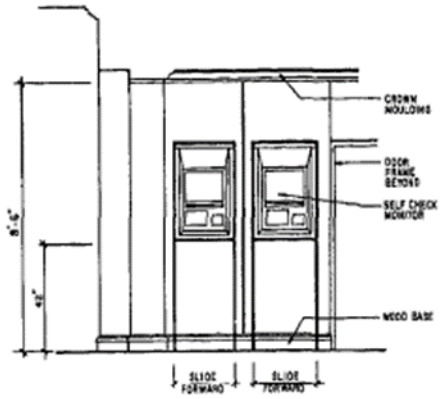

1'-9½"
1'-2½"
5¼"
3¼"
6"
8
10-21
PL-1
1'-6" CLEAR
CASH DRAWER
CASH DRAWER
2x8" WD @ 16" O.C.
CABLE CHASE
FINISH GRADE HARDWOOD VENEER PLYWOOD
CYLINDER LOCKING BRACE
SIDE PILASTERS
ADJUSTABLE SHELVES
PL. LAM TYP
PL-1
FINISHED FL
10"
81"
2'-2 3/4"
5 REGISTRATION DESK STORAGE
10-21
1½"=1'-0"



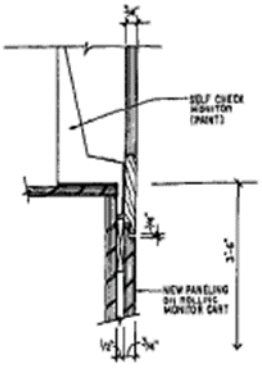
ELEVATION - REGISTRATION COUNTER



ELEVATION/SECTION - REGISTRATION COUNTER



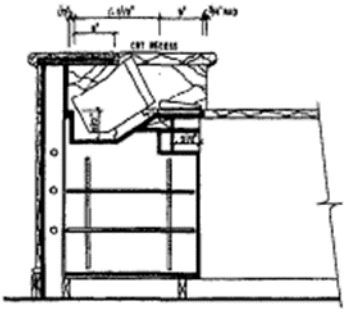
ELEVATION
AT SELF CHECK MONITOR



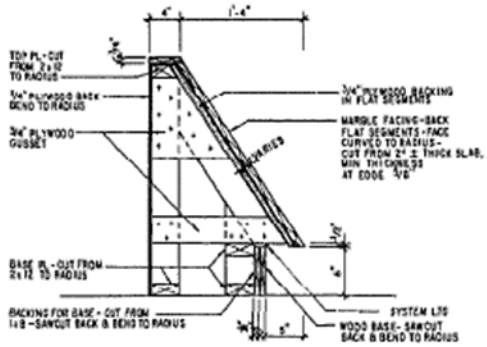
SECTION DETAIL
AT SELF CHECK MONITOR



SECTION DETAIL-
SETTEE



ELEVATION/SECTION-
REGISTRATION COUNTER



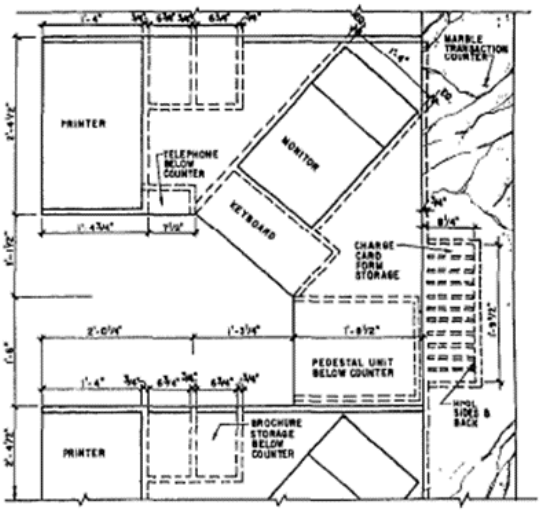
SECTION - CIRCULAR SETTEE BACK

3. Elevators servicing the hotel guest rooms should be readily visible from the front desk. This is not always feasible in extremely large hotels.

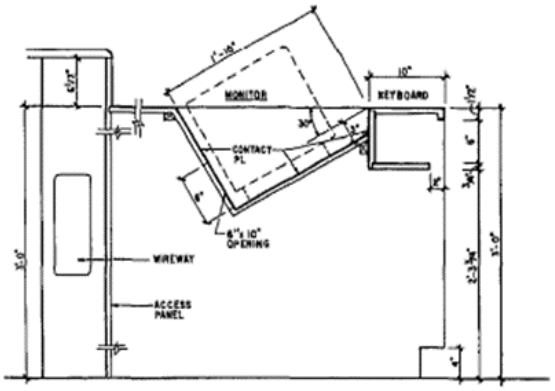
4. The front desk should be designed in such a way as to take into consideration the various users it will accommodate. Special attention should be given to the fact that hotel guests may be physically challenged or chairbound. The overall height, writing surfaces, and overhangs should be designed to accommodate a hotel guest seated in a wheelchair.

5. The basic front desk design should avoid, wherever possible, visual obstructions that block sightlines or create blind spots. Accordingly, columns and high walls should be avoided.

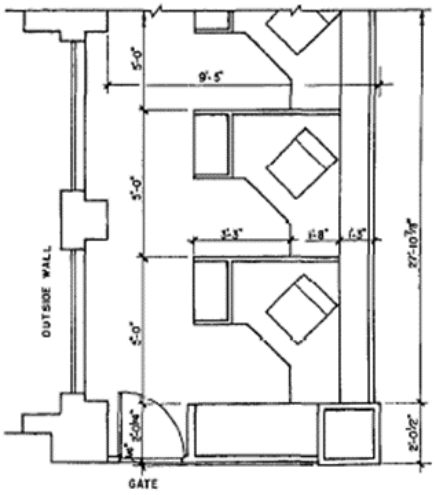
6. Equipment and custom elements that are typically incorporated within the front desk include computer monitors/CRTs with keyboards and printer, room racks, reservation racks, information racks, room status displays, mail drawers, key drawers, alpha guest listings, message-waiting display, credit card imprinters, fax and telex, guest/employee paging system, automatic wake-up system, electric receptacles, cable chases, alarm systems, and file and cash drawers.



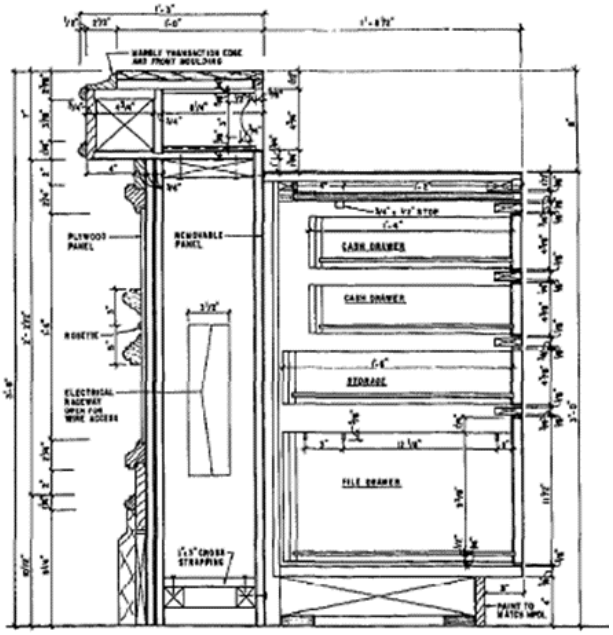
ENLARGED PARTIAL PLAN
REGISTRATION COUNTER
GRAND FLORIDIAN HOTEL



SECTION AT REGISTRATION DESK
GRAND FLORIDIAN HOTEL



PARTIAL PLAN
REGISTRATION COUNTER
GRAND FLORIDIAN HOTEL

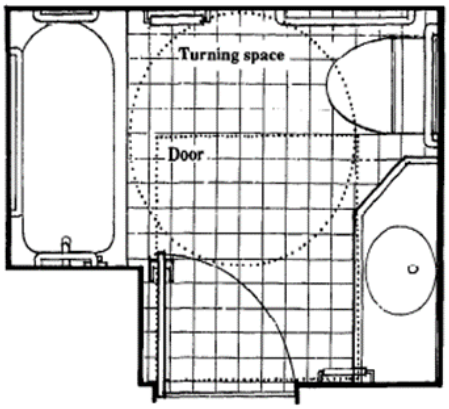


SECTION AT COUNTER
GRAND FLORIDIAN HOTEL

project the appropriate hospitality image while at the same time integrating all of the required technologies. Figures 10 to 13 show examples of architectural working drawings and details that meet many of these requirements.

The design of a front desk or registration desk can take many forms and be constructed with a variety of materials. Regardless of the design vocabulary used or architectural style, certain important design considerations must be observed.

1. The number of persons actively staffing the counterlike facility will dictate both the width and overall depth of the front desk. It is suggested that between 5–7 ft be allocated per staff workstation and that one workstation be allocated for every 125–150 rooms. For every additional 125–150 rooms, an additional workstation should be provided. Peak check-in/check-out loads could require even more staff workstations.
2. The front desk should be easily accessible from and to the main hotel entrance. "Easily accessible" strongly implies clear visibility.



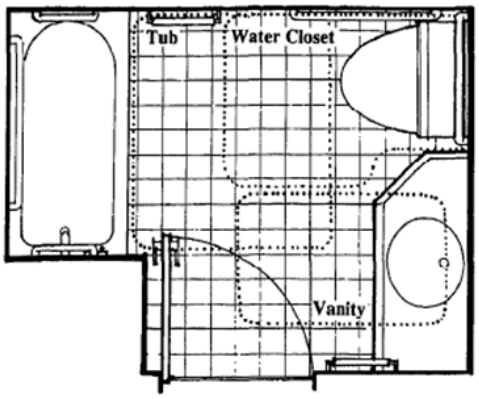
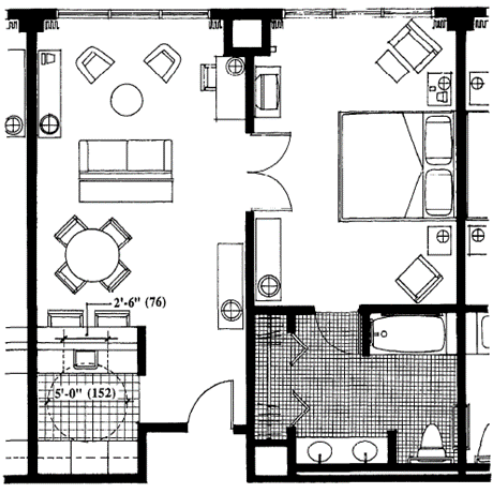
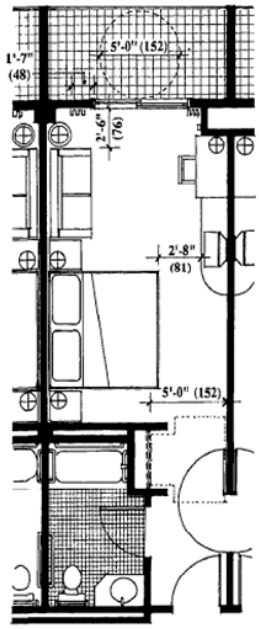


Fig. 9 These two diagrams illustrate the same bathroom plan with the required clearances for door operation and turning space and access to each fixture, including the tub/shower, vanity, and water closet. Clearances for maneuvering space, door operation, and individual fixtures can "overlap." Because of the vertical characteristics of wheelchairs, clearances can include toespace (9" high) below water closet and kneespace (2'3" high) below vanities.



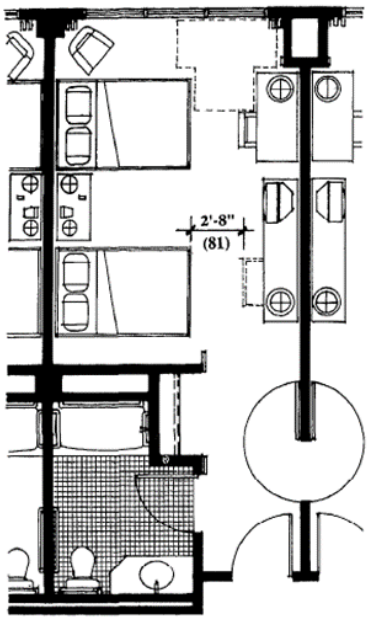
Suite with 14' Bay-spacing

Fig. 8 Accessible suites should meet the same requirements for accessible guestrooms and guest baths. Because suites are usually more generous in terms of space, providing accessibility is less difficult. If a small kitchenette is included, a kneespace 2'3" high should be provided below the sink. A countertop height of 2'10" (2" lower than standard) is suitable for both ambulatory guests and guests in wheelchairs. A pull-out lapboard at a height of 2'6" provides a workspace for guests in wheelchairs. The kitchenette should include a 5'0" turning space.



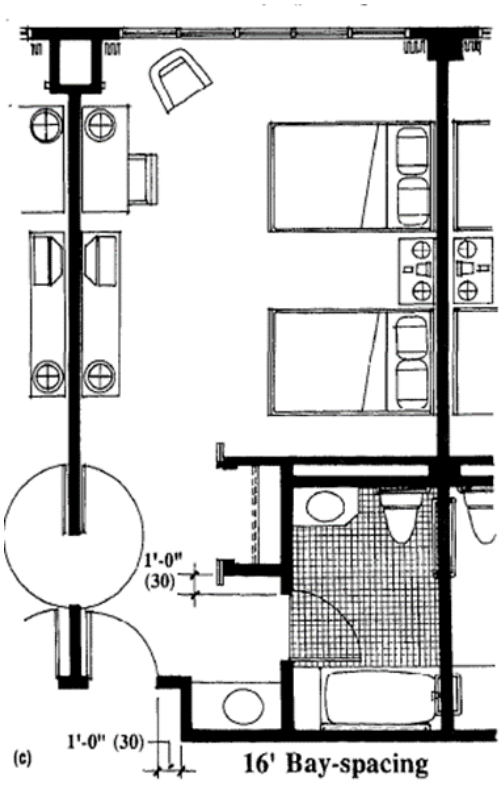
12' Bay-spacing

Fig. 6 This alternative 12'0" bay-spacing design requires the dresser to be offset from the foot of the bed. The bathroom wall is stepped back to provide clearances for the bathroom door and connecting door. The heating/cooling unit projects into the room to allow access to the thermostat. If balconies are provided, a minimum depth of 5'0" is recommended to allow guests with wheelchairs to turn around.

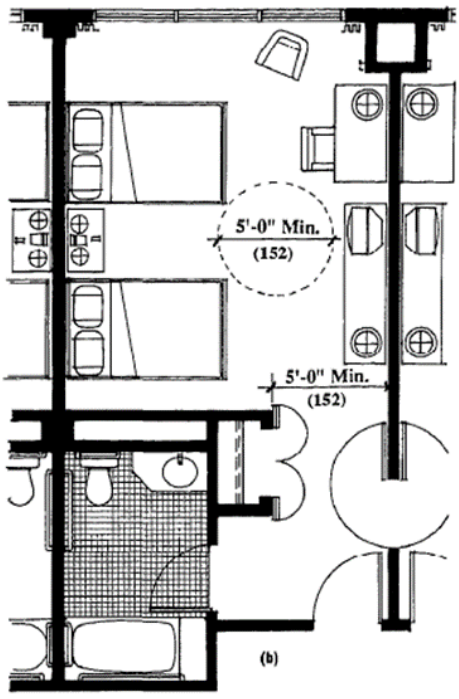


13' Bay-spacing

Fig. 7 A 13'0" bay-spacing provides room for wheelchair clearances, including a turning space in front of the closet and at the foot of the beds, an access aisle between the beds, a T-turnaround at the window aisle for access to temperature controls and blinds and drapes, door clearances, and a bathroom that meets ANSI standards.



16' Bay-spacing



15' Bay-spacing

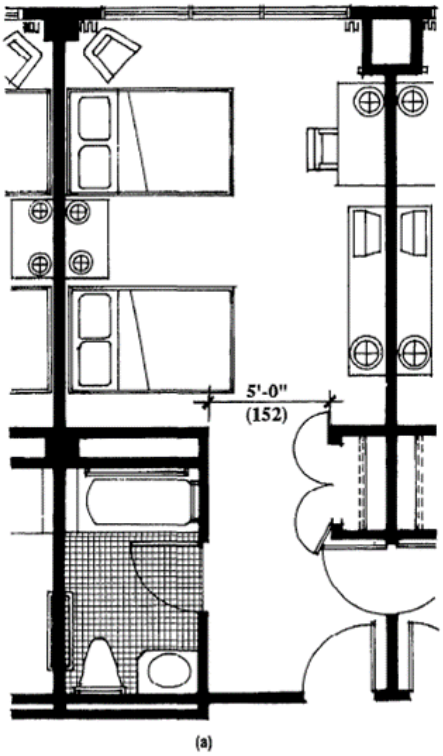


Fig. 5 Bay-spacings of *(a)* 14', *(b)* 15', and *(c)* 16' can easily accommodate guests with restricted mobility.

Guestroom Plans

Accessible guestrooms have design features and floor plans that provide the maneuvering clearances for guests with limited mobility. Figures 5 to 9 show sample plans of guestrooms and bathrooms with the required:

- Widths and clearances at the entry, connecting, closet, and bathroom doors
- Maneuvering space in front of the closet, in the sleeping area, and within the bathroom
- Clearances to use and transfer to fixtures in the bathroom
- Clearances to open dresser drawers, to maneuver into kneespace at the desk, and to access the bed, bedside table, windows, blinds, and thermostat

Clearances may depend on the design of specific furnishings. The width of the access aisle at the bed is determined by the design of the bedside table. Access to dressers is determined by the width of the drawer. The maneuvering space to turn into the desk is determined by the width of the kneespace.

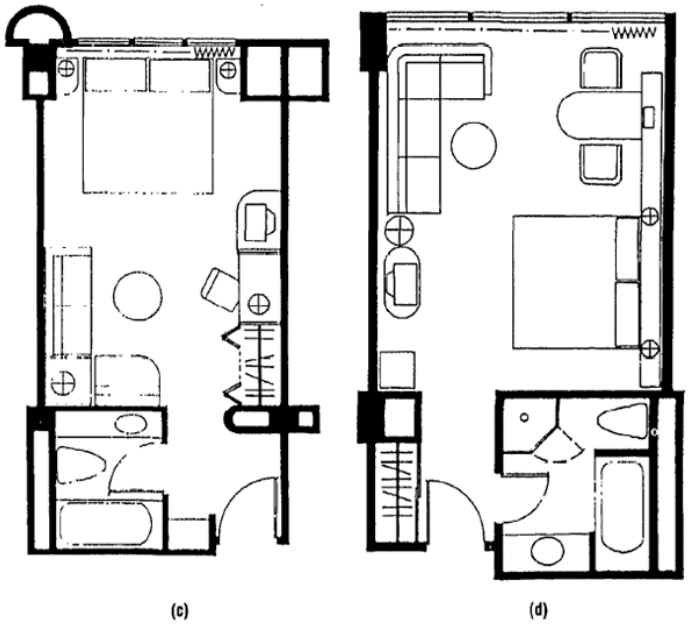


Fig. 2 Guestroom plans. *(a)* Typical double-double finishes plan: vinyl wallcovering (WC), paint (P), carpet (C), ceramic tile *(CT)* identified and keyed to legend. *(b)* King-studio (Holiday Inn): standard layout with armoire unit and large lounge area including a convertible sofa. *(c)* Reversed layout (Sheraton, Washington, D.C.): unusual room with bed placed in front of window and lounge area near bathroom. *(d)* Luxury king room (Sheraton Grande, Los Angeles): oversized room with shelf/ledge in place of headboard, large desk surface, and lounge area; four-fixture bathroom.

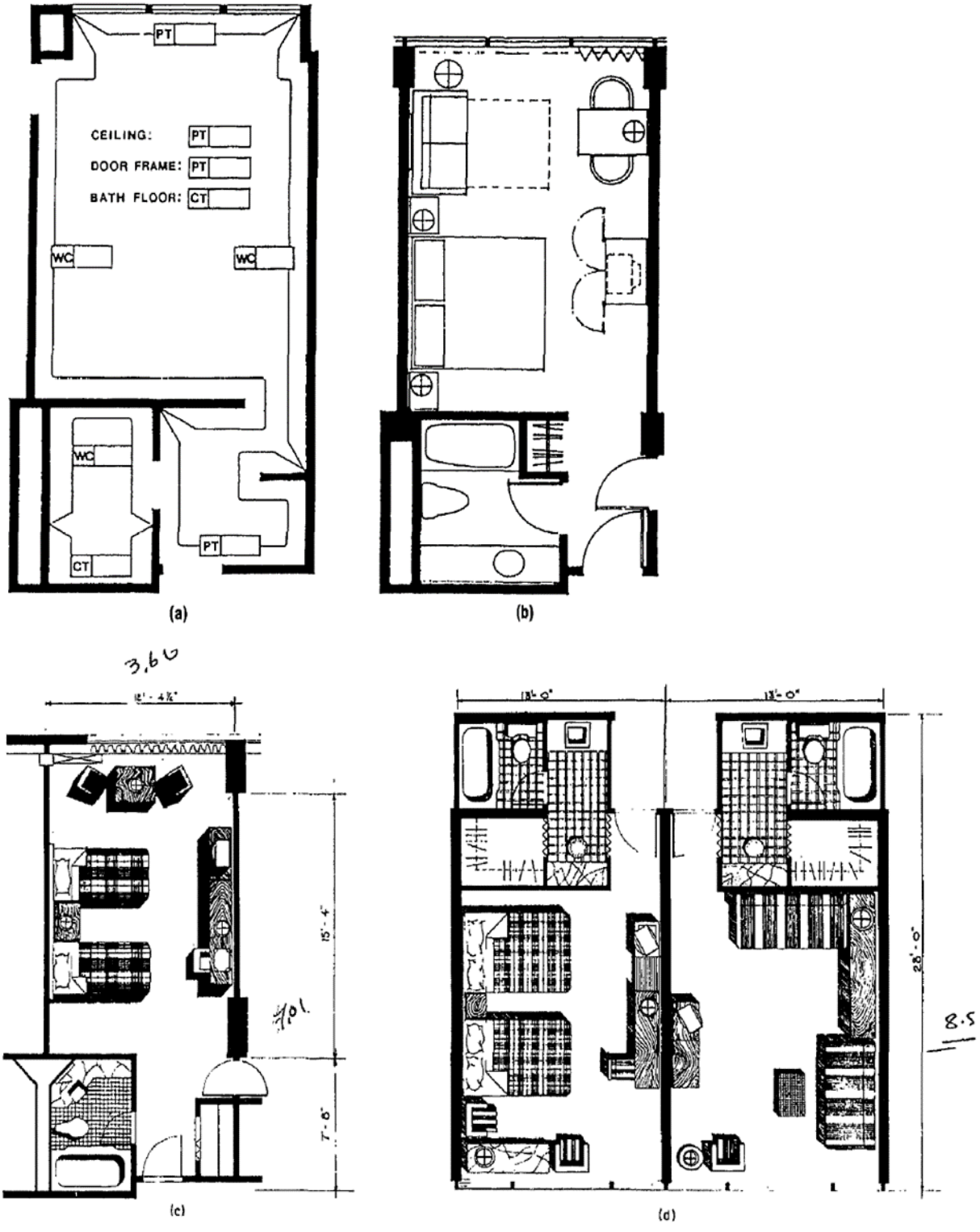
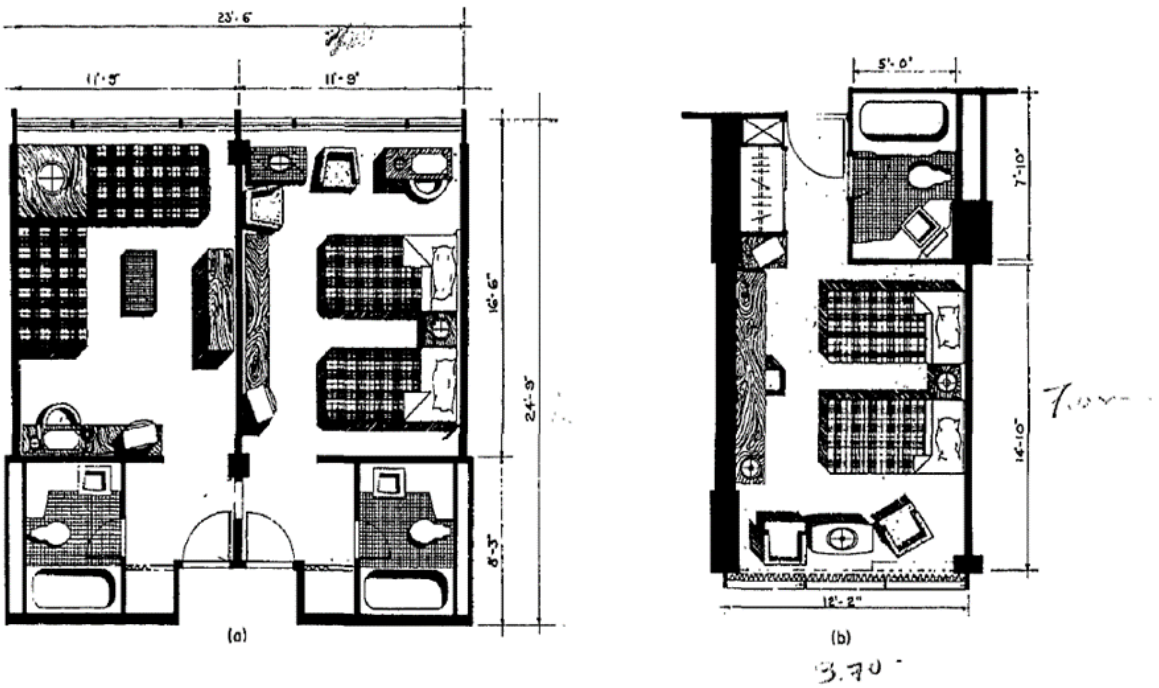


Fig. 1 *(a)* Uris Brothers Hotel, New York. *(b)* Americana Hotel, New York, typical tower room. *(c)* Loews N.Y. Motel, typical room. *(d)* Causeway Inn, Tampa, Florida.



Snack bar –

Corner pub, bistro, cafe, restaurant: capacity 55-60 seats (2-4 place turnover at lunchtime, 2 in evenings). Between lunch and evening meals: serving coffee, cakes and snacks. Kitchen: supplied predominantly with pre-prepared items. Storeroom need not be particularly large if deliveries are daily.

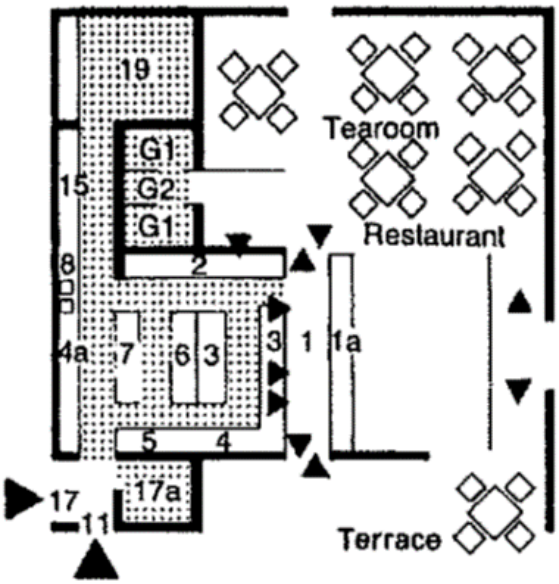


1	meals and drinks servery
2	dishwasher
2a	crockery returns
3	drinks bar with mixer, toaster, food containers etc.
4	oven for small pastry items
5	food storage
6	rotisserie
6/7	cooker rings
7a	water boiler and steam machine
8	pot and pan washer
11	stores/office; catering size refrigerators and freezers instead of cold store
19	staff toilets
G1	bar counter
G3	customer toilets

1 Snack bar

Cafe-restaurant-

With tea room. Urban business in heavy traffic location.



1	waiters' walkway
1a	service counter and cash tills
2	dishwasher
3	drinks bar with mixer, toaster, ice cream freezer etc.
4	pastry preparation
4a	pastry oven
5	sandwich preparation
6	reheating equipment (e.g. soup)
7	cooker rings
8	pot and pan washer
11	empties
15	linen store
17	deliveries and (a) store
19	staff toilets and cloakroom
G1	toilets
G2	telephone cubicle

2 Café-restaurant

Cafe:

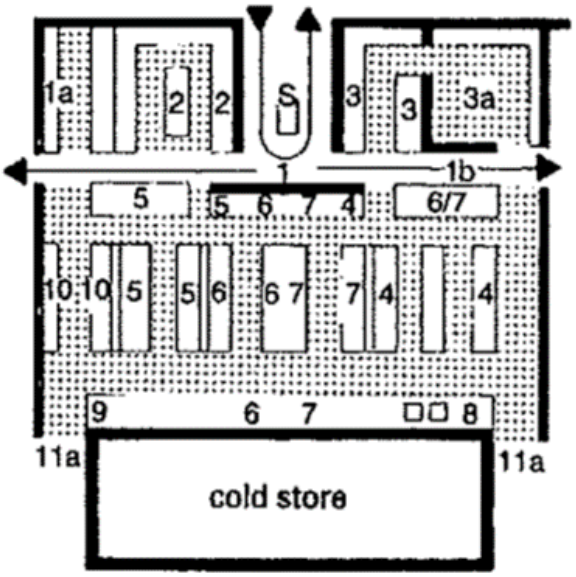
Alcohol-free drinks, except bottled premium beer, liqueurs etc., patisserie and light food-cold and hot.

Tea room:

Alcohol-free drinks, patisserie, sandwiches. Capacity approx. 150 seats, continuous operation 6.30 - 24.00. Kitchen: predominantly pre-prepared items, little storage.

Large hotel restaurant kitchen-

Also, for large catering establishments with side rooms, external deliveries or production for outside companies. Capacity 800-1000 people. Waiters' walkway: in the center with special service in the garden or also bowling alley and direct access to the side rooms. Kitchen: cell system fronted by the backs of the large appliances.

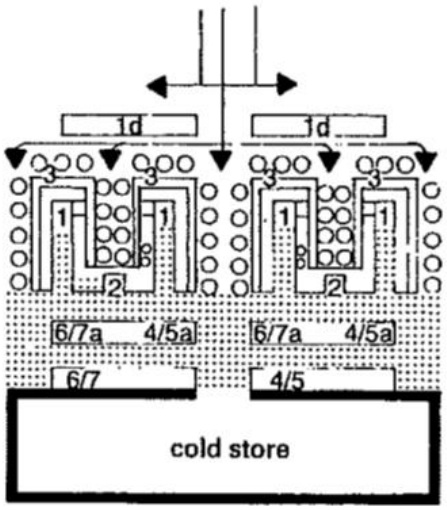


1 waiters' walkway
1a garden service counter
2 dish-washing area
3 drinks counter
3a drinks cellar
4 pastry counter
5 cold dishes
6 hot dishes and sauces
6/7 table with hot store
8 pot and pan washer
9 vegetable preparation
10 meat preparation
11a deliveries, and access to stores, offices, staff cloakrooms and toilets
S service accessories and tills

3 Large hotel restaurant kitchen

Restaurant with buffet and vending machines-

For fast midday meals in canteens, department stores and motorway services. Capacity 500 people/h. Kitchen: only warming of preprepared foodstuffs, except for salads and soups.

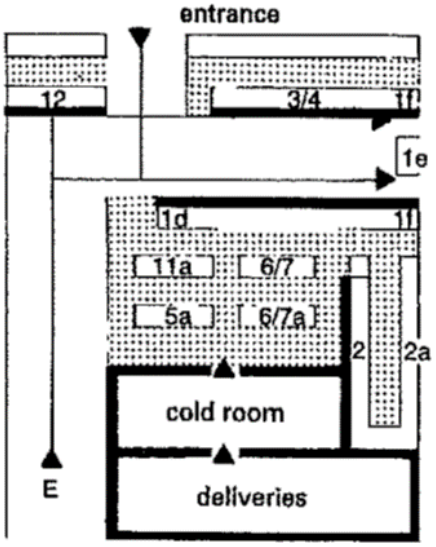


1 serving aisles in U-shaped counters
1d vending machines
2 link between two counters with covered dishwashers, operated from both sides, each with two rinsing basins
4/5 cold meal preparation
4/5a cold servery (salads, ices, desserts)
6/7 griddle, soup heater, water boiler etc.
6/7a hot servery (bain-marie, hotplates)

4 Restaurant with buffet and vending machines

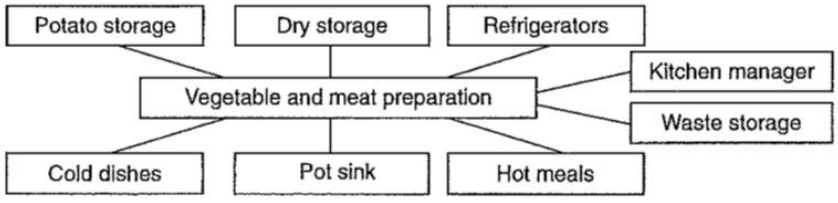
Self-service restaurant-

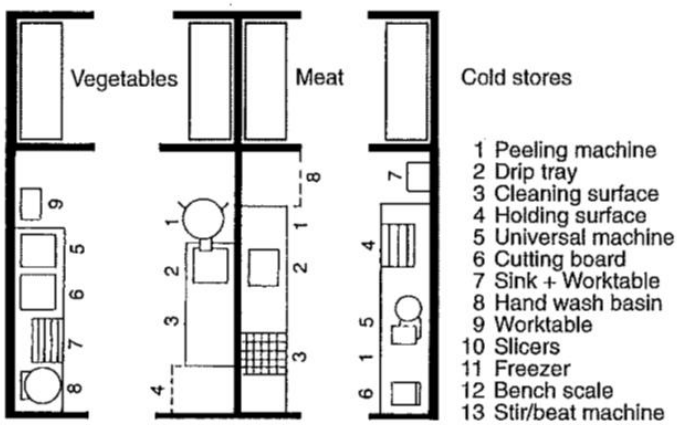
Suitable for department stores or attached to offices. Kitchen: no in-house production. Outside delivery and preparation using deep frozen process.



1d	self-service buffet with grill and chip fryer
1e	sauces, condiments, cutlery
1f	cash till
2	dishwasher
2a	crockery returns
3/4	food and drinks servery (service to street possible)
5a	cold meal preparation table
6/7	heating units, used from both sides
6/7a	hot meal preparation table
11a	refrigerators, used from both sides
12	sales kiosk (serving inside and to street)
E	entrance

5 Self-service restaurant





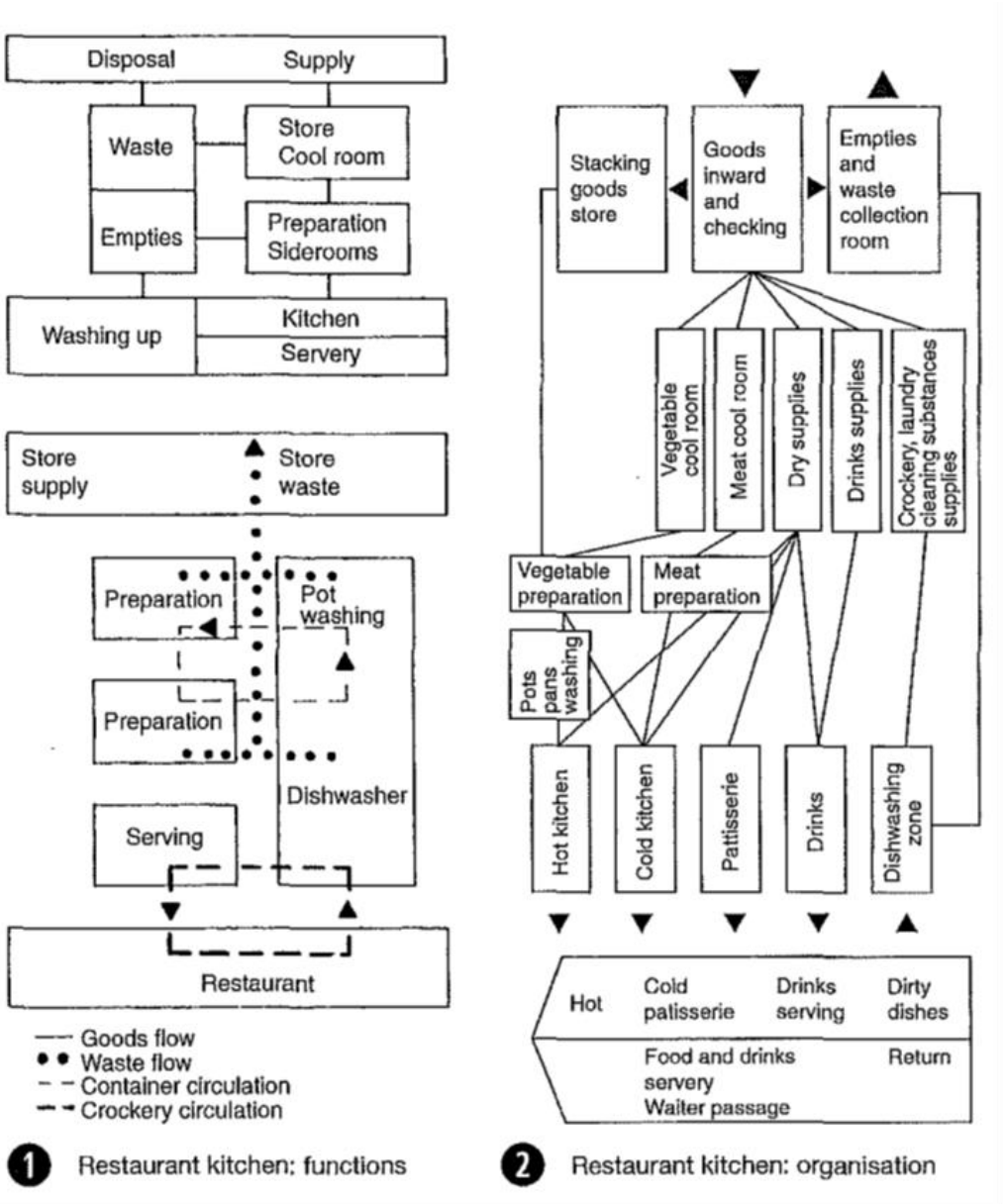
1 Peeling machine
2 Drip tray
3 Cleaning surface
4 Holding surface
5 Universal machine
6 Cutting board
7 Sink + Worktable
8 Hand wash basin
9 Worktable
10 Slicers
11 Freezer
12 Bench scale
13 Stir/beat machine

6 Separate preparation of vegetables and meat

Function and organization of the restaurant kitchen-

The capacity of the kitchen is primarily dependent on the number of customer seats, customer expectations (type, extent and quality of the meals offered), the proportion of products freshly prepared from raw (in contrast to ready-prepared food) and the rate of customer turnover all day or at mealtimes (consumer frequency).

In fast food restaurants the rule of thumb for seat changes is about 1-3 times per hour, in conventional restaurants about 2. In specialty and evening-based restaurants, the guests stay on average for 1.3-2 hours.



Percentage of total kitchen space requirement-

Differentiated according to small, medium and large kitchens, floor area values for individual functions are be based on.

Aisle widths in storage, preparation and production areas differ according to whether they are purely traffic routes or also overlap the service area. Working aisle widths should be 0.90-1.20 m, side traffic routes with (temporary) overlapping use 1.50-1.80 m and main traffic routes (transport and two-way through traffic) 2.10-3.30 m wide. For kitchen areas in small to medium restaurants, aisle widths of 1.00-1.50 m should be sufficient.

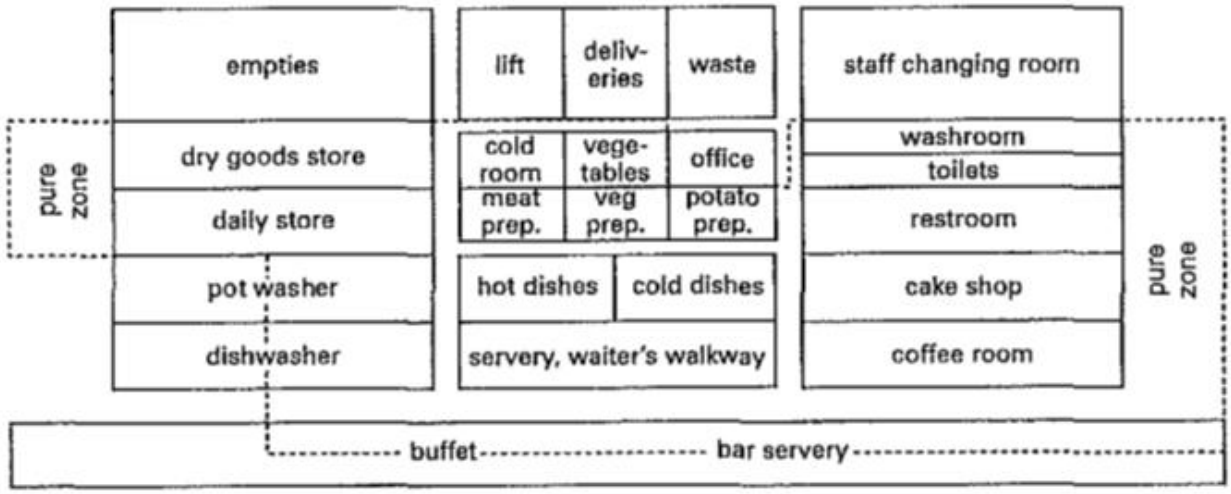
Bistros, snack bars, small cafes - or specialty restaurants with 40-60 seats- are classified as small operations. Small to medium units (70-1 00 places) require on the other hand carefully zoned and fully equipped kitchen facilities. Large businesses (service areas, fast food restaurants, large hotel kitchens) achieve considerably higher place numbers, often with an integrated eating bar or self service areas.

Seats	80	120	200
goods inward	0.05–0.075	0.05–0.067	0.05–0.06
empties	0.05–0.075	0.05–0.067	0.05–0.06
waste/rubbish	0.05–0.075	0.03–0.050	0.03–0.04
delivery/disposal	0.15–0.225	0.13–0.183	0.13–0.16
cold room meat	0.05–0.075	0.05–0.067	0.04–0.05
cold room fruit and vegetables	0.05–0.075	0.05–0.067	0.04–0.05
cold room dairy products	fridge	0.03–0.05	0.03–0.05
cold room cold service	fridge	fridge	0.02–0.03
cool room drinks	fridge	fridge	0.05–0.07
freezer room	0.05–0.075	0.05–0.067	0.06–0.08
cooled goods delivery	0.15–0.225	0.183–0.25	0.24–0.32
store dry goods	0.15–0.175	0.117–0.13	0.09–0.1
store drinks	0.075–0.1	0.1–0.117	0.08–0.1
store non-food	0.075–0.1	0.067–0.083	0.07–0.08
cooled goods storage	0.3–0.375	0.283–0.33	0.24–0.28
vegetable preparation	0.075–0.1	0.067–0.083	0.04–0.05
meat preparation	0.075–0.1	0.05–0.067	0.04–0.05
fish/poultry preparation	0	0.03–0.05	0.03–0.04
hot kitchen	0.325–0.35	0.217–0.23	0.16–0.18
cold kitchen	0	0.05–0.067	0.04–0.05
patisserie	0	0	0.04–0.05
pot washing	0.05–0.075	0.05–0.067	0.03–0.04
office kitchen manager	0	0	0.03–0.04
kitchen facilities	0.525–0.625	0.47–0.567	0.41–0.5
dishwasher	0.1–0.125	0.1–0.117	0.09–0.1
service/waiter office	0.075–0.1	0.083–0.1	0.07–0.08
dishwasher/office	0.175–0.225	0.183–0.217	0.16–0.18
= Total	1.3–1.675	1.25–1.55	1.18–1.44

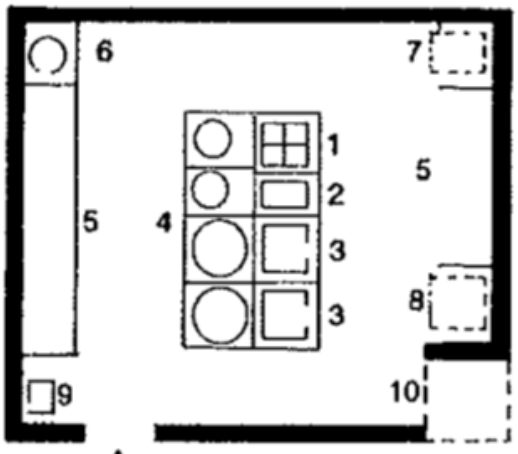
3 Kitchen areas: space required (m^2/seat)

Area	Proportion (%)
goods delivery including inspection and waste storage	10
storage in freezer, cold and dry rooms	20
daily store	
vegetable and salad preparation area	2
cold dishes, desserts	8
patisseries/cakes	8
meat preparation	2
cooking area	8
washing area	10
traffic area	17
staff rooms and office	15
Total	100

4 Basis for dimensions and space requirements

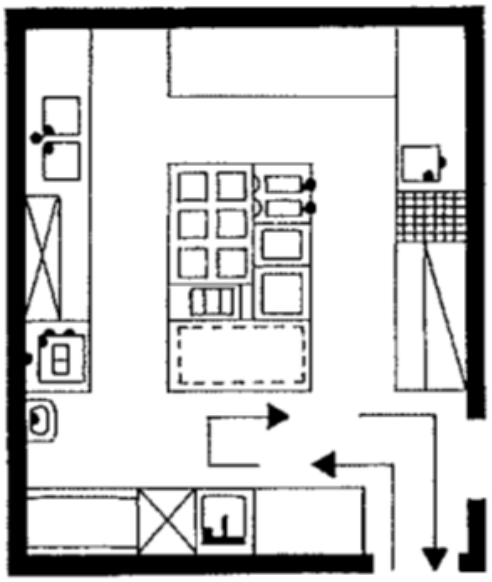


5 Kitchen areas: classification and relationships of functional areas in clean and unclean zones (if earth-covered vegetables are prepared, this must take place in a separate part of the unclean area!)



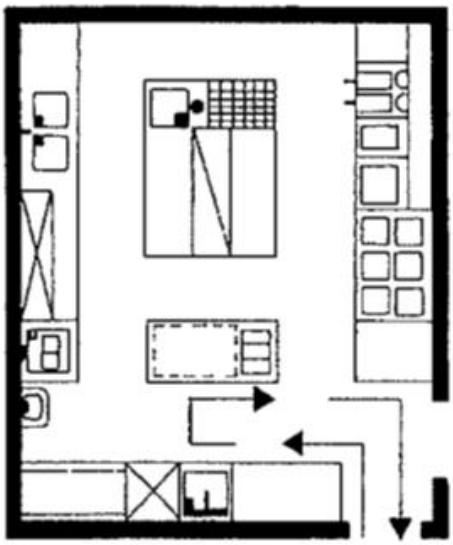
1 cooker
2 deep fat fryer
3 griddle
4 water boiler
5 work surface
6 cooker
7 double-deck oven
8 convectomat
9 hand basin
10 storage area

1 Basic organisation of the hot kitchen → **2** –**3**



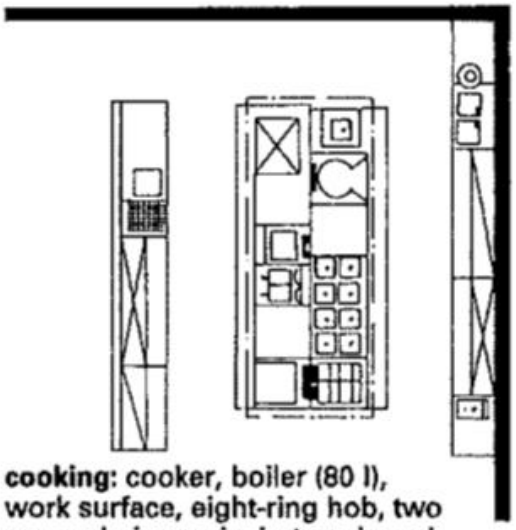
1. production in block

2 Kitchen for restaurant with 60–100 places



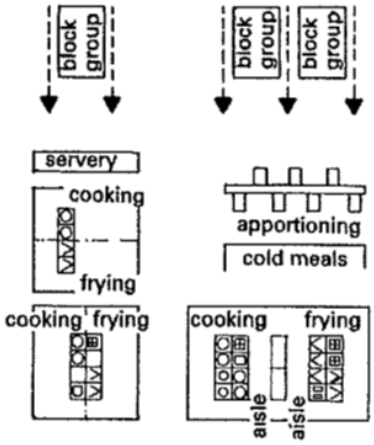
2. production in line

3 Kitchen for restaurant with 60–100 places

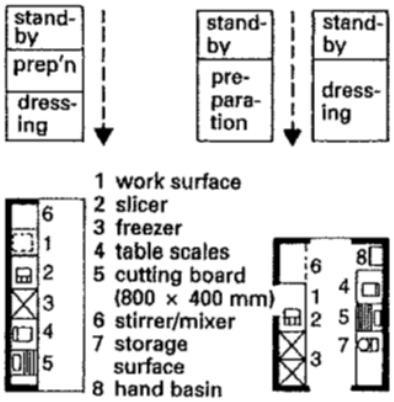


cooking: cooker, boiler (80 l), work surface, eight-ring hob, two ovens, bain-marie, hot cupboard
frying: griddle, work surface, twin deep fat fryer, frying pan, hot-air oven with table

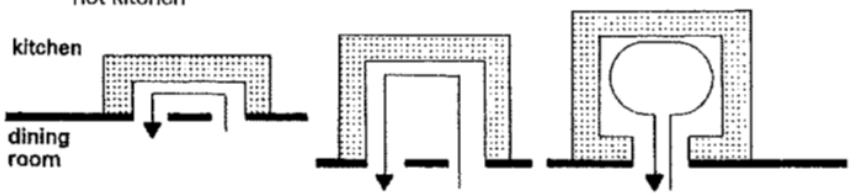
4 Restaurant kitchen for 150–200 meals



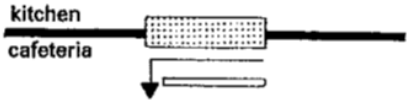
5 Functions and organisation of hot kitchen



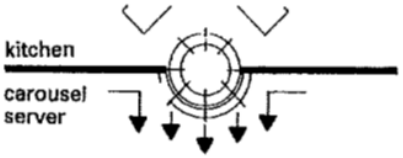
6 Organisation of cold kitchen



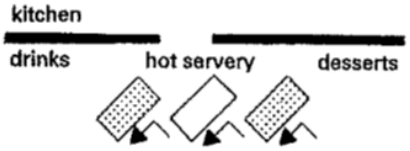
7 Servery, waiter walkway



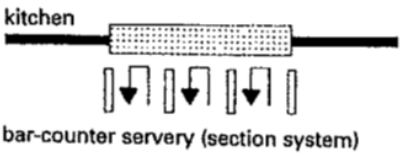
8 Self-service restaurant



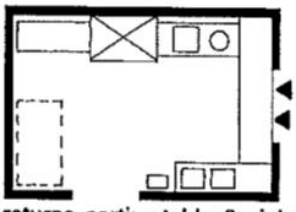
9 Self-service restaurant



10 Free-flow restaurant

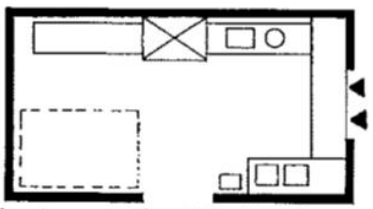


11 Self-service restaurant



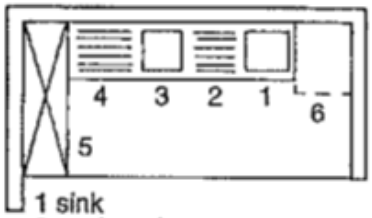
1: returns, sorting table; 2: sink; 3: waste clearance; 4: pre-wash; 5: dishwasher; 6: discharge table; 7: crockery area

12 Basic solution: dishwashing area



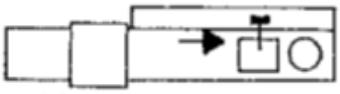
1: returns, sorting table; 2: sink; 3: waste clearance; 4: pre-wash; 5: dishwasher 6: discharge table; 7: crockery area

13 Basic solution: dishwashing area

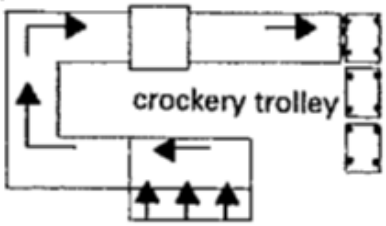


1 sink
2 work surface
3 automatic rinsing
4 automatic rinsing system (Serene)
5 shelf
6 holding area

14 Basic solution: pot washing area

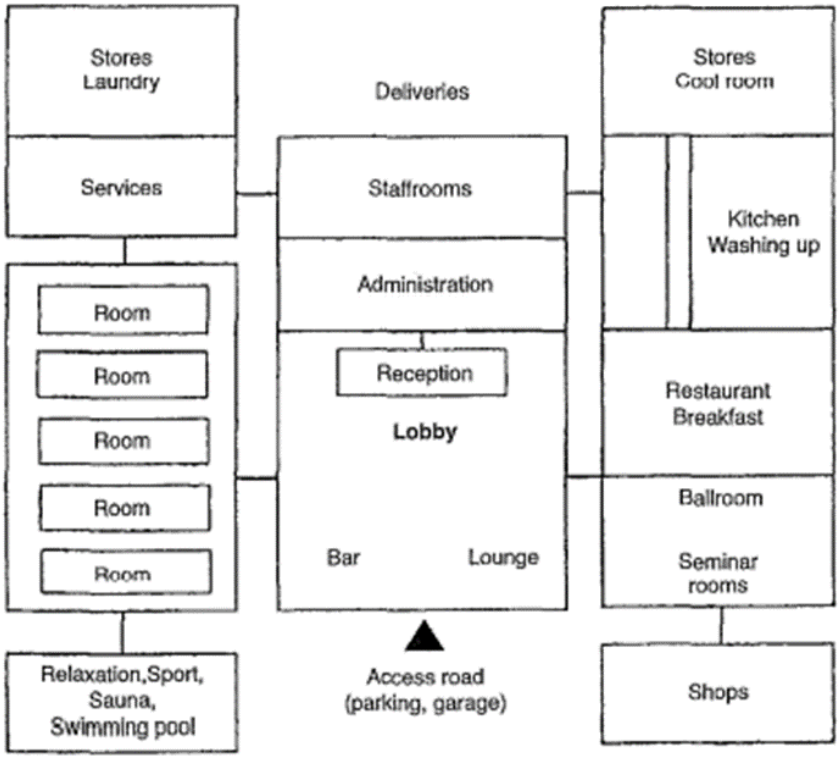


sink, mixer taps with spray hose and swivelling nozzle; waste food cleared through hole in work surface into bin below; splashproof wall



15 Functions and components of the dishwashing area

A scheme of the basic room and route relationships within a hotel is shown below



2 Room and access scheme of a hotel

The percentages of hotels' surface areas required for the various functions are shown below

1.	guest rooms, bathrooms, corridors, room service	50–60%
2.	public areas, lobby, reception etc.	4–7%
3.	catering	4–8%
4.	events, ballroom, seminar rooms	4–12%
5.	wellness/ fitness area	5–10%
6.	other areas, cosmetics, hairdresser	1–2%
7.	management, administration	1–2%
8.	service area, kitchen, staff rooms, stores	9–14%
9.	building services	5–10%

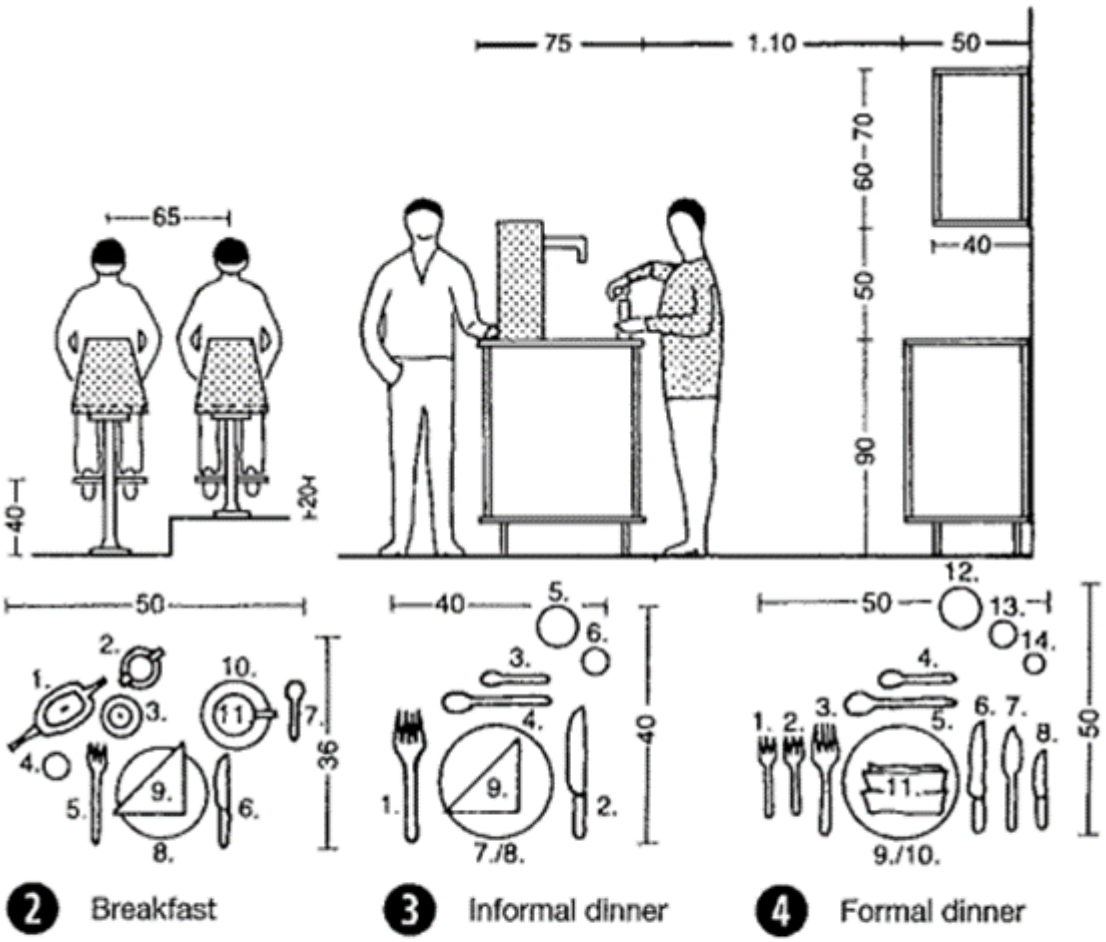
Parking and garage areas and special areas (e.g. wellness and bathing area) are also to be taken into account (and can vary widely according to the range of services)

	Hotel type	m^2/room
1.	luxury	90–110
2.	first class	60–70
3.	comfort	50–60
4.	standard (holiday hotel, motel)	40–60
5.	tourist (low-budget)	15–20

4 Guideline values for (above) shares of hotel surface area taken by each function and (below) gross areas per room in various categories of hotel

5 Stars (Luxury): as before, but single room 18m2 , double room 26m2, (minimum size, see above), 2% of the hotel rooms as suites (at least two), each with an armchair/sofa per bed, additional washbasin in double rooms and suites, additional colour television in suites, reception lobby.

To be able to eat in comfort, one person requires a table area around 60 em wide and 30-40 cm deepThis provides sufficient distance between adjacent diners. Although an additional 20 cm space in the centre for dishes and large bowls is sometimes desirable, an overall width of 80-85 cm is suitable for a dining table. If the food is served on plates, then 70 cm is sufficient, and for fast food 60 cm table depth.

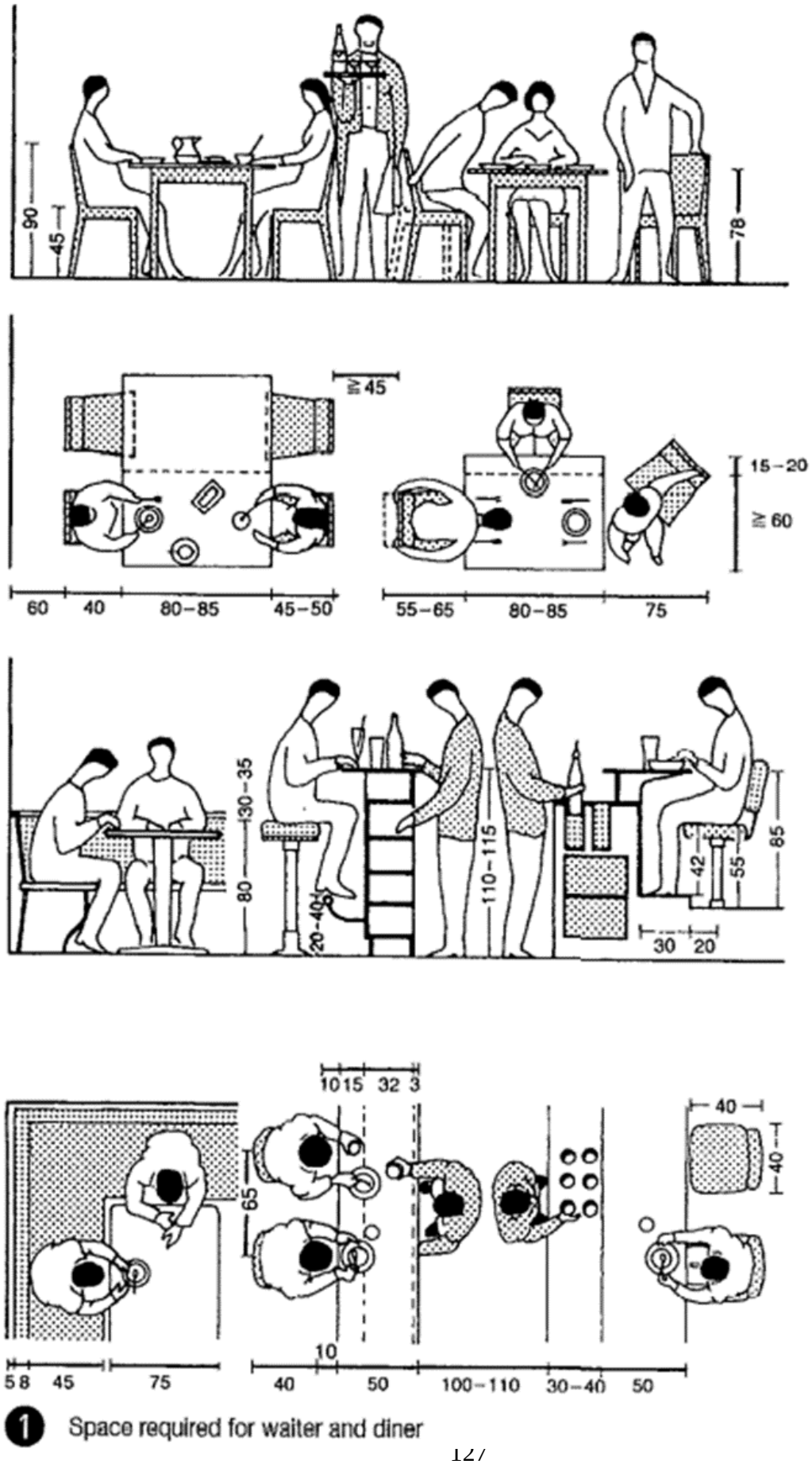


❷ Breakfast setting: 1 tea or coffee pot; 2 milk jug; 3 jam or butter bowl; 4 sugar bowl; 5 dessert fork; 6 dessert knife; 7 coffee or tea spoon; 8 dessert plate; 9 napkin; 10 saucer; 11 coffee cup

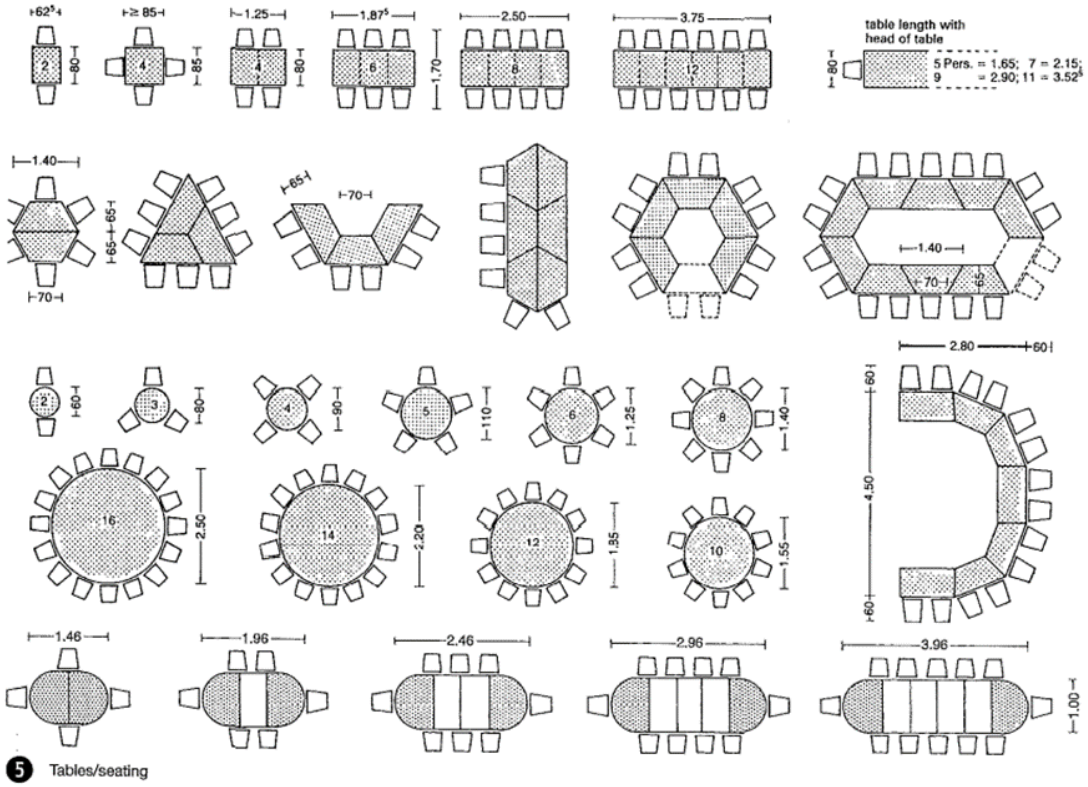
❸ Informal dinner setting: 1 fork; 2 knife; 3 soup or dessert spoon; 4 spoon; 5 beer glass, 6 wine or dessert wine glass; 7 soup bowl; 8 dinner plate; 9 napkin

❹ Formal dinner setting: 1 dessert fork; 2 fish fork; 3 fork, 4 soup or dessert spoon; 5 spoon; 6 knife; 7 fish knife; 8 dessert knife; 9 soup bowl; 10 dinner plate, 11 napkin; 12 beer glass; 13 red or white wine glass; 14 liqueur or dessert wine glass

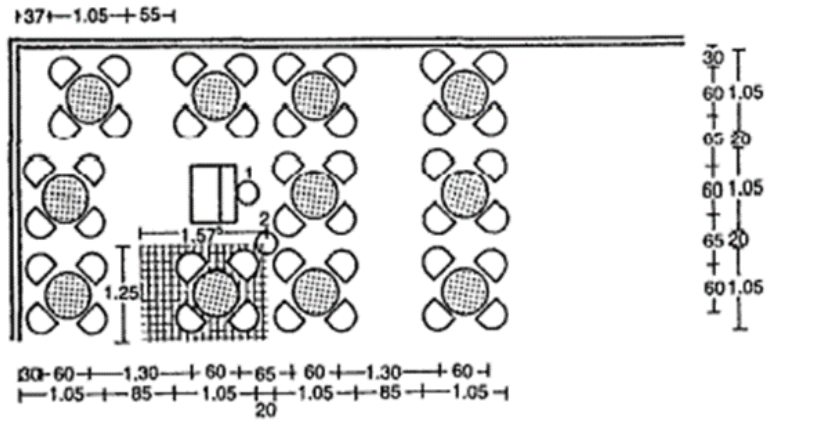
Distance between table and wall greater than equal to 75 cm because the chair alone requires a space of 50 cm. If the space between table and wall is also used for access, the distance should be greater than 100cm. Round tables need a little more space, a difference of up to 50 cm.



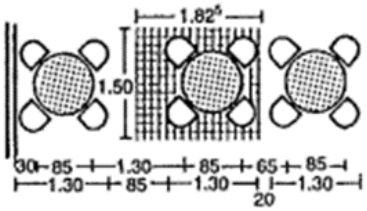
1 Space required for waiter and diner



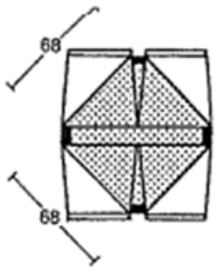
5 Tables/seating



5 Closest table spacing

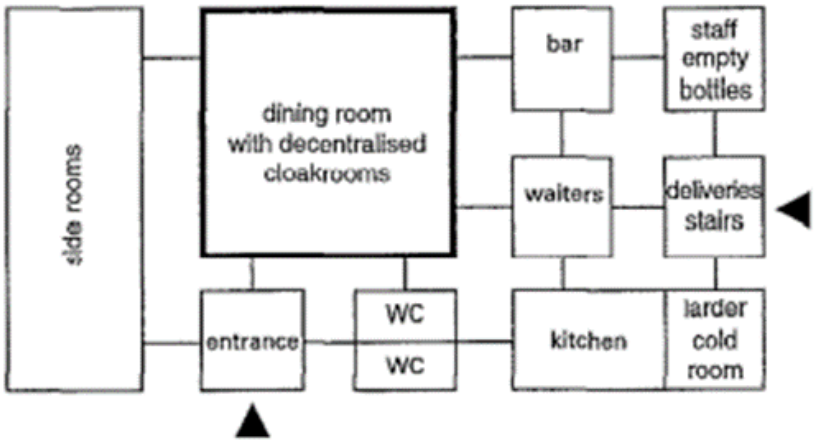


6 Tables in a café



7 Zuntz table

Larger dining rooms should be split into zones. Kitchen, side rooms, toilets and sanitary installations should be grouped around the dining room, also in the basement.

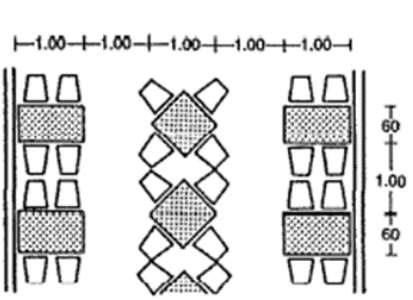


8 Functional scheme of a small restaurant

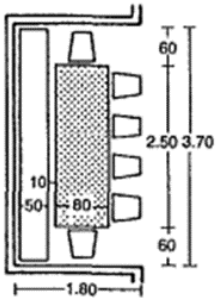
Type	Seat occupancy per meal	Kitchen floor area (m^2/cover)	Dining room floor area (m^2/seat)
exclusive restaurant	1	0.7	1.8–2.0
restaurant with rapid turnover, e.g. department store	2.5	0.5–0.6	1.4–1.6
standard restaurant	1.5	0.4–0.5	1.6–1.8
inn, guest house	1	0.3–0.4	1.6–1.8
for storerooms, personnel rooms etc., add approx. 60%			
cover = seat × seat turnover.			

11 Space requirements

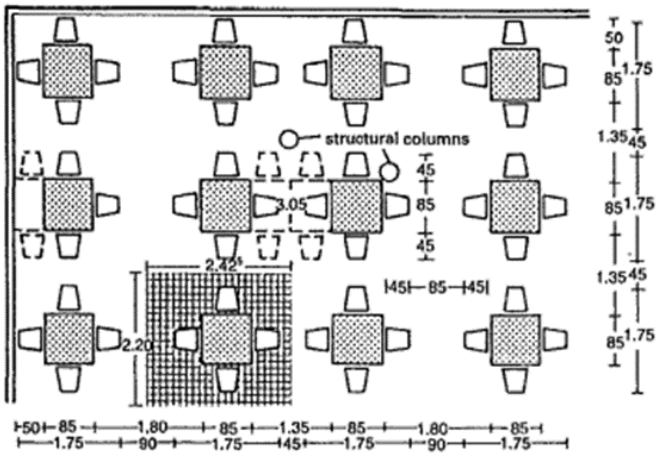
Columns in a dining room are best located in the centre of a group of tables or at the corners of the tables. The ceiling heights of dining areas with a floor area less than equal to 50 m2 = 2.50 m, > 50 m2 = 2.75 m and >100m2 greater than equal to 3.00 m; above or below galleries greater than equal to 2.50 m.



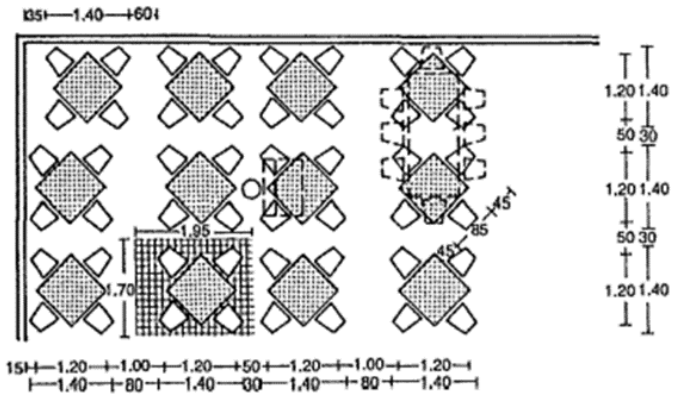
1 Closest seating layout



2 In an alcove



3 Parallel arrangement of tables



4 Diagonal arrangement of tables

Emergency exits 1.0 m wide per 150 people using them. Minimum clear width of aisles in restaurants 0.80 m, doors 0.90 m.

Floor area of dining room	Usable walking width
≤100 m²	≥1.10 m
≤250 m²	≥1.30 m
≤500 m²	≥1.65 m
≤1000 m²	≥1.80 m
>1000 m²	≥2.10 m

9 Usable width of stairs

Toilets in public houses, bars or restaurants: Stairs to toilets, wash, staff and storage rooms, usable width less than equal to 1.1 0 m. Clear walkthrough height less than equal to 2.10 m measured vertically. Window area less than equal to 1/10 of the floor area of a restaurant.

Dining places	WCs, gents	WCs, ladies	Urinals, no.	Channel (m)
≤50	1	1	2	2
≤50–200	2	2	4	3
= 200–400	3	4	6	4
≥400	– decision for each case –			

10 Toilet facilities

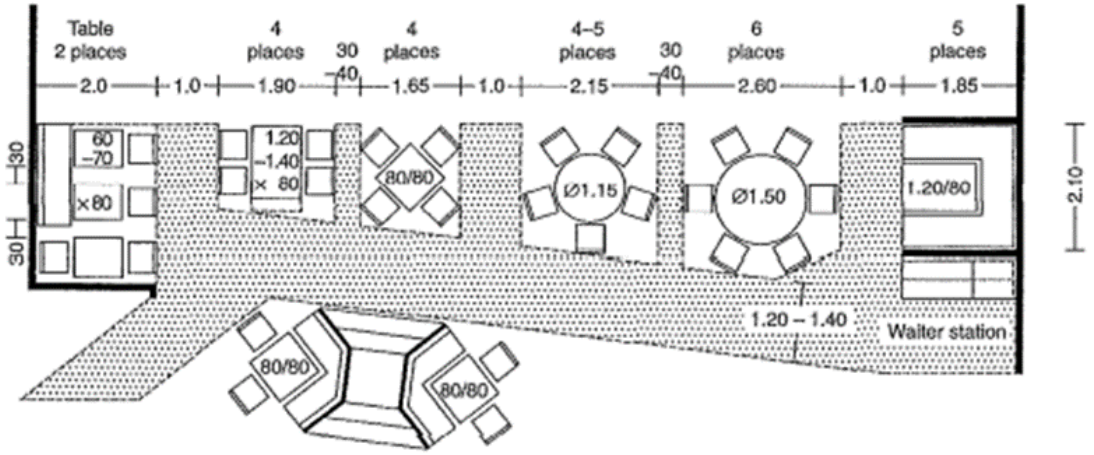
Furnishing (tables)	No. places	Waiter (m²/place)	Self-service (m²/place)
square	4	1.25	1.25
rectangular	4	1.10	1.25
rectangular	6	1.00	1.05
rectangular	8	1.10	1.10

12 Total space required for dining room: 1.4–1.6 m²/place

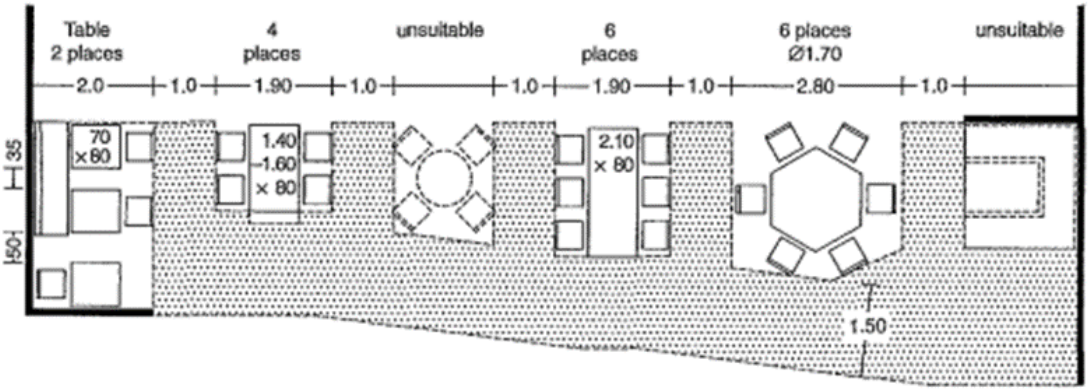
main aisles	min. 2.00 m wide
intermediate aisles	min. 0.90 m wide
side aisles	min. 1.20 m wide

13 Aisle widths

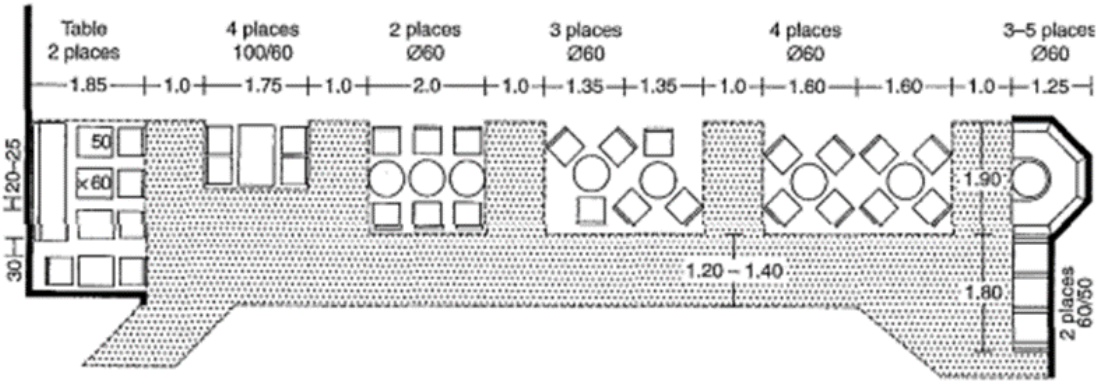
Diagonal arrangement of the tables generally takes up less space than an aligned pattern, with a space saving of up to 35%.



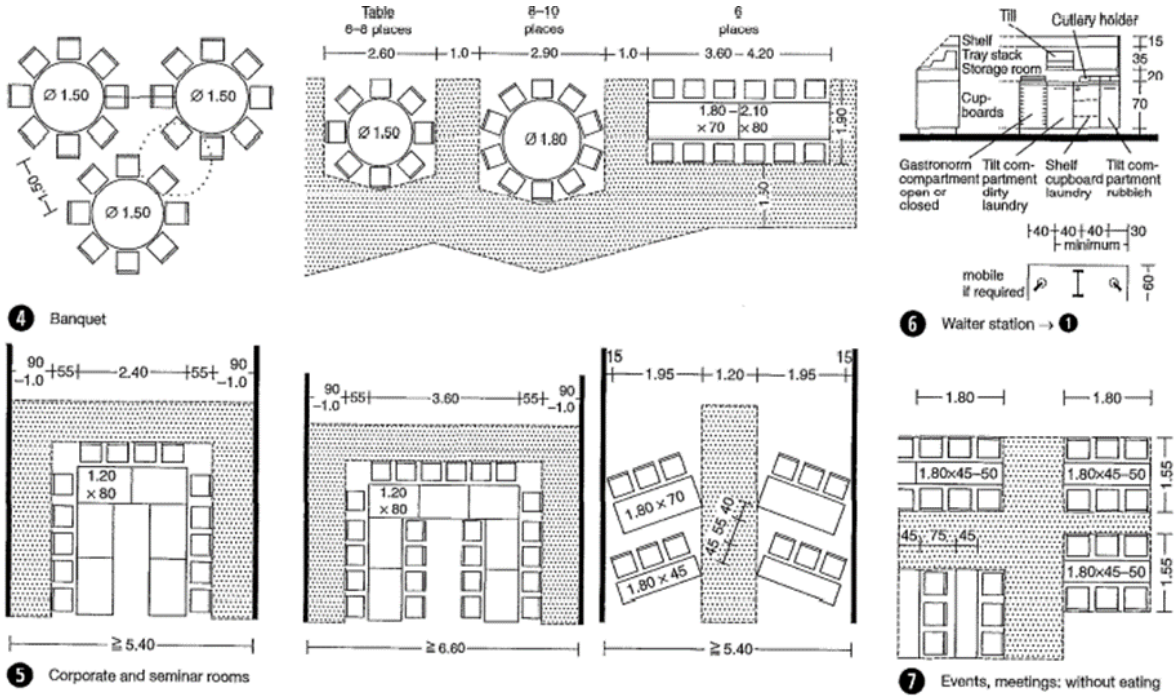
1 Table sizes in a restaurant: with predominantly plate service the table depth can be reduced to 70 cm



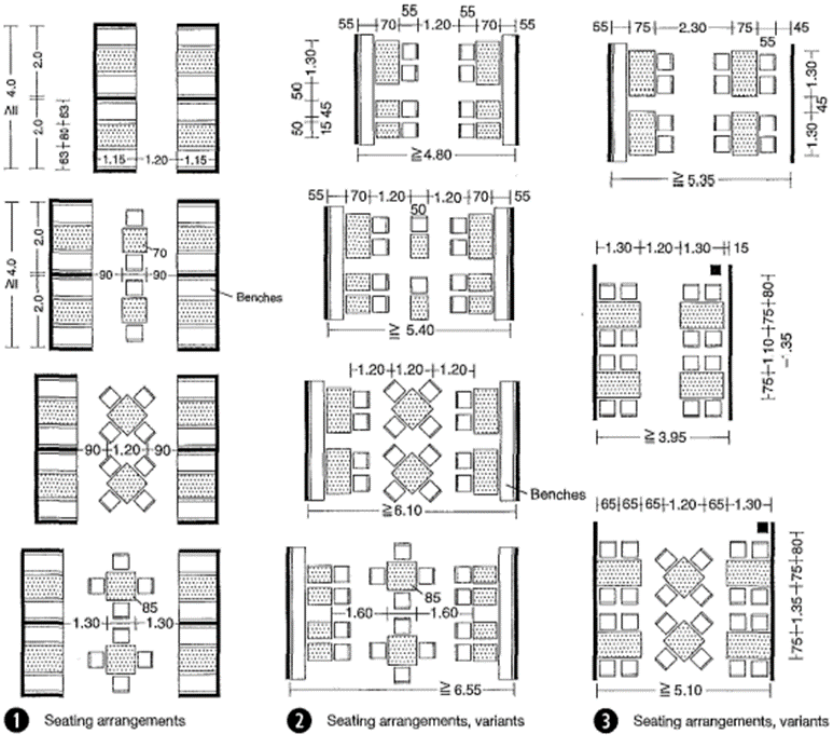
2 In a self-service restaurant



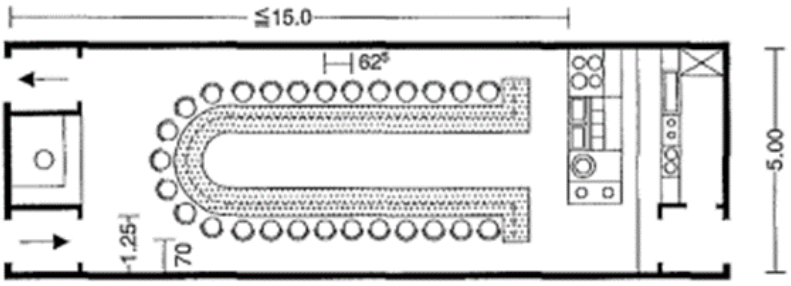
3 Bistro–café–bar



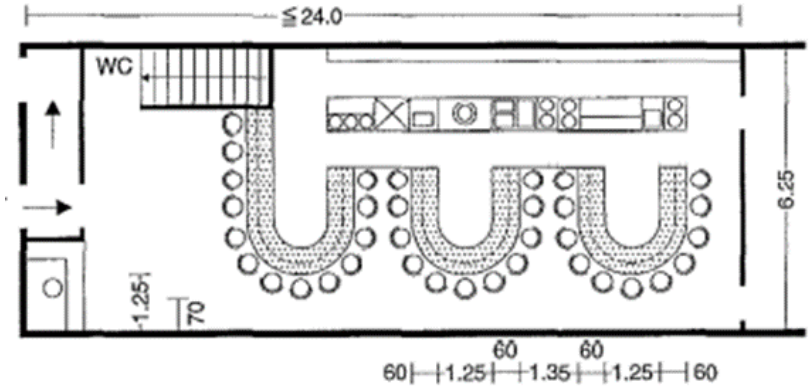
Tables and chairs are kept as small as possible and tightly grouped.



The customer space, 1.50-2.15 m2 per person, features groups of seats and the longest possible bar at which to eat.

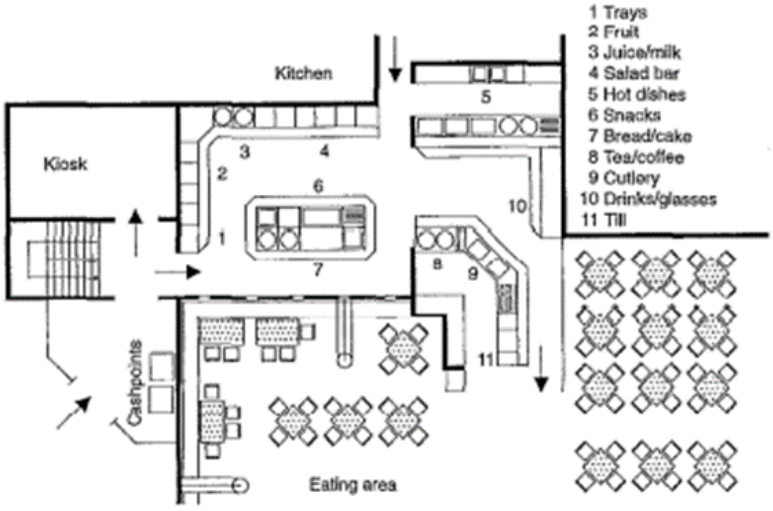


5 Space required for a horseshoe-shaped bar for eating



6 Space required for a horseshoe-shaped bar for eating, variant

a built-in kiosk will be able to serve food on the pavement as well as indoors



7 Example of a fast food restaurant, self-service

2.1. NATIONAL BUILDING CODES

MEANS OF ACCESS:

Other Buildings For all assembly buildings like, Hotels, theatres, cinema houses, assembly halls, stadia; educational buildings; markets, hospitals; industrial buildings, and other buildings which attract large crowds, the means of access shall not be less than -

Sl No.	*Width of Means of Access* m	*Length of Means of Access* m
i)	12.0	200
ii)	15.0	400
iii)	18.0	600
iv)	24.0	above 600

Minimum Setbacks:

Setbacks based on Plot Sizes The following table may be referred to for deciding the minimum setbacks for different-size plots in various use zones. The size of plots should be decided after taking into account the provisions of the National Housing Policy and Urban Land (Ceiling and Regulation) Act. The setbacks, if necessary, may be changed depending upon the local situations and specified in the Development Plans and Building bye-laws:

Setbacks with respect to Abutting Road Width

Sl No. (1)	*Front Open Space, Min m* (2)	*Width of Street Fronting the Plot m* (3)
i)	1.5[1)]	Up to 7.5[1)]
ii)	3.0	7.5 to 18
iii)	4.5	18 to 30
iv)	6.0	Above 30

[1)] For buildings up to a maximum height 7 m.

NOTE – In case a building abuts two or more streets, the value of open spaces is to be based on the average width of streets, subject to a minimum of 1.8 m for Sl No. (ii), (iii) and (iv).

A. Front Setback

Note: For streets less than 7.5 m in width, the distance of the building (building line) shall be at

At least 5m from the center line of the street.

B. Rear and Side setback for building heights above.

The open areas provided in the buildings can be used for the following permissible activities:

a. Garden, rockery, water well and well structures, plant nursery, water pool, swimming pool (if uncovered), platform around a tree, landscaping, tank, fountain, bench, chabutra with open top and unenclosed on sides by walls and the like.
b. Drainage culvert, conduit, catch pit, gully pit, chamber, gutter and the like.
c. Compound wall, gate, un-storied porch and portico, canopy, slide, swing, uncovered staircase, ramps areas covered by chajja and the like.
d. Watchmen's booth, suction tank and pump-house, garbage shaft, sanitary block, parking lock up garages, electric cabin or substations and such other utility structures meant for the services of the building under consideration.

Table 4 Side and Rear Open Spaces for Different Heights of Buildings

(*Clause* 8.2.3.1)

Sl No. (1)	Height of Building m (2)	Side and Rear Open Spaces to be Left Around Building m (3)
i)	10	3
ii)	15	5
iii)	18	6
iv)	21	7
v)	24	8
vi)	27	9
vii)	30	10
viii)	35	11
ix)	40	12
x)	45	13
xi)	50	14
xii)	55	16
xiii)	70	17
xiv)	120	18
xv)	Above 120	20

NOTES

1 For buildings above 24 m in height, there shall be a minimum front open space of 6 m.

2 Where rooms do not derive light and ventilation from the exterior open space, the width of such exterior open space as given in col 3 may be reduced by 1 m subject to a minimum of 3 m and a maximum of 8 m. No further projections shall be permitted.

3 If the length or depth of the building exceeds 40 m, add to col (3) ten percent of length or depth of building minus 4.0 m subject to maximum requirement of 20 m.

For high-rise buildings and buildings other than residential, the following additional provisions shall be ensured:

a) The width of the abutting main street shall not be less than 12 m and one end of this street shall join another street not less than 12 m in width.
b) The approach to the building and open spaces on all sides up to 6 m width and the layout shall be done in consultation with the Chief Fire Officer of the city.
c) The main entrance to the plot shall be of minimum 6 m width to allow easy access to the fire engine.

Ventilation shaft

For ventilating the spaces for water-closets and bath rooms, if not opening on to front, side, rear or interior open spaces is given below:

Sl No.	Height of Building	Size of Ventilation Shaft	Minimum One Dimension of the Shaft
	m	m^2	m
(1)	(2)	(3)	(4)
i)	Up to 10	1.2	0.9
ii)	12	2.8	1.2
iii)	18	4.0	1.5
iv)	24	5.4	1.8
v)	30	8.0	2.4
vi)	Above 30	9.0	3.0

NOTES

1 For buildings of height above 30 m, a mechanical ventilation system shall be installed besides the provision of minimum ventilation shaft.

2 For fully air conditioned residential/business buildings, the ventilation shaft need not be insisted upon, provided the air conditioning system works in an uninterrupted manner, also, provided there is an alternative source of power supply.

Accessory building

The following accessory buildings may be permitted in the open spaces:

a) In an existing building, a sanitary block of 2.4 m in height subject to a maximum of 4 m2 in the rear open space at a distance of 1.5 m from the rear boundary may be permitted, where facilities are not adequate.

b) Parking lock-up garages not exceeding 2.4 min height shall be permitted in the side or rear open spaces at a distance of 7.5 m from any road line or the front boundary of the plot.

c) Suction tank and pump room each up to 2.5 m2 in are

GROUND COVERAGE & FAR

S.No.	Hierarchy of Commercial Centre	Maximum Ground Coverage	(%)	Maximum FAR		Maximum Height	(m)	Other Controls
		Plains	Hills	Plains	Hills	Plains	Hills	
1.	Cluster Centre Convenience Shopping	40	40	60	60	15	6	
2.	Neighbourhood Centre	30	35	100	100	15	9	
3.	Community Centre	25	30	100	100	26	15	
5.	Sub city centre	--	--	--	--	--	--	Controls to be as per requirement
6.	City Centre	25 (MPD, pg 59)	--	150 (MPD, pg 59)	--	--	--	Other controls to be as per requirement
7.	Hotel	40 (MPD, pg 59)	--	225	--	--	--	Other controls to be as per requirement

WATER SUPPLY

A public protected water supply system aims to supply safe and clean water in adequate quantity, conveniently and as economically as possible. Rising demand of water due to rapid urbanization is putting enormous stress

S. No.	Institutions	Litres per head per day
1	Hospital (including laundry) a. no of beds exceeding 100 b. no. of beds not exceeding 100	a. 450 (per bed) b. 340 (per bed)
2	Hotels	180 (per bed)
3	Hostels	135
4	Restaurants	70 (per seat)

FIRE FIGHTING:

The CPHEEO Manual recommends fire-fighting water demand as a function of population, i.e. water demand for fire-fighting purposes = $100\sqrt{P}$, where P stands for a forecasted population that may be adopted for communities larger than 50,000. It is desirable that one-third of fire-fighting.
The requirements from part of the service storage. The balance requirement may be distributed in several static tanks at strategic points.
These static tanks may be filled from nearby ponds, streams, or canals by water tankers wherever feasible.
The pressure required for fire-fighting would have to be boosted by fire engines.

SOLID WASTE MANAGEMENT

Municipal Solid Waste (MSW) is the trash or garbage that is discarded day to day in human settlements. According to MSW Rules 2000 MSW includes commercial and residential wastes generated in municipal or notified areas in either solid or semisolid form excluding industrial hazardous wastes but including treated bio-medical wastes. Waste generation encompasses activities in which materials are identified as no longer being of value (being in the present form) and are either thrown away or gathered together for disposal. The following table indicates the waste generation per capita per day for estimation and forecast of waste generation for the future for planning purposes:

S.No.	Land use type	Estimated waste generation
1	Residential refuse	0.3 to 0.6 kg/cap/day
2	Commercial refuse	0.1 to 0.2 kg/cap/day
3	Street sweepings	0.05 to 0.2 kg/cap/day
4	Institutional refuse	0.05 to 0.2 kg/cap/day

FOOTPATHS AND PATHWAYS

Footpaths

Footpath should be normally designed for a pedestrian Level of Service (LOS) B, thereby providing wide pedestrian facilities for safe, pleasant, and comfortable walking. Under resource constraints, LOS C may be adopted for deciding the width of the footpath mentioned in Table 2. The width of footpaths depends upon the expected pedestrian traffic and may be fixed with the help of the following norms subject to not being less than 1.8 m.

The land use adjacent to roads significantly influences the generation of pedestrian traffic. Recommended width of footpath along various land uses are given in

Table 2 Capacity of Footpath and Design
(*Clause* 4.3.2.1.1)

Sl No.	Width of Foothpath	Design Flow in Number of Persons Per Hour			
		In Both Directions		All in One Direction	
	m	LOS B	LOS C	LOS B	LOS C
(1)	(2)	(3)	(4)	(5)	(6)
i)	1.8	1 350	1 890	2 025	2 835
ii)	2.0	1 800	2 520	2 700	3 780
iii)	2.5	2 250	3 150	3 375	4 725
iv)	3.0	2 700	3 780	4 050	5 670
v)	3.5	3 150	4 410	4 725	6 615
vi)	4.0	3 600	5 040	5 400	7 560

Table 3 Required Width of Footpath as per Adjacent Land Use
(*Clause* 4.3.2.1.1)

Sl No.	Description	Width m
(1)	(2)	(3)
i)	Minimum free walkway width and residential/mixed use areas	1.8
ii)	Commercial/Mixed use areas	2.5
iii)	Shopping frontages	3.5 to 4.5
iv)	Bus stops	3
v)	High intensity commercial areas	4

AREA AND HEIGHT LIMITATIONS

General The limitation of area and height of buildings of different occupancy classes and types of construction shall be achieved by specifying it in terms of FAR, which shall take into account the various aspects that govern in specifying FAR as given below:
a) Occupancy class;

b) Types of construction;
c) Width of street fronting the building and the traffic load;
d) Locality where the building is proposed and the density;
e) Parking facilities;
f) Local fire fighting facilities;
g) Water supply, drainage and sanitation facilities.

Restrictions in the Vicinity of Aerodromes

- For buildings in the vicinity of aerodromes, the maximum height of such buildings shall be decided in consultation with the Airports Authority of India who shall be responsible for issuing the no objection certificate. This shall be in accordance with the concerned notification of the Ministry of Civil Aviation, Govt of India.
- For the purpose of 9.5.1, new buildings and structures coming up in the vicinity of an aerodrome shall be subjected to height restrictions in accordance with the subject notification. No building or structure higher than the height specified in the subject notification shall be constructed or erected and no tree which is likely to grow or ordinarily grows higher than the height specified in the subject notification shall be planted on any land within the specified radius from the aerodrome reference point, as given in the notification.

OFF-STREET PARKING SPACES

- Each off-street parking space provided for vehicles shall be as follows: a) For cars, the minimum parking space is to be 3 m × 6 m when individual parking space is required and 2.75 m × 5 m when common parking space is required. b) Space for scooter/two-wheeler and bicycle to be not less than 1.25 m2 and 1.00 m2, respectively. c) Area for each equivalent car space inclusive of the circulation area is 23 m2 for open parking, 28 m2 for ground floor covered parking, and 32 m2 for the basement

- In buildings of mercantile (commercial), industrial and storage type, in addition to the parking spaces provided, a space at the rate of 3.5 m × 7.5 m, shall be provided for loading and unloading activities, for each 1 000 m2 of floor area or fraction thereof.

REQUIREMENTS OF PARTS OF BUILDINGS

for public buildings and sites as accessible and barrier-free for elders and persons with disabilities, shall also be complied with.

Plinth

- Main Buildings The plinth or any part of a building or outhouse shall be so located with respect to the surrounding ground level that adequate drainage of the site is assured. The height of the plinth shall be not less than 450 mm from the surrounding ground level.
- Interior Courtyards and Covered Parking Every interior courtyard shall be raised at least 150 mm above the determining ground level and shall be satisfactorily drained.

Habitable Rooms

- Height The height of all rooms for human habitation shall not be less than 2.75 m measured from the surface of the floor to the lowest point of the ceiling (bottom of slab). In the case of pitched roof, the average height of rooms shall not be less than 2.75 m.
- The minimum clear head room under a beam, folded plates or eaves shall be 2.4 m. In the case of air-conditioned rooms, a height of not less than 2.4 m measured from the surface of the floor to the lowest point of air conditioning duct or the false ceiling shall be provided.

- Size The area of habitable room shall not be less than 9.5 m2 , where there is only one room with minimum width of 2.4 m. Where there are two rooms, one of these shall not be less than 9.5 m2 and the other not less than 7.5 m2 , with a minimum width of 2.1 m.

Kitchen

- Height The height of a kitchen measured from the surface of the floor to the lowest point in the ceiling (bottom slab) shall not be less than 2.75 m, except for the portion to accommodate floor trap of the upper floor.

Bathrooms and Water-Closets

- Height The height of a bathroom or water-closet measured from the surface of the floor to the lowest point in the ceiling (bottom of slab) shall not be less than 2.1 m.
- Size The area of a bathroom shall not be less than 1.8 m2 with a minimum width of 1.2 m. The floor area of the water closet shall be 1.1 m2 with a minimum width of 0.9 m. If bath and water-closet are combined, its floor area shall not be less than 2.8 m2 with a minimum width of 1.2 m.

Staircase/Exit Requirements

The following minimum width shall be provided for staircases for respective occupancies:

a) Residential (A-2) : 1.00 m NOTE — For row housing with 2 storeys, the minimum width shall be 0.75 m. b) Residential (A-1, A-3 and A-4) : 1.25 m

c) Residential hotel (A-5 and A-6) : 1.50 m

d) Assembly : 2.00 m

NOTE - The width of stairs may be accepted to be 1.50 m in case of assembly occupancy having less than 150 persons

e) Educational: 1.50 m f) Institutional: 2.00 m g) All other occupancies: 1.50 m

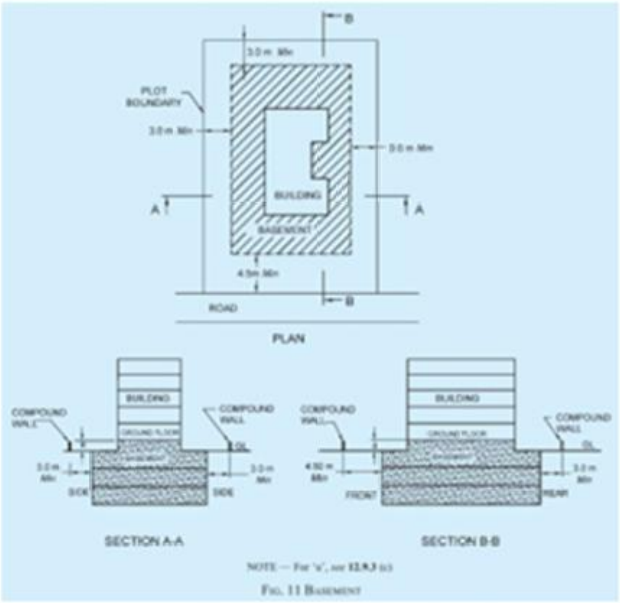


Fig. 11 Basement

REQUIREMENTS FOR ACCESSIBILITY IN BUILT ENVIRONMENT FOR ELDERS AND PERSONS WITH DISABILITIES

These requirements deal with barrier-free access to, movement within and around buildings, by elderly persons and persons with disabilities who may have non-ambulatory disabilities, ambulatory disabilities, sight disabilities, hearing disabilities, disabilities of incoordination, aging, allergies, heart and lung diseases, epilepsy, hemophilia, incontinence, enterostomy, etc

Car Park Entrance and Parking Controls

The car park entrance shall have a height clearance of at least 2 600 mm. If a payment machine is provided, it shall provide all control at a height between 800 mm and 1 000 mm.

Accessible Car Parking Space Dimensions and Surface Requirements The accessible car parking space shall meet the following requirements:

a) The minimum width of the parking space for a car shall be 3 900 mm and the minimum length shall be 5 400 mm. This minimum width includes the transfer area beside the car with a minimum of 1 500 mm.

b) Two accessible parking spaces with one shared transfer area are widely used and shall have a minimum width of 6 300 mm (see Fig. 38).

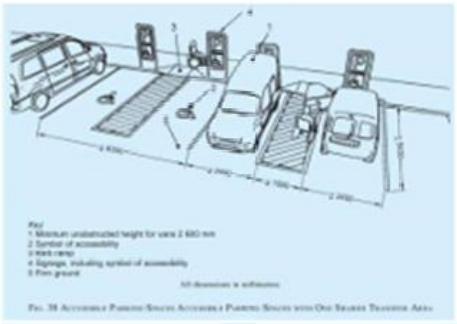
c) The designated accessible parking spaces shall be located on a gradient not greater than 1:50, throughout its length and its width.

d) The accessible route of 1 200 mm width shall be provided for wheelchair users to pass behind vehicles that may be backing out (see Fig. 39).

e) Parking space along the footpath/sidewalk -For roadside parking of an accessible van, the minimum dimensions shall be 9 000 mm × 2 400 mm with a kerb to access the nearest footpath/sidewalk (see Fig. 40).

f) Van parking with auxiliary movable ramps - The size and design of accessible vehicles may vary as some are fitted with ramps or hoists at the side or at the rear.

Kerb Ramp from Parking Space to an Adjacent Higher Pedestrian Path The kerb ramp should be located in close proximity to the designated accessible parking area connecting the accessible path of travel to the main entrance. The kerb ramp width should be a minimum of 1 000 mm



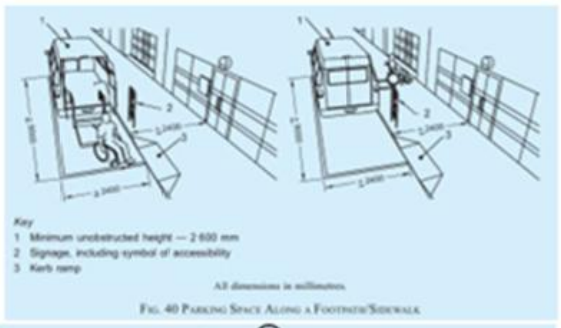


FIG. 40 PARKING SPACE ALONG A FOOTPATH/SIDEWALK



FIG. 39 ACCESSIBLE ROUTE WIDTH FOR WHEELCHAIR USERS TO PASS BEHIND A PARKED VEHICLE

APPROACH TO THE BUILDING

The entry to the building shall be facilitated by the following: a) Space should be provided for passenger drop-off points for taxis, public transport, and also for large vehicles such as vans, etc, as near as possible to the main accessible entrance. Vehicle drop-off areas should be a minimum of 9 000 mm in length, have a minimum width of 3 600 mm, and be served by a kerb ramp

ACCESS AT THE ENTRANCE AND WITHIN THE BUILDING

a) Access to the building entrance shall be in accordance with B-4.

b) A clear, firm, and level landing of at least 1 800 mm × 1 800 mm shall be provided on either side of the entrance door.

c) The width of the accessible entrance door shall not be less than 900 mm and the width of the corridors or passageways leading to and from such access door shall not be less than 1 200 mm.

d) In multi-storey buildings, the accessible entrance shall have an accessible route leading to the lifts.

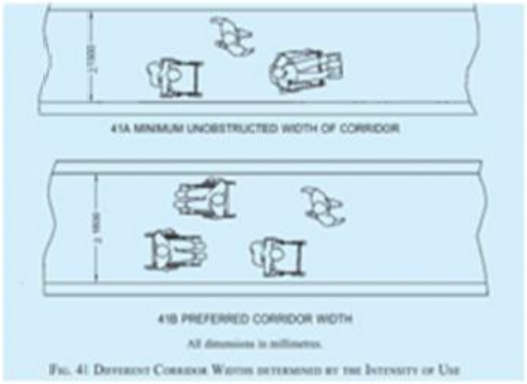


FIG. 41 DIFFERENT CORRIDOR WIDTHS DETERMINED BY THE INTENSITY OF USE

Doors Leading into Corridors

Doors shall not open outwards from rooms directly into a frequently used corridor, with the exception of doors to accessible toilets and service ducts. Where a door opens into an infrequently used corridor such as emergency exit, the corridor width shall allow a clear space of 900 mm within the corridor when the door is open. Such doors shall be located clear of any sloping floor surfaces in the corridor.

Level Changes

Vertical circulation includes the provision of ramps, stairs, and lifts, as well as escalators, moving walks, and lifting platforms.

Ramps

Ramps of an appropriate design shall be provided at all changes in level other than those served by an accessible lift or accessible lifting mechanism accommodating the specific requirements of persons with disabilities.

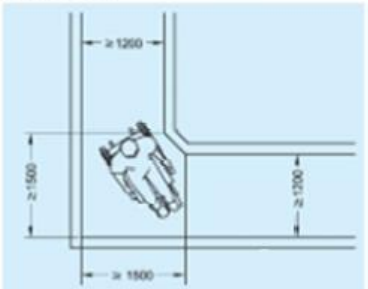


FIG. 42 SPACE REQUIRED FOR 90° TURN

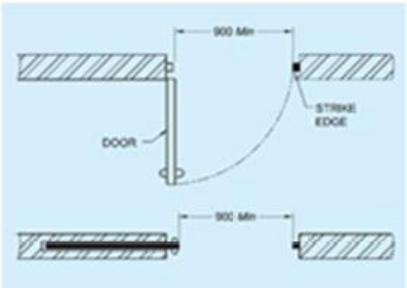


FIG. 43 MINIMUM CLEAR OPENING OF DOORWAYS

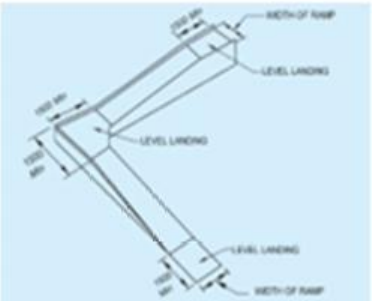


FIG. 56 LANDING DETAILS FOR RAMPS

Table 10 Requirements for Ramp

(*Clause* B-6.2.2)

Sl No.	Level Difference	Maximum Gradient of Ramp	Ramp Width mm	Handrail on Both Sides	Other Requirements
(1)	(2)	(3)	(4)	(5)	(6)
i)	150 mm to 300 mm	1:12	1 200	√	—
ii)	301 mm to 750 mm	1:12	1 500	√	Landings after every 5 m of ramp run
iii)	751 mm to 3 000mm	1:15	1 800	√	Landings after every 9 m of ramp run
iv)	More than 3 000 mm	1:20	1 800	√	Landings after every 9 m of ramp run

2.10 INDIAN STANDARD CODE FOR HOTELS AND RESTAURANTS:

BUILDING

In addition to the recommendations in the code the building in which food service establishment is located shall also conform to the local building byelaws in force. The building should be of a permanent nature and maintained in a proper stateof repair and cleanliness.

FLOORS

The floors of all rooms in which food or drink is stored, prepared or served and of all washing placed shall be of such construction as to be impervious, easily cleansed, smooth and in good repair. All floors shall be kept clean and free from litter. Dustless method of floor cleaning shall be used, ail except emergency floor cleaning shall be done during the period when least amount of food and drink is exposed.

WALLS

The walls shall have a smooth, non-absorbent surface, free from cracks and crevices to facilitate their efficient cleaning.

The walls of all rooms in which food or drink is prepared or utensils are washed shall have a smooth washable surface up to a minimum height of 2-O m from the floor.

CEILING

Ceiling shall be clean, leak-proof and have a smooth non-absorbent surface free from cracks and crevices to facilitate their efficient cleaning. These should be such that they do not harbour vermin.

DOOR AND WINDOWS

In the absence of air-conditioning all openings to the outer air includingdoors, windows, sky lights shall be effectively screened with tight fitting screens free from holes with wire gauge conforming to IS: 1568-

1960*. The doors when not in use shall be kept in closed position. Selfclosingscreened doors to the outer air shall open outwards. Other methods approved by the authority shall be employed to ensure the absence of flies

LIGHTING

TABLE 1 RECOMMENDED VALUES OF ILLUMINATION

The lighting of some of these locations will be determined primarily by aesthetic considerations and the recommended illumination values as given in IS : 3646 (Part II)-1966* may be taken as a guide only.

Sl No.	Areas	Illumination, Lux
(1)	(2)	(3)
i)	Entrance halls	150
ii)	Reception and accounts	300
iii)	Dining rooms (tables)	100
iv)	Lounges	150
v)	Bedrooms:	
	a) General	100
	b) Dressing tables, bed heads, etc	200
vi)	Writing rooms (tables)	300
vii)	Corridors	70
viii)	Stairs	100
ix)	Laundries	200
x)	Kitchens	†200
xi)	Goods and passenger lifts	70
xii)	Clockrooms and toilets	†200
xiii)	Dining rooms:	
	a) Tables	100
	b) Cash desks	300
xiv)	Self service-counters	300

*Code of practice for interior illumination: Part II Schedule for values of illumination and glare index.

†Supplementary local lighting should be provided over kitchen equipment and mirrors.

VENTILATION

In case of ran-air-conditioned buildings the minimum standards of mechanica ventilation shall be maintained as given

TABLE 2 VENTILATION REQUIREMENTS FOR NON-AIRCONDITIONED BUILDINGS

Sl No.	Area	Air Changes per Hour
(1)	(2)	(3)
i)	Living rooms	3
ii)	Dining and lounge	2-3
iii)	Big kitchen	12
iv)	Small kitchen	6
v)	Toilets	6

WATER SUPPLY

There shall be adequate supply of safe and potable water. Running water shall be easily accessible to all rooms in which food is prepared or utensils are washed. Requirements for water supply for hotels and restaurants shall be as given

TABLE 3 WATER SUPPLY REQUIREMENTS FOR HOTELS AND RESTAURANTS

Sl. No.	Description	Non-Airconditioned (Litres per Day)	Air Conditioned (Litres per Day)
(1)	(2)	(3)	(4)
i)	Hotels (per bed)	180	275
ii)	Restaurants (per seat)	70	97

NOTE — In hotels where laundry is provided arrangement for an extra quantity of 120 litres per bed should be made.

Storage of Water-

For the storage of water, proper receptacles made of galvanized iron or other suitable material shall be used. Such receptacles shall he kept covered with tight fitting lids and shall have screw caps at the bottom for draining out residual water. The receptacles shall be placed on a stand or a platform rasily accessible for the purpose of maintenance and cleaning, The receptacles shall be examined and cleaned regularly.

DRAINAGE

Adequate arrangements shall be made for satisfactory drainage of all sewage and waste water. Harmful waste water, such as water containing kitchen waste, &all be saticfactorily disposed of. The drainage shall be so designed as to cause no stagnation at the maximum discharge rate fur which the different units are designed. The requirements for firments for drainage and sanitation shall conform to the requirements given

TABLE 4 REQUIREMENTS OF DRAINAGE AND SANITATION FITMENTS IN HOTELS

(*Clause* 14.1.1)

Sl No.	Fitments	For Residential Public and Staff	For Public Rooms		For Non-Residential Staff	
			For Males	For Females	For Males	For Females
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Water-closets	1 per 8 persons omitting occupants of the room with attached water-closets; minimum of 2 if both sexes are lodged	1 per 100 persons up to 400 persons; and for over 400, add at the rate of 1 per 250 persons or part thereof	2 per 100 persons up to 200 persons; and for over 200, add at the rate of 1 per 100 persons or part thereof	1 for 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons
ii)	Ablution taps	1 in each water-closet	1 in each water-closet	1 in each water-closet	1 in each water-closet	1 in each water-closet
		1 water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of water-closets and urinals				
iii)	Urinals	—	1 per 50 persons or part thereof	—	Nil up to 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons	—
iv)	Wash basins	1 per 10 persons omitting the wash basins installed in the room suite	1 per water-closet and urinal provided	1 per water-closet provided	1 for 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons
v)	Baths	1 per 10 persons omitting occupants of the room with bath *en suite*	—	—	—	—
vi)	Slop sinks	1 per 30 bedrooms, minimum 1 per floor	—	—	—	—
vii)	Kitchen sinks and dish washers	← 1 in each kitchen →				

Note 1 — Some of the water closets may be of European style if desired.

Note 2 — It may be assumed that two-thirds of the number are males and one-third females.

Septic tanks conforming to I**S: 2470 (Part I)- 1963* or IS: 2470 (Part II)**-l964 shall be provided if required by the authority. The gradient of the drains should be such that no water stagnates any where within the premises. Where no sewerage is provided for the final outfall, soak pits or cess pools to the satisfaction of the Authority should be provided.

TABLE 5 REQUIREMENTS OF DRAINAGE AND SANITATION FITMENTS IN RESTAURANTS

(Clause 14.1.1)

Sl. No.	Fitments	For Male Public	For Female Public	For Male Staff	For Female Staff
(1)	(2)	(3)	(4)	(5)	(6)
i)	Water-closets	1 for 50 seats up to 200 seats; and for over 200 seats, add at the rate of 1 per 100 seats or part thereof	1 for 50 seats up to 200 seats; and for over 200 seats, add at the rate of 1 per 100 seats or part thereof	1 for 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons
ii)	Ablution taps	1 in each water-closet	1 in each water-closet	1 in each water-closet	1 in each water-closet
		1 water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of water-closets and urinals.			
iii)	Urinals	1 per 50 seats	—	Nil up to 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons	—
iv)	Wash basins	← 1 for every water-closet provided →			
v)	Kitchen sinks and dish washers	← 1 in each kitchen →			
vi)	Slop or service sinks	← 1 in the restaurant →			

Note 1 — Some of the water closets may be of European style, if desired.

Note 2 — It may be assumed that two-thirds of the number are males and one-third females.

KITCHEN

Kitchen shalt be sufficiently spacious and should be of a size in proportionto the average number of diners catered for at one meal, The floor spice in the kitchen shall be calculated at the rate of0.5 me Min per diner. In case of snack bars, soda fountains, etc, the service-cumdispensing area shall be treated as part of the kitchen.

The minimum size of the kitchen should not be less thnn 10 rnp and none of the sides less than 2.4 meter. Exhaust fans should have provisions of grease filters for collecting grease.

STORAGE AND HANDLING EQUIPMENT

All containers and utensils shall be stored at a height of not less than. 430 mm above the floor in a clean, dry place protected from flies, splash, dust, overhead leakage, and other contamination.

STORAGE OF FOOD STUFF

All perishable food shall be stored at the temperatures as given in

TABLE 6 STORAGE TEMPERATURES FOR FOODSTUFF

Sl No.	Names of Articles	Storage Temperature °C
(1)	(2)	(3)
i)	Meat, meat products, poultry	0·00 to 1·50
ii)	Fresh fish and sea food	−2·00 ,, −0·50
iii)	Dairy products and eggs	0·50 ,, 2·50
iv)	Fresh fruit and vegetables	2·00 ,, 4·50
v)	Ice-creams	−14·50 ,, −12·00

Note 1 — Potatoes need no refrigeration, but should be stored away from light.

Note 2 — Fish and sea foods shall be stored in separate compartments so as not to affect other materials.

ACOUSTICS

Food service establishments (hotels, restaurants, etc) shall adopt suitable noise control measures to provide adequate sound insulation against various noise sources which would cause disturbance to human comfort and efficiency.

FIRE SAFETY REQUIREMENTS

All buildings and particularly buildings having more than one storey shall be provided with liberally desigl:cd safe-fire-resistant exists or escapes.

The exits shall be so placed that they are always immediately accessible and each is capable of taking all the persons on that floor as alternative escape routes may be rendered unsuitable and/or unsafe due to

fire.

Escape route shall be well-ventilated as persons using the escapes are likely to be overcome by smoke and/or fumes which may enter from floor.

Basements- It is essential that the fire resistance of the basement conforms to the highest order and all columns for separating the upper structure shall have grading not less than the standards laid down for Grade 3.

3 CHAPTER 3:
SITE ANALYSIS

SITE INVENTORY

- DEMOGRAPHICS OF SANAND
- TOPOGRAPHY
- SEISMIC ACTIVITY
- SOIL TYPE
- CLIMATIC DATA
- CLIMATIC ANALYSIS IN BUILDING

3.1 DEMOGRAPHIC OF SANAND DIST. AHMEDABAD

With a 2025 estimated population of about **8.16 million** in the city and **9.31 million** in its metro region, Ahmedabad stands as Gujarat's most populous urban center. According to the 2011 Census, the city had **5.58 million** residents. The **sex ratio** in the municipal limits was **898 females per 1,000 males** (child sex ratio: 848 girls per 1,000 boys), while the broader district recorded a sex ratio of **904 per 1,000** (child ratio: 857). Literacy rates are strong: the city averaged **88.29%** literacy (male 92.30%, female 83.85%), with district-wide literacy at **85.31%** (male 90.74%, female 79.35%)

Religions in Ahmedabad		
Religion		Percent
Hindu		81.56%
Muslim		13.51%
Not Stated		0.12%
Jain		3.62%
Sikh		0.24%
Christian		0.85%
Buddhist		0.08%
Other		0.04%

Religiously, Ahmedabad is predominantly **Hindu (≈ 81.6%)**, followed by **Muslims (≈ 13.5%)**, **Jains (≈ 3.6%)**, **Christians (≈ 0.85%)**, **Sikhs (≈ 0.24%)**, **Buddhists (≈ 0.08%)**, with small shares of "other religions" (≈ 0.04%) and "not stated" (≈ 0.12%).

3.2 TOPOGRAPHY

For the purposes of this report, the geographical coordinates of **SANAND** are:

Latitude: ~ 23.0° N

Longitude: ~ 72.38° E (Sanand taluka area)

Elevation at town center: ~ 38 m (≈ 124 ft.) above sea level.

Sanand town is part of the vast **Gujarat Plains** region, with flat terrain forming part of the Sabarmati river basin

From elevation models (~10-30 m resolution elevation data):

Within ~2 miles (~3 km)

Min elevation: ~10 m (~33 ft.)

Max elevation: ~65 m (~213 ft.)

Average ~**31 m (≈ 102 ft.)**

Within ~10 miles (~16 km)

Elevation range in surrounding taluka: **10 m – 65 m** (~33 ft. – 213 ft.), so variation up to ~**185 ft**.

Within ~50 miles (~80 km)

Larger Ahmedabad-Gujarat plains remain largely flat; typical elevation ~30–40 m, max occasional rises near gentle uplands, so **variation under ~200 ft**.



Figure 5 TOPOGRAPHICAL CONTOURS OF SANAND

3.3 SEISMIC ACTIVITY:

Zone III: This zone corresponds to a **Moderate Damage Risk Zone**, liable to **MSK VII** levels.

The **IS code assigns a zone factor (Z)** of **0.16** for Zone III.

Major cities in this zone include Chennai, Mumbai, Kolkata, Bhubaneswar, Ahmedabad, Vadodara, Pune, Lucknow, and Sanand (in the Ahmedabad region).

CITY	STATE	ZONE
SANAND	GUJRAT	III

3.4 SOIL TYPE:

The soils around Sanand belong to the deep, alluvial loam-clay category characteristic of Central Gujarat plains (Quaternary deposits). They are very deep, well to moderately drained, and slightly saline and sodic in parts of the taluka. The terrain is nearly level (< 2 % slope), unlike the interfluvial hill slopes seen in Agra soils.

The local climate has a mean annual temperature of ~27 °C (80.6 °F) and mean annual rainfall of ~757 mm (~30 inches), supporting moderate moisture retention soils under arable and industrial usage.

3.5 CLIMATE-

In Sanand, the **wet season (mid-June to mid-September)** is **hot, humid, and mostly cloudy**, while the **dry season** (October through May) is **sweltering and predominantly clear**, with hot temperatures year-round. Over the course of the year, daily high temperatures typically range from **82 °F (28 °C)** in January up to about **106 °F (41 °C)** in May, and rarely dip below **55 °F (13 °C)** or exceed **109 °F (43 °C)**

Based on the **beach/pool score** (which favours clear, rainless days with perceived temperatures between 75–90 °F), the **best times for hot-weather activities in Sanand** are from **mid-November to early March**, peaking in **early February**

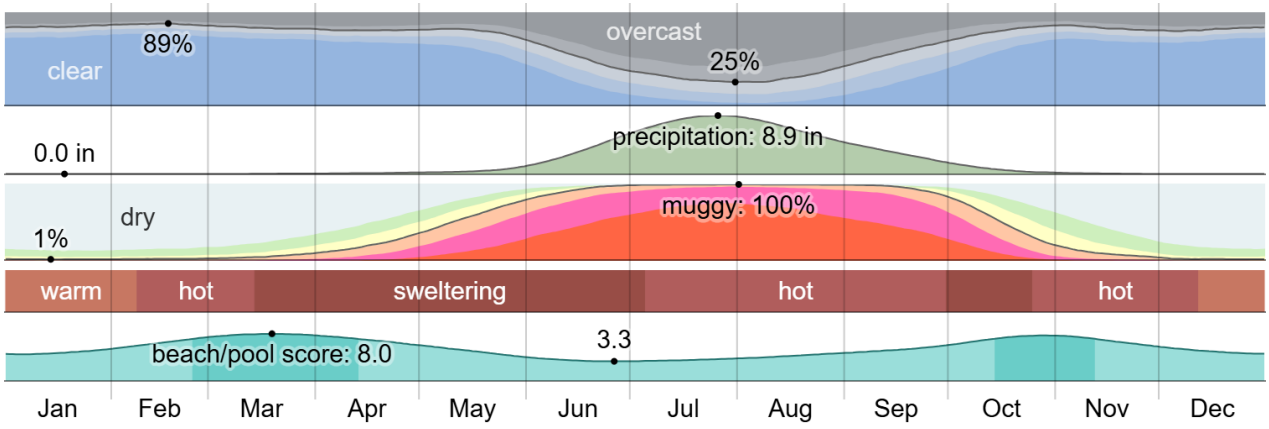


Figure 6 CLIMATIC EXPERIENCE IN SANAND AROUND THE YEAR

Average Temperature in sanand

The hot season in Sanand lasts for about 2.2 months, from April 9 to June 15, with **average daily highs remaining above 38 °C (100 °F)**. The **hottest month is May**, featuring typical temperatures of **41 °C (105.8 °F)** during the day and **28 °C (82 °F)** at night.
The cool season spans around 2.1 months, from December 7 to February 12, characterized by **average daily highs below 30 °C (86 °F)**. **January is the coldest month**, with daily temperatures ranging from approximately **13 °C (55 °F)** to **28 °C (82 °F)**.

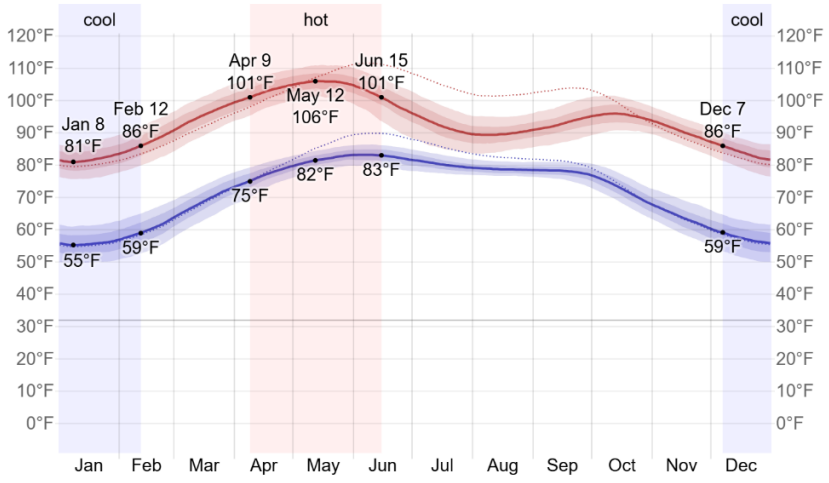


Figure 7 TEMPERATURE IN SANAND ANUALLY

Precipitation

A wet day in Sanand is defined as one with at least **0.04 in (1 mm)** of precipitation. The **wetter season** extends for approximately **2.8 months**, from **June 20 to September 13**, during which a given day has a **greater than 23% chance** of rainfall. **July is the wettest month**, averaging about **12.5 rainy days**, while the **driest month is December**, with only **~0.2 wet days**. Notably, **rain alone** is the only form of precipitation, with its probability peaking at **46% around July 29**

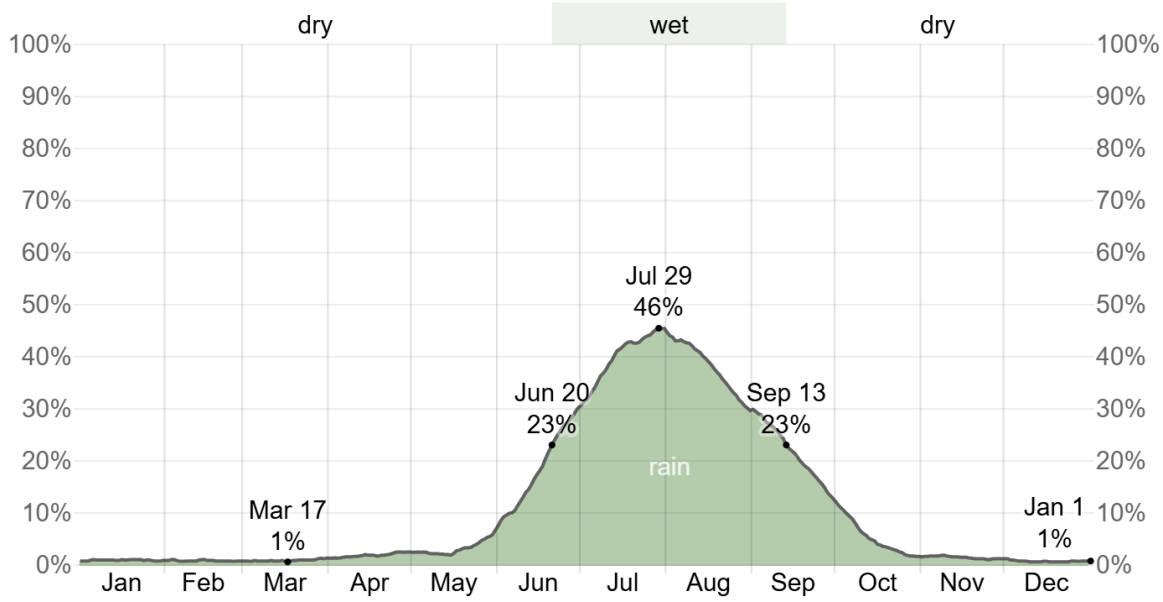
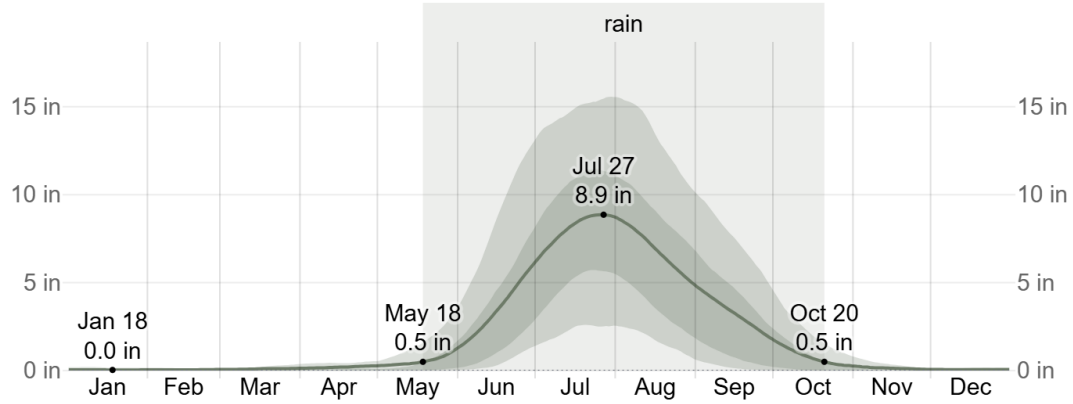


Figure 8 AVERAGE PRECIPTATION IN SANAND

Rainfall

To illustrate intra-month variation, Sanand's **rainy period** lasts approximately **5.1 months**, spanning **May 18 to October 20**, during which any **rolling 31-day total rainfall** stays **at or above 0.5 inches**. Rainfall peaks in **July**, registering up to **8.4 inches** in a sliding monthly average. From **October 20 to May 18**, forming the **rainless period** of about **6.9 months**, 31-day rainfall falls below 0.5 inches, with **January** recording the



least rainfall (~0.0 inches).

Figure 9: AVERAGE RAINFALL IN SANAND

Humidity

The muggier period in Sanand extends over approximately 6.1 months, from April 23 to October 27. During this time, the dew point rises enough to make conditions feel muggy, oppressive, or even miserable on at least 26% of the days. This means that for nearly half the year, outdoor conditions may feel uncomfortably humid, especially during the daytime. **The peak of this discomfort occurs in August**, which records the highest average number of muggy days—**around 30.9 days**, essentially the entire month. Such levels of humidity can significantly impact thermal comfort, especially when combined with high temperatures. In

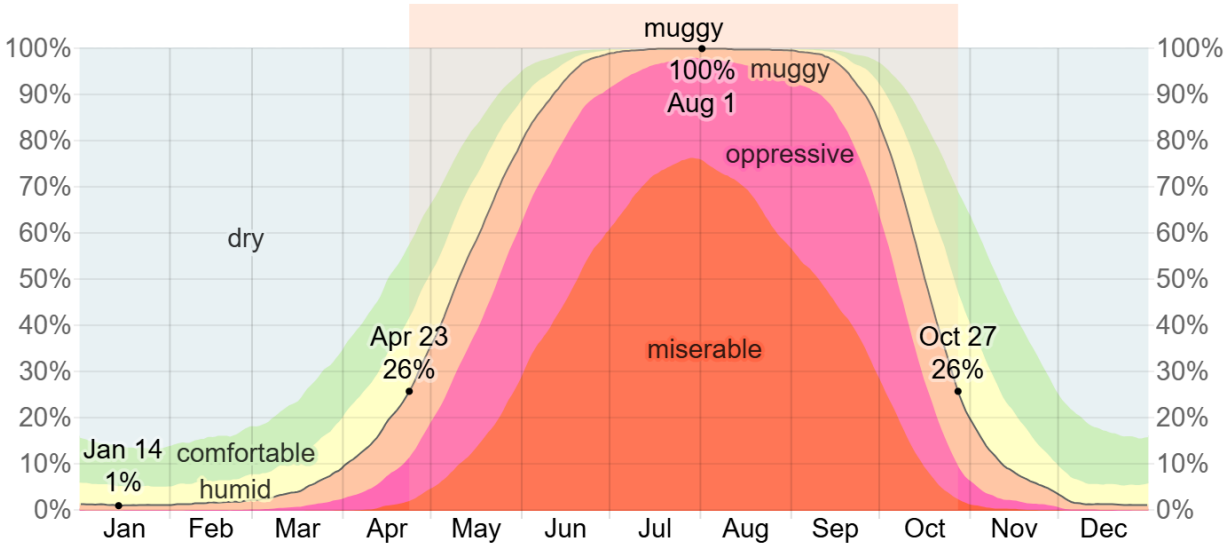


Figure 10 AVERAGE HUMIDITY IN SANAND

contrast, **the least humid part of the year is January**, with an average of only **0.3 days** experiencing similar muggy conditions, offering a brief respite of dry, more comfortable air. This stark seasonal variation makes it crucial to consider humidity control in architectural and planning decisions, especially for ventilation, cooling, and material selection.

Wind

The windiest span in Sanand lasts about four months, stretching from April 22 to August 22, when the hourly average wind speed consistently exceeds ~13.6 km/h (~8.5 mph). June is the peak wind month, with an average speed close to 18.9 km/h (~11.8 mph), while October offers the calmest air—mean speeds dipping to 8.4 km/h (~5.2 mph).

Wind direction shifts dramatically with the seasons: from March 9 through October 10, winds predominantly blow from the west, reaching a seasonal high of 86% on May 14. Then, between October 10 and December 4, easterly winds take over—peaking at 53% on November 8. From December 4 to March 9, northerly winds dominate, with 52% frequency recorded on January 1. These patterns suggest a pronounced seasonal wind regime—useful

for everything from natural ventilation design to planning outdoor structures and shading in architectural projects.

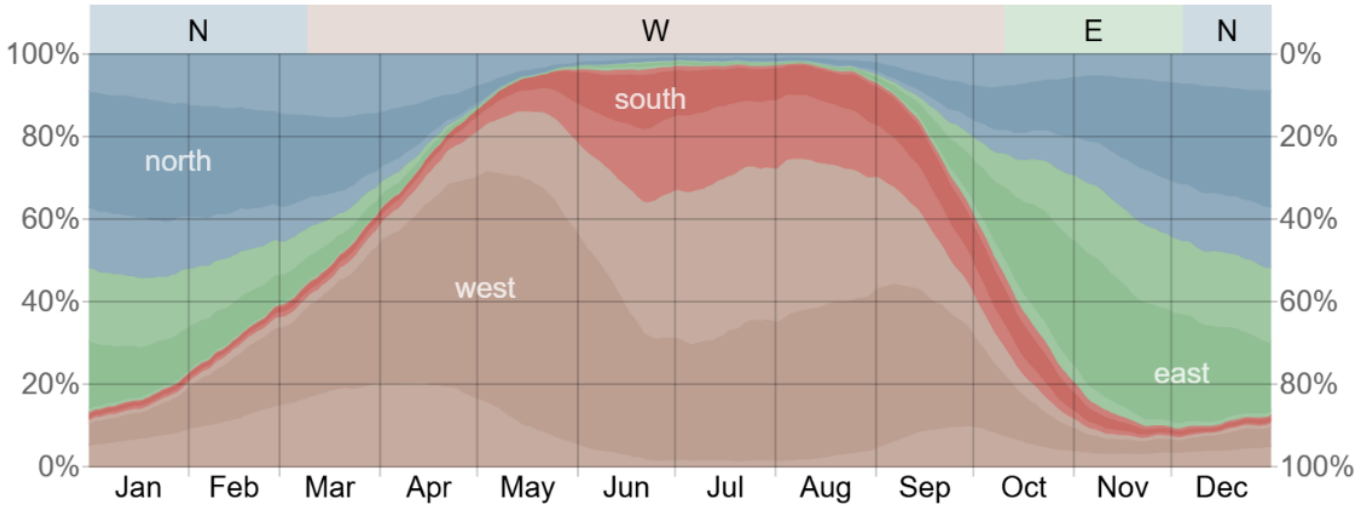


Figure 11 AVERAGE WIND SPEED IN SANAND

Sunpath

The sun path diagram for Sanand (Latitude 23.0019°N, Longitude 72.2491°E) reveals critical solar movement data essential for climate-responsive architectural design. The site experiences a sunrise at 06:44 and sunset at 18:53, resulting in approximately 12.08 hours of daylight. At the time of analysis, the solar azimuth and altitude are 119.09° and 49.46°, respectively—indicating the sun's southeast position in the morning with a moderately high altitude in the sky. The solar envelope indicates that maximum solar gain occurs from the southeast to southwest arc, especially during summer months when the sun travels a higher and longer path.

This data supports strategic orientation of built forms and fenestrations. North-facing façades remain shaded most of the day, making them ideal for minimal heat gain, while south and southwest exposures require adequate shading devices such as vertical fins or overhangs to mitigate harsh afternoon sun. Open green zones and public areas are best located on the eastern and northern edges, benefiting from softer morning sunlight and avoiding peak afternoon heat. Overall, this sun path analysis informs passive design strategies to optimize thermal comfort and energy efficiency in the Sanand climate context.

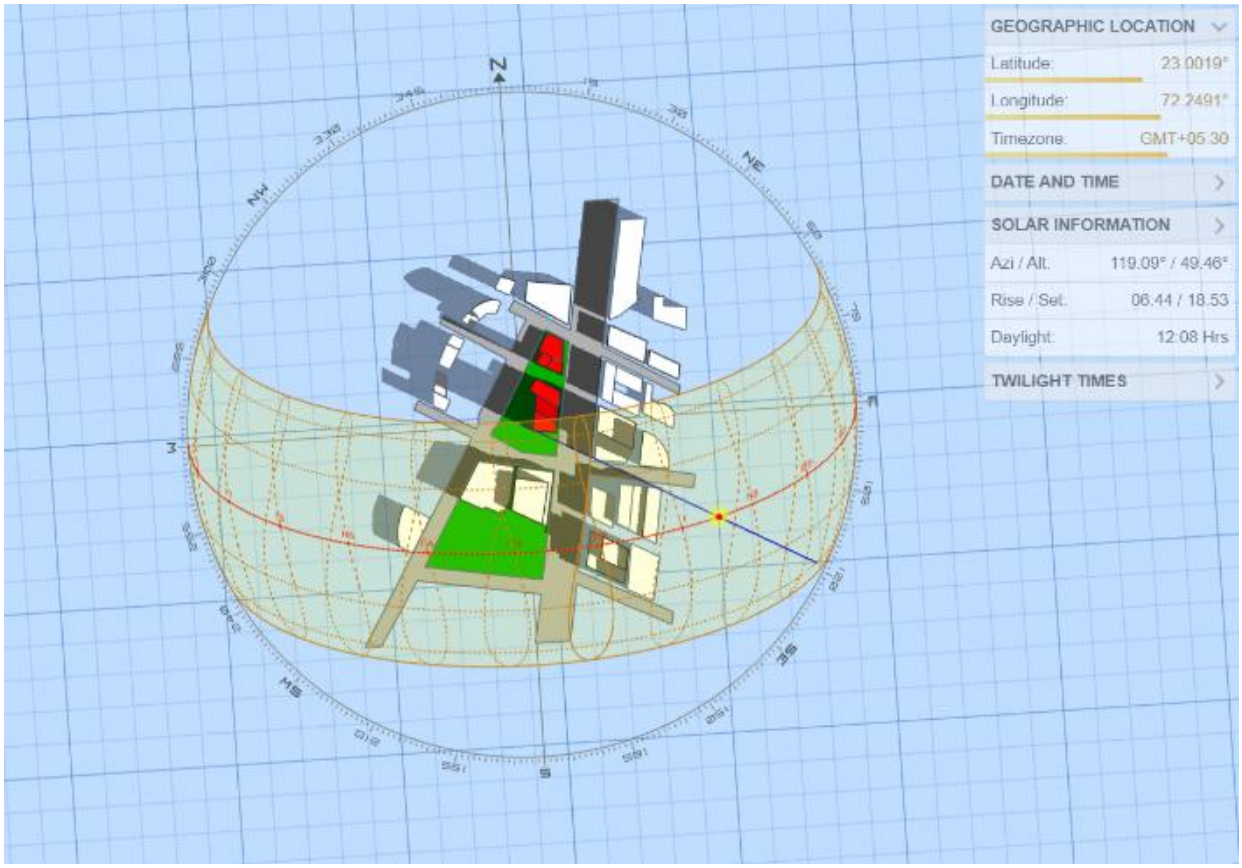


Figure 12: SUNPATH ANALYSIS

3.6 CLIMATE ANALYSIS IN BUILDING-

To ensure the proposed **5-star hotel** design is contextually responsive and environmentally efficient, a series of detailed climatic simulations were conducted using **Adobe Forma**. These simulations—covering solar path, wind direction, and temperature analysis—were run on a representative building mass placed at the actual site location in **Sanand.** The objective was to study how natural elements interact with the built form throughout the year. The sunlight analysis provided insight into optimal orientation and shading strategies, while wind simulations informed natural ventilation potential and facade articulation. Temperature mapping further helped identify thermal hotspots and areas requiring passive cooling solutions. These simulations form the backbone of the project's sustainable design intent, ensuring a comfortable and **energy-efficient** environment for future occupants.

SUN HOURS ANALYSIS

A detailed **sun hours** analysis was carried out for four representative months of the year—covering both summer and winter extremes—to understand the site's **solar exposure** and inform passive design strategies. The simulation, conducted using **Adobe Forma**, revealed the daily duration and intensity of sunlight received across various parts of the building mass. This helped identify zones with prolonged exposure, which are ideal for placing solar panels or sunlit public areas, as well as areas needing shading elements to prevent overheating. The

data serves as a crucial tool in optimizing natural daylight while minimizing glare and solar gain, enhancing both energy efficiency and **occupant comfort** in the proposed hotel.

FEBRUARY-

To understand the solar exposure across different facades of the proposed hotel design, a sun hours analysis was conducted for the month of February using Adobe Forma. The simulation, performed on a massing model located on the exact project site, revealed significant variations in sunlight exposure due to orientation and surrounding topography. The southern and western facades received maximum solar gain, with sun exposure reaching up to **11 hours per day**, indicating ideal zones for passive solar strategies and solar energy integration. In contrast, the northern façade exhibited minimal sunlight, with areas showing as low as **0 hours of direct sun**, suggesting potential zones for service areas or thermal insulation focus. Intermediate zones showed moderate exposure, such as **5.2 to 5.9 hours**, indicating a balance of shading and daylighting potential. This analysis plays a critical role in optimizing façade design, spatial planning, and energy efficiency strategies for the hotel in alignment with climate-responsive architecture.

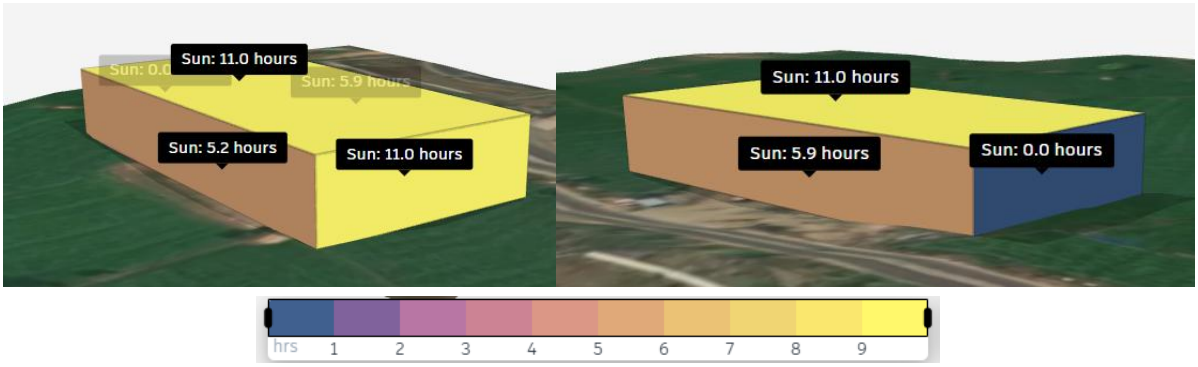


Figure 13: SUN HOUR ANALYSIS OF FEBRUARY MONTH

MAY-

A peak summer month, show that the building receives abundant sunlight with certain roof areas achieving up to **13 hours** of sun exposure, while other facades receive between **6 to 7 hours** depending on orientation and shadow impact. This variation provides vital insights for optimizing **rooftop amenities**, **solar panel** placements, shading devices, and thermal **comfort zones**. The analysis further aids in refining the building's massing and facade articulation to reduce heat gain in summer while ensuring adequate daylight throughout the year. This data-driven approach strengthens the sustainable intent of the design by aligning architectural decisions with the site's climatic potential.

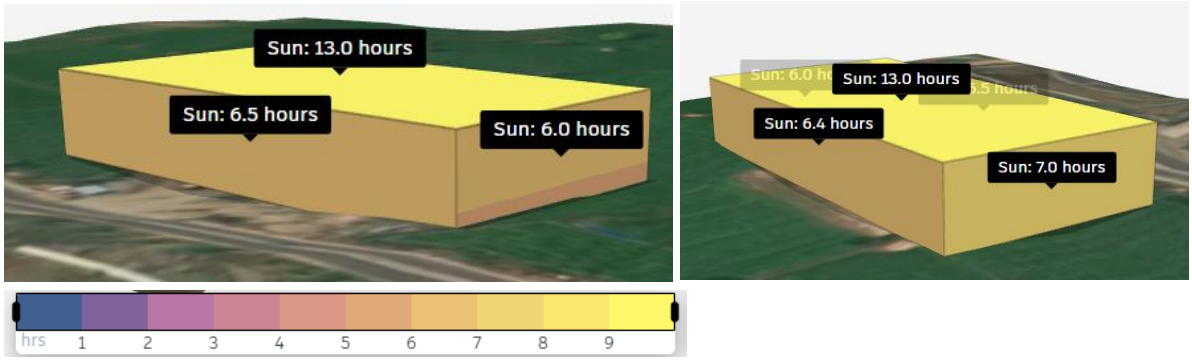


Figure 14: SUN HOUR ANALYSIS OF MAY MONTH

AUGUST-

The analysis revealed that the rooftop receives maximum solar exposure, with peak values reaching up to **13.1 hours** per day, making it a suitable zone for solar panel installations or recreational spaces that benefit from direct sunlight. Vertical surfaces showed moderate sun exposure, with some façades receiving as low as **5.7 hours** and others up to **7.3 hours** of sunlight daily. This variation in exposure will play a critical role in informing the building's façade design, passive cooling strategies, and placement of fenestrations to balance natural lighting and thermal gain. The results reinforce the importance of climate-responsive design in maximizing user comfort while optimizing energy performance.

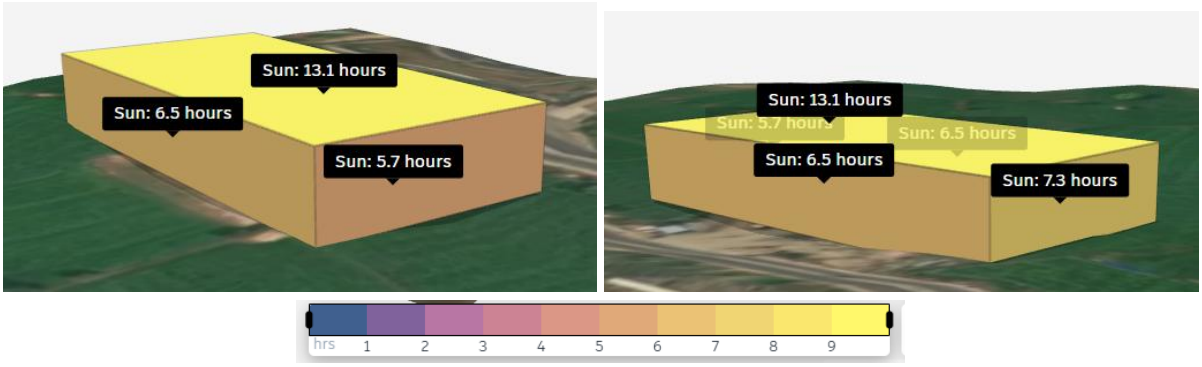


Figure 15: SUN HOUR ANALYSIS OF AUGUST MONTH

DECEMBER-

The **south and southeast-facing** facades receive the highest sunlight, with values peaking around **10.6** hours per day, while certain **north-facing zones remain in full shade with zero sun exposure**. This distribution highlights the need for strategic space planning—placing public or solar-dependent functions such as lobbies, lounges, or **energy-harvesting** systems in high-exposure zones, while reserving shaded areas for back-of-house or utility services. The insights from this simulation will guide passive design interventions like facade articulation, fenestration placement, and shading devices to optimize thermal comfort and energy efficiency during **winter months**.

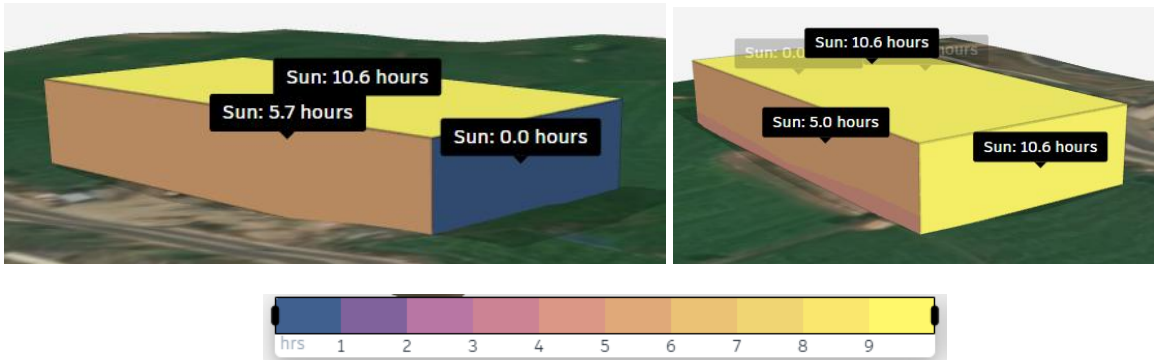


Figure 16: SUN HOUR ANALYSIS OF DECEMBER MONTH

DAY LIGHT POTENCIAL

The daylight potential analysis for the proposed building site in GIDC Sanand, Gujarat, reveals significant variations in light exposure across the structure. The analysis indicates that the top surface of the building achieves a **maximum score of 100%,** reflecting optimal daylight penetration, while the middle and lower sections **score 40% and 40%** respectively, suggesting moderate to **limited natural light** availability. This data underscores the need for **strategic design** considerations, such as incorporating additional glazing or light wells, to enhance **interior illumination**, particularly in **the lower levels**, ensuring a balance between **natural lighting** and **energy efficiency** in the final construction plan.

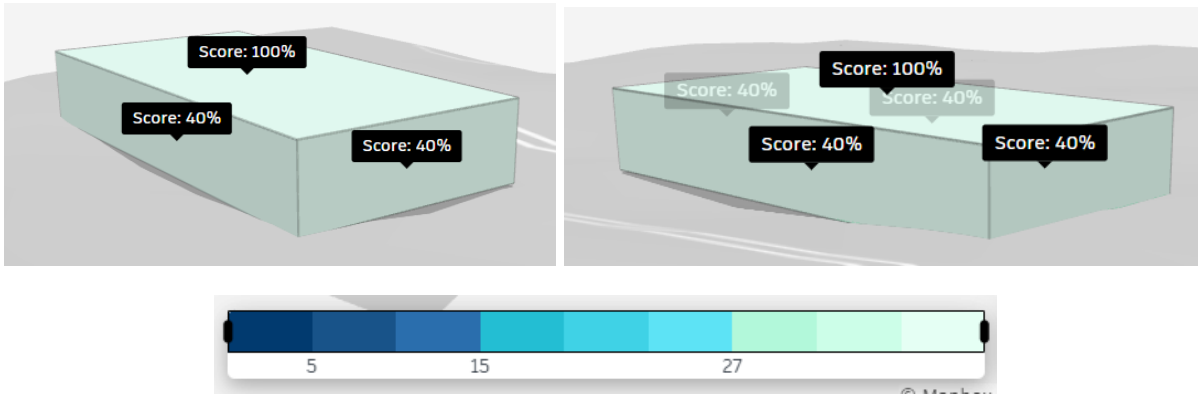


Figure 17: DAY LIGHT POTENCIAL

WIND ANALYSIS

The wind analysis simulation conducted on the proposed building in **GIDC Sanand**, Gujarat, at 11:14 AM IST on Sunday, July 27, 2025, using the advanced **Autodesk Forma** software, provides comprehensive insights into the **building's aerodynamic performance**. The simulation reveals significant variations in **wind pressures**, with the upper facade experiencing peak **velocities** due to prevailing winds, while the lower levels exhibit reduced exposure, indicating potential stagnation zones that could affect ventilation. These findings emphasize the necessity of incorporating **aerodynamic shaping**, such as **windbreaks** or **streamlined contours**, into the design to mitigate pressure imbalances, enhance structural

stability, and optimize **natural ventilation** across all levels of the building, ensuring a resilient **and efficient architectural** solution.

WIND COMFORT ANALYSIS-

The **Global Wind Atlas 3.0** with a roughness of **0.27** and a measurement **height of 1.75m**, provides valuable insights into pedestrian comfort levels. The analysis indicates that **76%** of the surrounding area falls within the **comfortable "Standing" range**, while **21%** is suitable for **"Strolling**" and **3%** for **"Sitting,"** with no significant areas classified as **"Uncomfortable."** The color-coded wind rose overlay highlights that the majority of the site experiences moderate **wind speeds**, with localized zones of higher activity, suggesting that the building's design effectively mitigates excessive **wind exposure**. These findings support

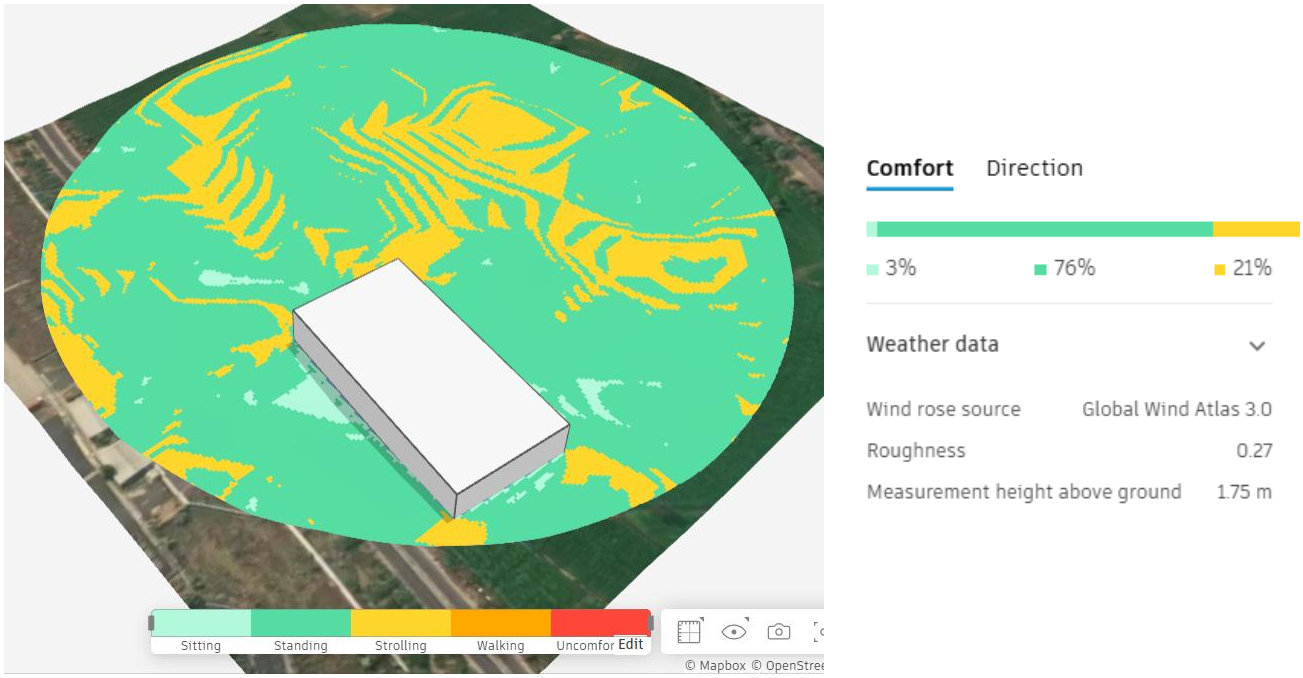


Figure 18: WIND COMFORT ANALYSIS

the integration of minor adjustments, such as **windbreaks or landscaping**, to further enhance **pedestrian comfort** across the site.

WIND DIRECTION ANALYSIS-

The Global Wind Atlas 3.0 with a **roughness of 0.27** and a measurement **height of 1.75m**, highlights the predominant wind patterns affecting the site. The wind rose diagram indicates that **86% of winds originate from the north (N 0°),** with **8% from the west and 2% from the east**, while the wind speed distribution peaks at **approximately 2 m/s**, with a **maximum of 3 m/s**. The spatial analysis overlay shows a consistent **north-to-south wind flow across the site**, with **velocities ranging from 1 to 3 m/s**, suggesting that the building's orientation

should align with this **dominant northerly** wind to optimize **natural ventilation** and **minimize wind load** on the structure.

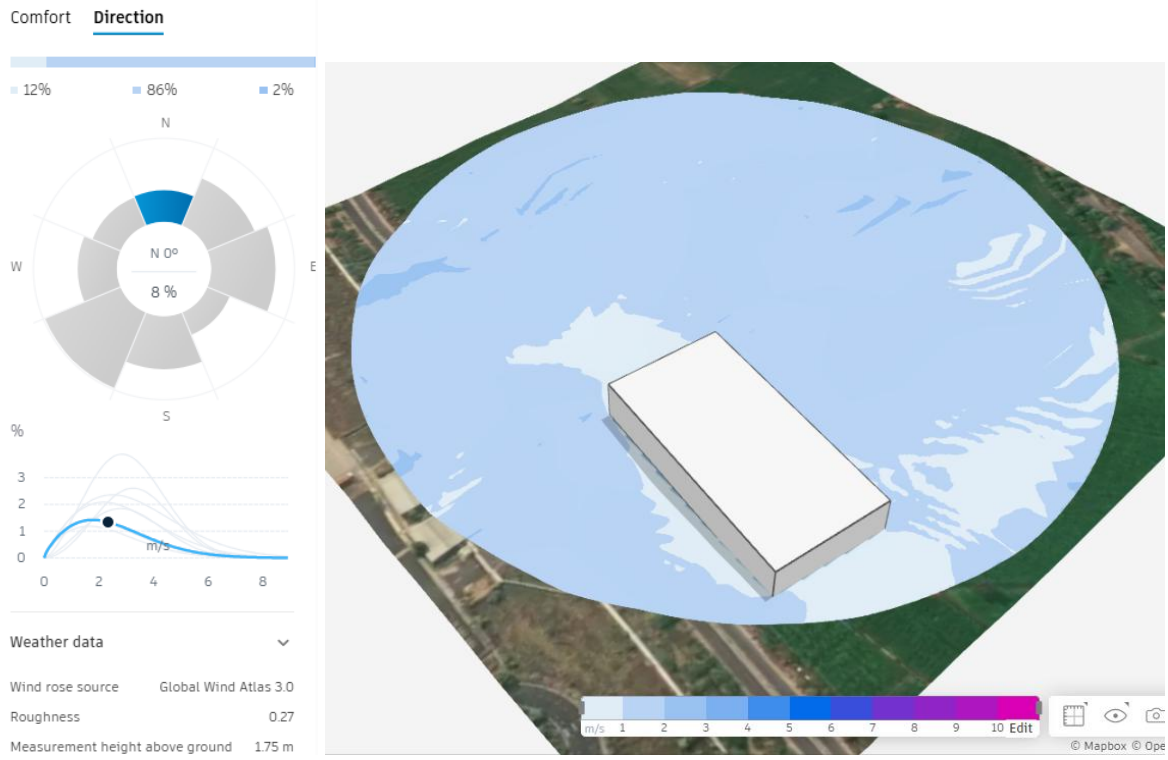


Figure 19: WIND DIRECTION ANALYSIS

SUN PATH ANALYSIS

Based on the **geographic location** at **latitude 23.005972° N** and **longitude 72.249801° E**, within the GMT+05:30 timezone. The sun path diagram illustrates that on this date, the sun rises at 06:11 AM and sets at 18:24 PM, offering a **daylight duration of 12 hours and 12 minutes**, with the **solar azimuth** and **altitude peaking at 131.08° and 59.26°** respectively around midday. The analysis reveals that the building's orientation and height result in **significant shadowing**, particularly from the **northeast to the southwest**, with the **sun's trajectory** indicating prolonged exposure on the **eastern facade in the morning and western facade in the afternoon**. The **day-length** graph further confirms that July, being near the summer solstice, provides the longest daylight hours, suggesting a need for strategic shading devices or glazing on the east and west elevations to mitigate overheating, while the **northern facade remains relatively shaded**, offering potential for **passive cooling design strategies**. These insights are crucial for optimizing the building's energy performance and ensuring **occupant comfort** throughout the year.

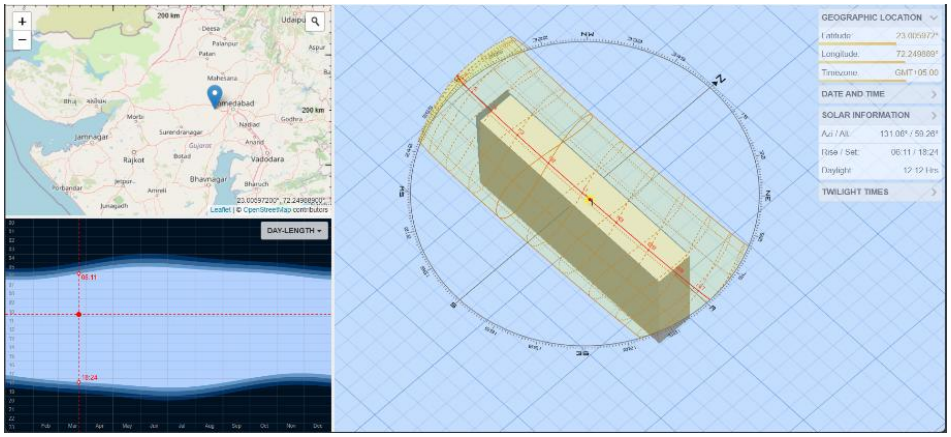


Figure 20: SUN LIGHT ANALYSIS

4 CHAPTER 4:
LIVE CASE STUDY 1

TAJ LAKEFRONT, BHOPAL

- LOCATION
- SITE
- FACILITIES
- APPROACH ROAD
- VERTICAL ZONING
- AREA STATEMENT
- FLOOR PLANS
- GUEST ROOMS TYPOLOGY
- VIEW/INTERIOR OF SPACES
- SERVICES

4.1 INTRODUCTION

The Taj Lakefront, Bhopal epitomises true luxury. Overlooking the upper lake and just 25 minutes from the international airport, this iconic landmark symbolises the soul of Bhopal and its vision for tomorrow. The magnificent structure by the lakefront redefines fine living with its modern interiors, ornate and luxurious finishes. The design is intuitive to the region and inspired by the bell metal craft of Tikamgarh, the lakes and Zari work of Bhopal, the paisley prints of Bagh, the Durries of Sironj, and the Terracotta art of the state's tribal areas.

Ready to be the new landmark of the city, it opens its doors to the world with 152 guest rooms, multi-cuisine and award-winning restaurants, recreation facilities, Jiva spa, modern meeting spaces, well-equipped conference rooms, and the city's largest banqueting facilities.



Figure 21: TAJ

4.2 DETAILS:

PROJECT	TAJ LAKEFRONT
LOCATION	BHOPAL
CLIMATE	Humid Subtropical
TOPOGRAPHY	PLAIN LAND
ARCHITECT	JOI DESIGN
COMPLITION YEAR	2021
NO. OF ROOMS	152
SITE AREA	4.77 ACRE
FAR	2

4.3 LOCATION

It is close to the Van Vihar National Park, Sanchi Stupa, National Museum of Mankind, Taj-ul-Masajid, and many such wonders of the city. Located near Bhadbhada Road Chauraha, Link Rd Number 3, Bhopal, Madhya Pradesh Overlooking the upper lake.

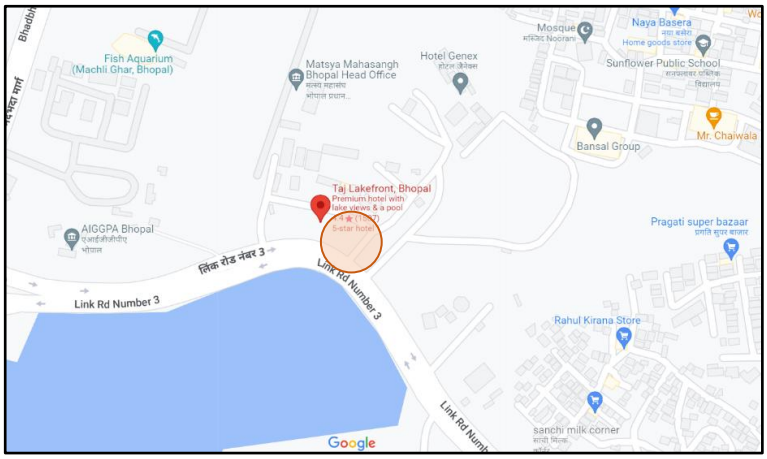


Figure 22: TAJ SITE LOCATION

4.4 SITE



Figure 23: TAJ SITE PLAN

Site Boundary

Circulation within the Site.

4.5 SITE CHARACTERISTICS:

- The site has kind of trapezium shape having curved edge in front.
- As we look into the site planning of taj the front part is designed with pleasing landscape by which guests can connect with its lush greenery.
- Back part of the site is used for the services.
- The building shape is evolved by the curved front edge of the site.
- Circulation of the site is designed in that way so that no congestion will occur.

4.6 FACILITIES

These are the following facilities and amenities that Hotel Taj is providing to their guests.

Outdoors
- ✓ Outdoor furniture
- ✓ Sun terrace
- ✓ Terrace
- ✓ Garden

Activities
- ✓ Evening entertainment
- ✓ Games room

Food & Drink
- ✓ Bar
- ✓ Restaurant

Internet

WiFi is available in all areas and is free of charge.

Parking

Free private parking is possible on site (reservation is not needed).
- ✓ Electric vehicle charging station

Reception services
- ✓ Invoice provided
- ✓ Concierge service
- ✓ Currency exchange
- ✓ Express check-in/check-out
- ✓ 24-hour front desk

Cleaning services
- ✓ Daily housekeeping
- ✓ Trouser press Additional charge
- ✓ Ironing service Additional charge
- ✓ Dry cleaning Additional charge
- ✓ Laundry Additional charge

Business facilities
- ✓ Business centre
- ✓ Meeting/banquet facilities

Safety & security
- ✓ Fire extinguishers
- ✓ CCTV outside property
- ✓ CCTV in common areas
- ✓ Smoke alarms
- ✓ Security alarm
- ✓ Key card access
- ✓ 24-hour security

General
- ✓ Air conditioning
- ✓ Lift
- ✓ Family rooms
- ✓ Non-smoking rooms
- ✓ Room service

Outdoor swimming pool

Free! All pools are free of charge
- ✓ Open all year
- ✓ Opening times
- ✓ All ages welcome
- ✓ Pool/beach towels
- ✓ Pool bar
- ✓ Infinity pool
- ✓ Pool is on rooftop

Wellness
- ✓ Fitness
- ✓ Full body massage
- ✓ Hand massage
- ✓ Head massage
- ✓ Couples massage
- ✓ Foot massage
- ✓ Neck massage
- ✓ Back massage
- ✓ Spa/wellness packages
- ✓ Spa lounge/relaxation area
- ✓ Spa facilities
- ✓ Pool/beach towels
- ✓ Massage
- ✓ Spa and wellness centre Additional charge
- ✓ Fitness centre

4.7 APPROACH ROAD

18 m wide arterial road named Link RD number 3 is connecting the Taj hotel to the various locations of the city.

12 m wide service lane is given in the right side of the site.

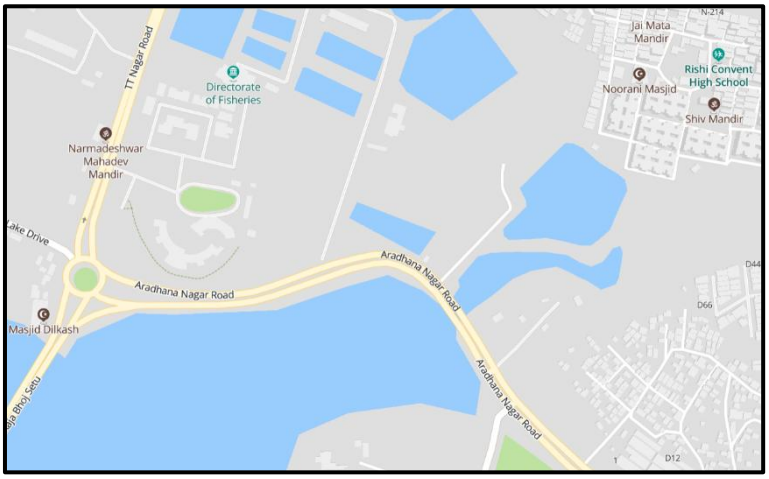


Figure 24: TAJ APPROCH ROADS

4.8 VERTICAL ZONING

Here is the conceptual section of the taj hotel to explain the vertical zoning.

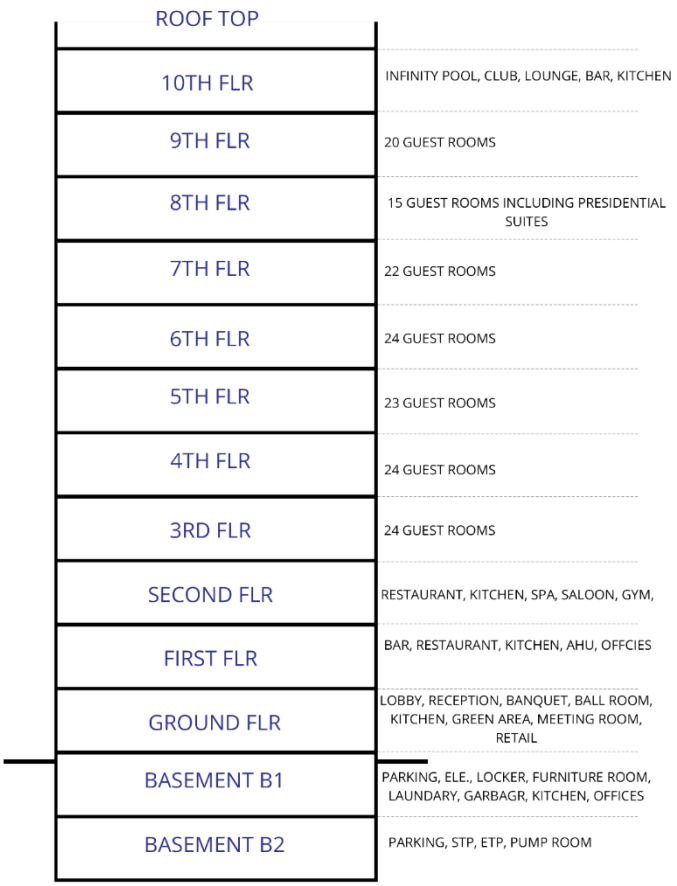


Figure 25: TAJ VERRTICAL ZONING

4.9 AREA STATEMENT

Name		No. of Units	Area (sq.m.)	Total Area	%
	Total No. of Keys	152			
	No. of Floors	10			
A.	Guest Room Mix				
	Executive Suite	141	66	9306	80
	Twin Bedroom	5	33	165	10
	King bedroom	5	33	165	10
	Presidential Suite	1	152	152	
	Total Area (Sum)			9788	
B.	Guest Floor Services				
I	Corridor Area				
	Type Floor Corridor	1	180	180	30
II	Housekeeping Static or Typical Floors				
	Housekeeping Static or Typical Floors	1	185	185	32
III	Lifts				
	Guest Elevators	2	55	110	19
	Service Lift Lobby	2	55	110	19
IV	Fire Protection				
	Fire Escape Stairs	2	30	60	10

	Total Area (Sum)			585	
C.	Public Areas				
I	Entrance Lobby				
	Port Cochere	1	40	40	15
	Entrance Lobby Waiting Areas Front Desk	1	100	100	38
	Front Desk	1	40	40	14
	Luggage Store	1	15	15	6
	Bell Man	1	4	4	8
II	Business Centre				
	Store	1	36	36	13
			5	5	2
III	Public Utilities				
	Public Toilet	1	30	30	10
	Total Area (Sum)			270	
D.	F&B Outlets				
	Bar (Special) - 30 Covers	1	100	100	25
	Multi-Cuisine Restaurant - 120 Covers	1	300	300	75
	Total Area (Sum)			400	
E.	Banquets				
	Banquet Hall	2	225	450	62
	Pre-Function Area	2	80	160	22

	Conference Room	1	50	50	6
	Banquet Toilets	1	60	60	10
	Total Area (Sum)			720	
F.	Recreation Facilities				
	Swimming Pool	1	100	100	32
	Pool Change Room	1	50	50	16
	Gym	1	100	100	32
	Massage Room	1	6	6	10
	Saloon	1	50	50	10
	Total Area (Sum)			306	
G.	Retail Archade				
	Retail Shops	1	25	25	
	Total Area (Sum)			25	
BOH					
A.	Material Management				
	Truck Dock	2	20	40	34
	Holding Area	1	38	38	34
	Veg Wash	1	2.5	2.5	2
	Purchase & Reciving Off	1	20	20	15
	Purchase Office Manager	1	18	18	15

	Total Area (Sum)			118.5	
B.	Main Store				
	General Store	1	120	120	75
	Linen	1	10	10	6
	Unassign Store	1	10	10	6
	Liquor	1	10	10	6
	Crockery	1	6	6	3
	Mis	1	2	2	2
	Fuel	1	2	2	2
	Total Area (Sum)			160	
C.	Garbage				
	Loading	1	20	20	30
	Trash Garbage(Dry)	1	8	8	12
	Trash Garbage Refrigerator (wet)	1	15	15	24
	Garbage Truck	1	12	12	18
	Coal Room	1	5	5	8
	Circulation Space	1	5	5	8
	Total Area (Sum)			65	
D.	Front Office : Admi/Acc/IT				
	GM	1	151	151	44

	Sec to GM	1	9	9	2
	FO Mgr Couples as duty manager)	1	5	5	1
	Revenue Manager	1	8	8	2
	Reservation Office	1	8	8	2
	Work Station	1	25	25	8
	Discussion Room (Commom Meeting)	1	4	4	1
	Chief Accountant- Refer Staff Reqmnt	1	15	15	5
	Credit Manager	1	8	8	2
	Cashier	1	5	5	1
	Controller	1	8	8	2
	Payroll Manager	1	5	5	1
	Account Record Room	1	10	10	2
	Meeting room	1	10	10	2
	Computer Room	1	17	17	8
	UPS	1	35	35	12
	Recorde	1	10	10	2
	Storage and Copy8ing	1	9	9	2
	Total Area (Sum)			347	
E.	Sales				
	Rooms Mgr	1	8	8	18
	Banquet Mgr	1	8	8	18
	Workstation	2	5	10	22
	Discussion Room	1	10	10	22
	Storage and Copying	1	8	8	20

	Total Area (Sum)			44	
F.	F&B				
	Multi Cuisine Main Kitchen	1	85	85	20
	Room Services Main Kitchen	1	20	20	5
	Pastery	1	32	32	7
	Bakery	1	20	20	4
	Commissary prep Kitchen	1	40	40	9
	Common Dishwash	1	20	20	5
	Central Potwash	1	12	12	2
	Pot Store	1	8	8	3
	Banquet BOH & Store	1	130	130	30
	Cold Kitchen	1	18	18	4
	Café Kitchen	1	12	12	2
	Show Kitchen\Back Pantry Area for bar	1	8	8	2
	Bar Counter	1	15	15	3
	Chief Counter	1	5	5	2
	Chief Office	1	8	8	2
	Total Area (Sum)			433	
G.	House Keeping				
	Issue / Trailer / Dirties Collection	1	5	5	4
	House Keeper Executive	1	10	10	10
	House Keeping Assistant	1	8	8	8

	Hsk Office + House Keeper (as per Ap.)	1	16	16	15
	Dead Store	1	30	30	28
	F&B Circulatipon	1	5	5	5
	Guest Supply Store	1	10	10	10
	Bulk Lenin Store	1	5	5	5
	Tailor	1	10	10	10
	Upholestry Store	1	5	5	5
	Lost & Found	1	5	5	5
	Total Area (Sum)			104	
H.	Human Resources				
	HR Mgr	1	8	8	14
	Sec	1	4	4	7
	Traing Room	1	20	20	35
	Training Mgr	1	4	4	7
	Discussion	1	20	20	35
	Total Area (Sum)			56	
K	Security & Time Office				
	Staff Entry & Time Keeper/cctv	1	10	10	
	Security Mgr	1	8	8	
	Total Area (Sum)			18	

L	Repair and Maintenance				
	Head of Engg	1	8	8	
	Asst Engg	1	8	8	
	Secured Store	1	10	10	
	Paint Shope	1	10	10	
	Engg Store	1	10	10	
	Carpentry	1	10	10	
	Spare Parts	1	5	5	
	Total Area (Sum)			61	
J.	Staff Facility				
	Male Toilets & Lockers	1	100	100	
	Male Executive Toilets and Lockers	0	0	0	
	Female Toilets and Lockers	1	70	70	
	Kitchen	1	25	25	
	Staff Cafeteria	1	90	90	
	Staff Recreation Area	1	15	15	
	Total Area (Sum)			300	
I.	Miscelienouis				
	Divers Rest Room	1	15	15	
	Drivers Toilet	1	22	22	
	Microbiologist	1	8	8	

	Total Area (Sum)			45	
M.	Other BOH (exer mech)				
I	Mechanical Areas				
	LV Room	1	56	56	
	Indoor Transformers	2	22	44	
	LT Panel	1	74	74	
	DG Generator Room	1	97	97	
	Chiller Plant Room	1	125	125	
	Rainwater Tank	105 Cubic Meter			
	Municipal Tank	123 Cubic Meter			
	Raw Water Tank	123 Cubic Meter			
	Fire Tank	105 Cubic Meter			
	Treated Water Tank	123 Cubic Meter			
	Salt Storage	1	12	12	
	Pump Room (Fire)	1	20	20	
	Pump Room (Raw + Soft + WTP)	1	60	60	
	Boiler Room with Pump and Heat	1	58	58	
	STP with Pump and Equipment’s	1	80	80	
	Work Shop	1	22	22	
	Engineering Office	1	8	8	
	Engineering Store	1	10	10	
	Control Room	1	15	15	
	Underground Oil Storage Tank	1	190	190	
	Swimming Pool Filtration Plant	1	12	12	

	Total Area (Sum)			487	
II	Mechanical; Areas on Terrace				
	Cooling Towers	1	135	135	
	Overhead Tank	1	12	12	
	Ventilation/Exhaust Fans	14	12	168	
	Flushing Tanks/ Cooling Tower Tanks	3	9	27	
	Staircase Pressurisation Fans	3	11	33	
	Lift Pressurisation Fans	2	2.2	4.4	
	Sorubber for Kitchen Exhaust	1	5	5	
	Total Area (Sum)		186.4	384.4	
N.	Parking				
	Basement 2			1700	
	Basement 1			1420	
	Total Wall Thiockness and Circulation			3120	

4.10 FLOOR PLANS

Basement 2 Plan:

- Basement 2 is comprised with services amenities like STP, ETP WTP, Fire Tank, Domestic Water Tank etc. and parking spaces.

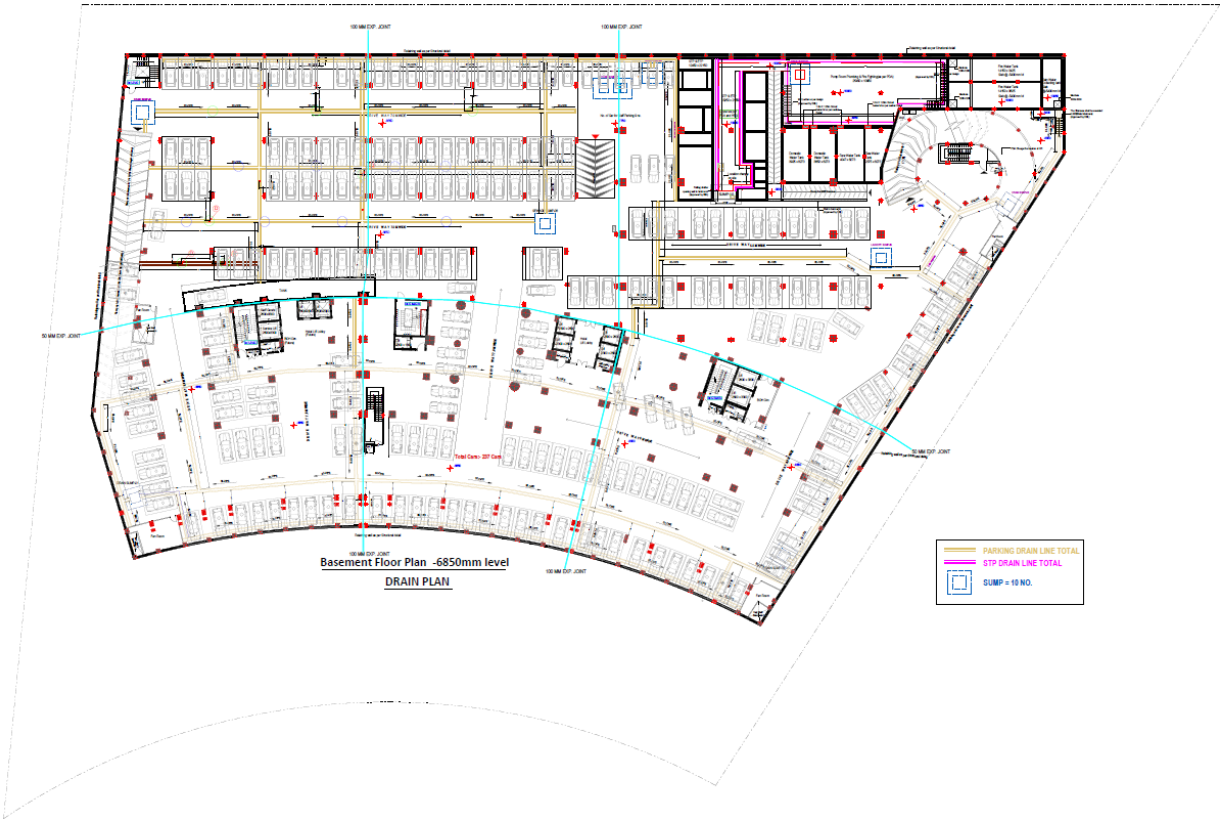


Figure 26: TAJ BASEMENT 2 PLAN

Basement 1 Plan:

- Basement 1 mainly consist of different types of Offices spaces like Housekeeping office , Finance Office, Sales office, Engg office and Canteen, Storage, Laundry spaces etc.
- It also has parking spaces and services outlet.
- All the staff of taj lakefront uses basement 1 as an entrance and parking space respectively.



Figure 27: TAJ BASEMENT 1 PLAN

Ground Floor Plan:

- The entrance lobby of the hotel has grand luxury feel as it has triple heighted spaces with very attractive false ceiling consist of cove lighting.
- There is a separate entrance has been provided including Banquet Hall, Meeting room, conference rooms.
- A Banquet Hall can be divided as 3 halls by automatic temporary panels.
- Washroom for Banquet guests is accessible from Pre-Function Area which act as a buffer space for guest.

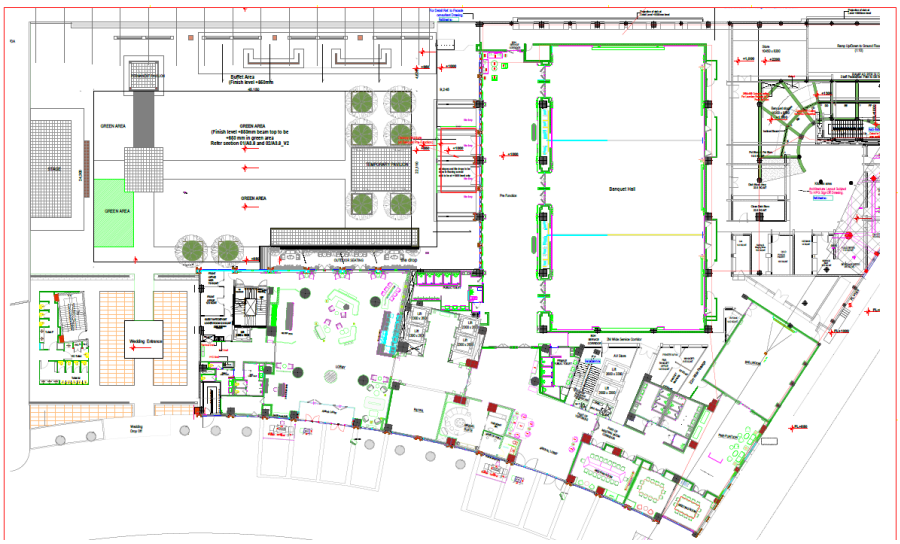


Figure 28: TAJ GROUND FLOOR PLAN

First Floor Plan:

- This floor has a Chinese Restaurant with a wonderful Chinese theme based interiors.
- Private Dining Restaurants are also provided in this floor.

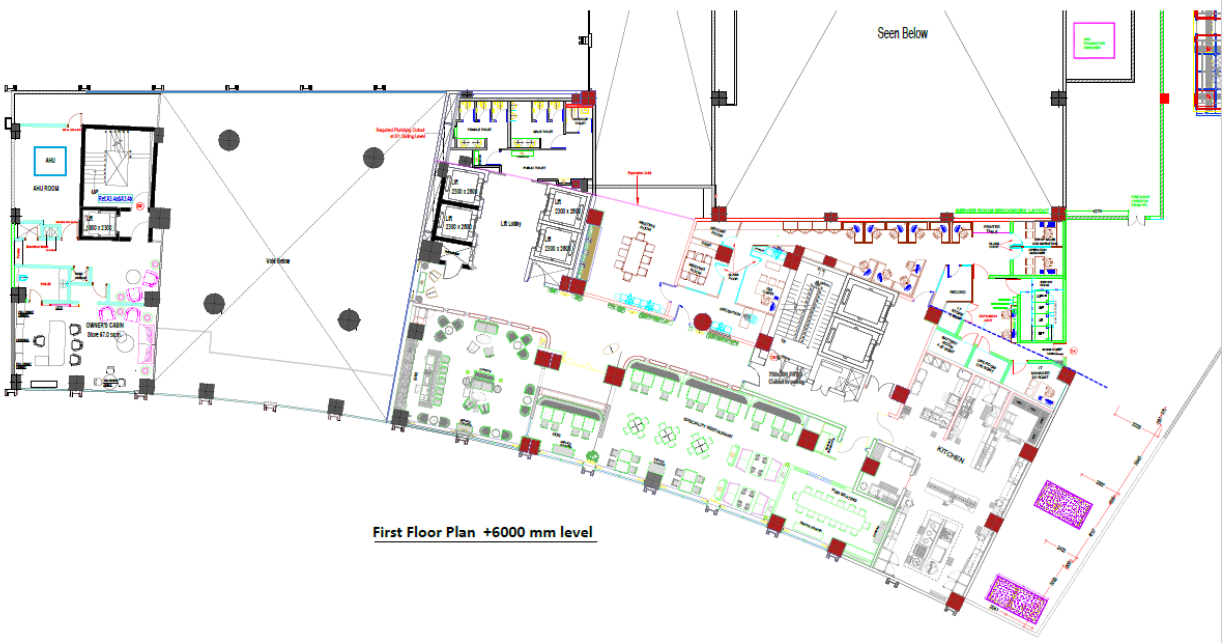


Figure 29: TAJ FIRST FLOOR PLAN

Second Floor Plan:

- Restaurant Seating's are provided in this floor.
- Kitchen including cooking, store, washing space has been provided.
- Live kitchen is also there.
- Amenities like Gym, Spa & sauna, Saloon etc. are provided with top class facilities.



Figure 30: TAJ SEACOND FLOOR PLAN

Typical Floor Plan (3rd to 7th) Floor :

- 24 guest rooms including Executive Suites, Twin Bedrooms are there in this floor.
- Housekeeping Room are also there in this room for room services.
- Specialty of these typical floor is that interior of lobby and corridors are fully different which gives different types of feeling at each different floor.



FIGURE 10: TYPICAL FLOOR PLAN (3RD TO 7TH FLOOR)

8th Floor Plan :

- 15 guest rooms including Executive Suites, King Bedrooms and 1 presidential suite are there in this floor.

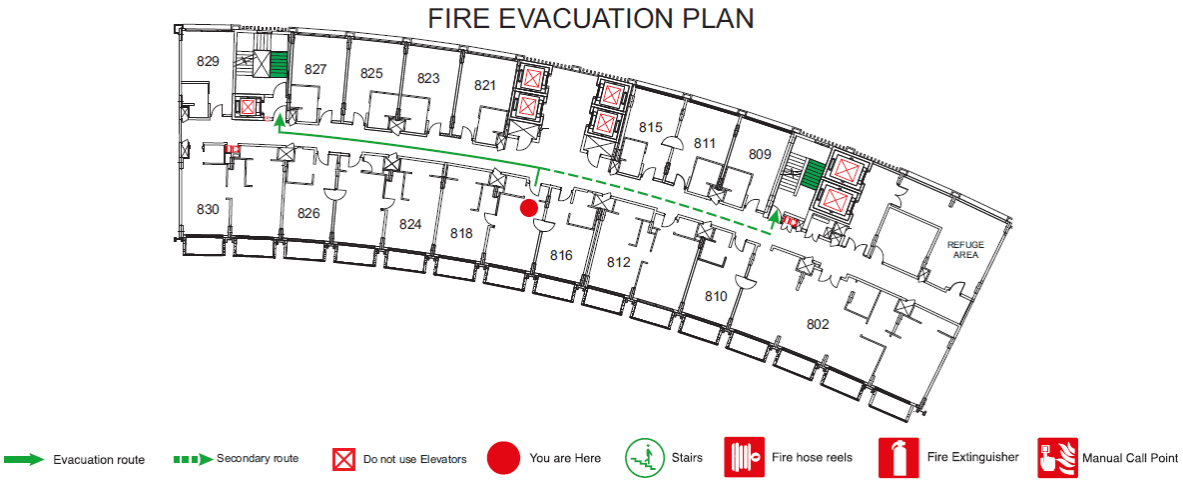


Figure 31: TAJ EIGHT FLOOR PLAN

9th Floor Plan :

- 20 guest rooms including Executive Suites, Twin Bedrooms are there in this floor.

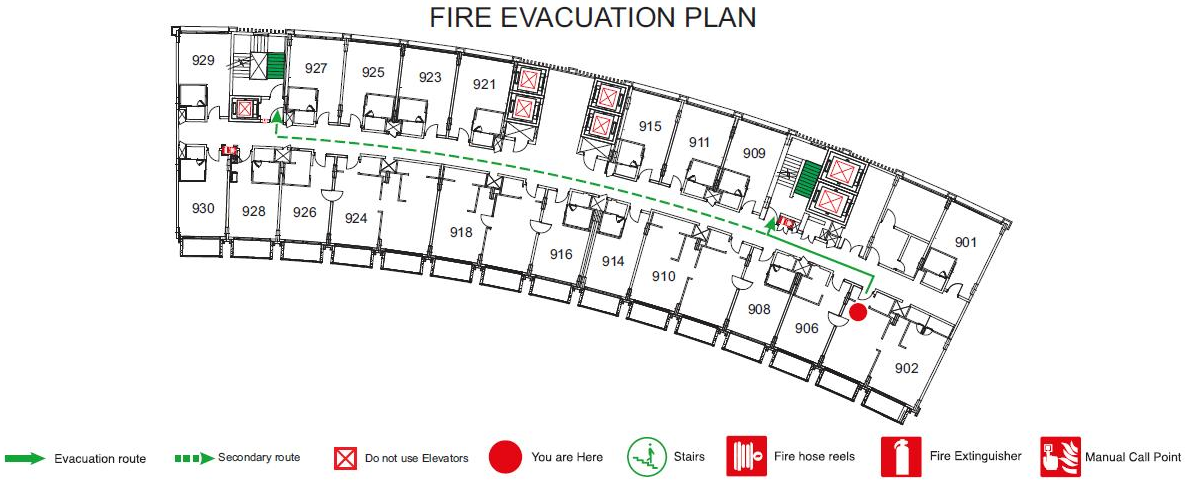


Figure 32: TAJ NINTH FLOOR PLAN

10th Floor Plan:

- Open terrace lounge, club area with the view of swimming pool is provided in the top floor of this Hotel.



Figure 33: TAJ TENTH FLOOR PLAN

4.11 GUEST ROOMS TYPOLOGY

Total there are 152 rooms which are majorly classified into 4 categories:

- Executive Suite
- Twin Room
- King Room
- Presidential Suite

Executive Suite

Tranquility and luxury unite in the Executive Suites at the Taj Lakefront, Bhopal. Extravagant and spacious, these suites, with the option of interconnecting rooms, are ideal for vacationing with family and friends. The breakfast table, the plush seating, a dressing area and state-of-the-art bathrooms are the perfect setting that your memories deserve. Indulge in the breath-taking views of the lake and Taj's signature service for a truly luxurious retreat.





Size: 66 sq.m

Signature Feature: Spacious two-room suites overlooking the lake

Occupancy Details: Up to 3 guests. Max Adults: 3, Max Children: 2

OTHER CONVENIENCES

- Tea-coffee maker
- Forest Essentials bath amenities
- Air conditioning
- Separate living area
- Electronic safe.
- WiFi
- Iron & ironing board

- In-room bottled water
- Minibar
- Newspaper
- Full-length mirror, hair dryer, weighing scale
- 49-inch Smart LED TV



Figure 34: TAJ EXECUTIVE ROOVE SUITE ROOM PLAN

Twin Room

Framed by the picturesque backdrop of the hills, the Deluxe Rooms are the epitome of tranquillity and relaxation. The decor seamlessly merges the aesthetic philosophy of Madhya Pradesh with a European flair. Fully-equipped with quality amenities, including digital connectivity with smart TV and Taj's signature service, the Deluxe Rooms offer an unmatched experience of comfort. Includes complimentary access to the hotel gym and wet areas





SIZE: 33 sq.m

SIGNATURE FEATURE: Spectacular vistas of the hills

Occupancy Details: Up to 3 guests. Max Adults: 3, Max Children: 2

OTHER CONVENIENCES

- Tea-coffee maker
- Forest Essentials bath amenities
- Choice of smoking & non-smoking accommodation
- Air conditioning
- WiFi
- Iron & ironing board
- In-room bottled water
- Minibar
- Newspaper
- Full-length mirror, hair dryer, weighing scale
- 49-inch Smart LED TV
- Shower Cubicle

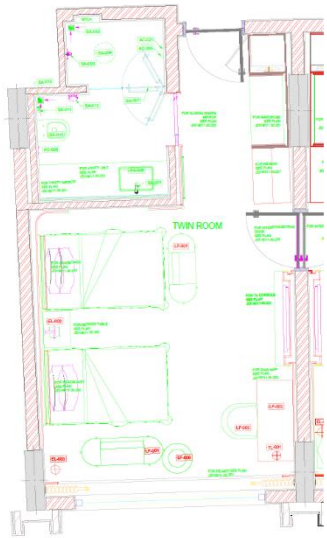


Figure 35: TAJ DELUX TWIN BEDROOM PLAN

King Room

Framed by the picturesque backdrop of the hills, the Deluxe Rooms are the epitome of tranquillity and relaxation. The decor seamlessly merges the aesthetic philosophy of Madhya Pradesh with a European flair. Fully equipped with quality amenities, including digital connectivity with smart TV and Taj's signature service, the Deluxe Rooms offer an unmatched experience of comfort. Includes complimentary access to the hotel gym and wet areas.



SIZE: 33 sq.m

SIGNATURE FEATURE: Spectacular vistas of the hills

Occupancy Details: Up to 3 guests. Max Adults: 3, Max Children: 2

OTHER CONVENIENCES

- Tea-coffee maker
- Forest Essentials bath amenities
- Choice of smoking & non-smoking accommodation
- Air conditioning
- WiFi
- Iron & ironing board
- In-room bottled water
- Minibar
- Newspaper
- Full-length mirror, hair dryer, weighing scale
- 49-inch Smart LED TV
- Shower Cubicle

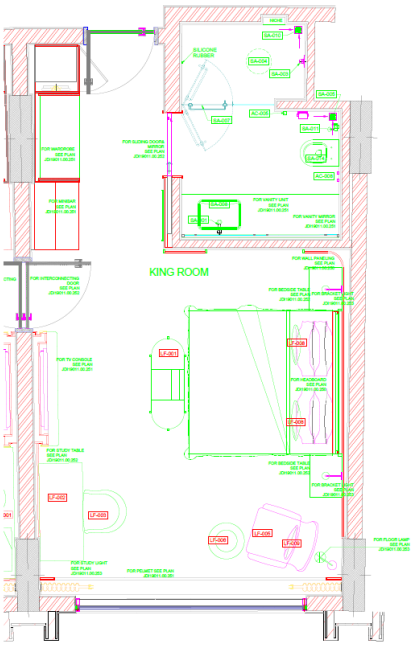
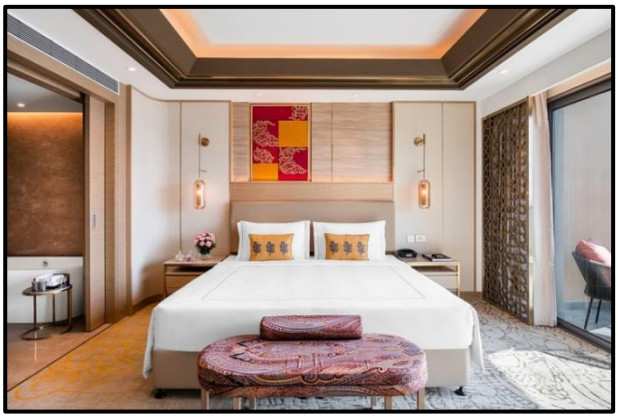


Figure 36: TAJ DELUX BED ROOM PLAN

Presidential Suite

Bhopal is the land of the Nawabs and Begums, and epitomizing this rich culture is the Presidential Suite of the Taj Lakefront, Bhopal. With interiors that give an ethereal glimpse into the bygone era and a private balcony in every room overlooking the glorious city, the Presidential Suite is a perfect union of the multitude of generations. A lavish experience, embodied by an elegant living room, a plush dining area and a palatial master bedroom, await your presence in the opulence of the Presidential Suite at the Taj Lakefront, Bhopal.









SIZE: 152 sq.m

SIGNATURE FEATURE: A regal experience in the heart of the country

Occupancy Details: Up to 3 guests. Max Adults: 3, Max Children: 2

OTHER CONVENIENCES

- Forest Essentials bath amenities
- Air conditioning
- Bedroom with private balcony or verandah & bathroom
- Living room with dining area, bedroom & bathroom
- Electronic safe.
- Tea coffee maker
- WiFi
- Iron & ironing board
- In-room bottled water

- Minibar
- Newspaper
- Full-length mirror, hair dryer, weighing scale
- 49-inch Smart LED TV
- Lake View
- Private Pantry

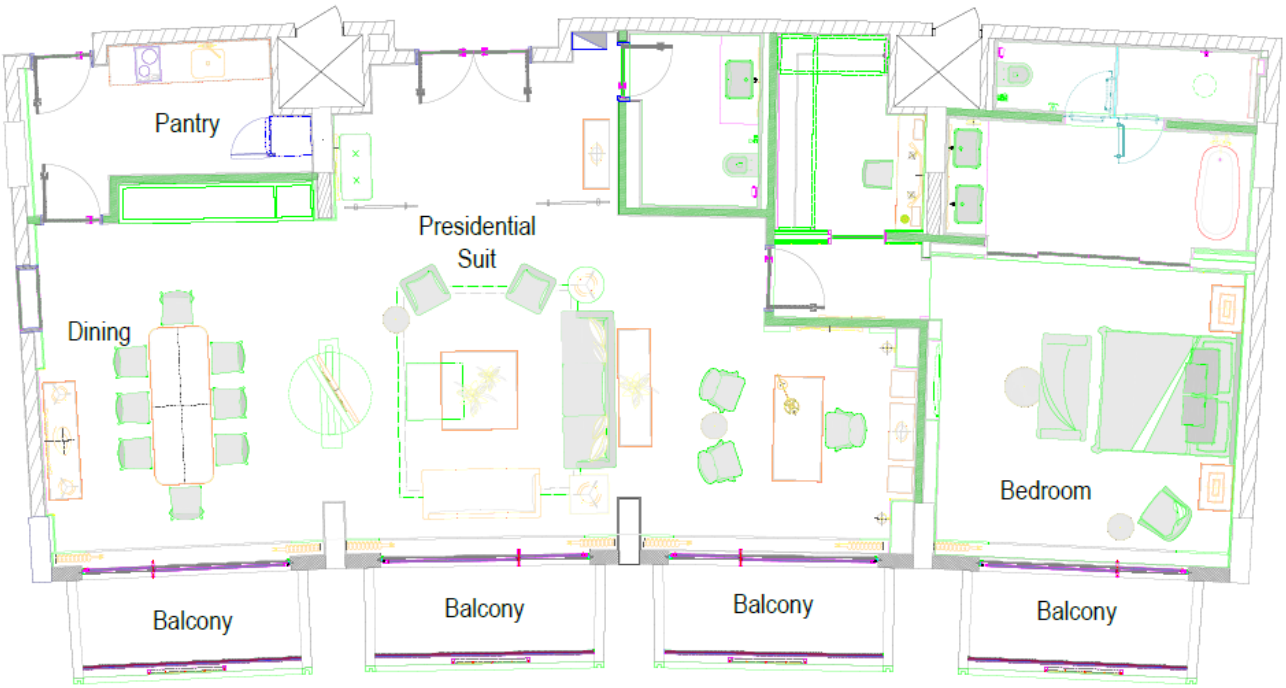


Figure 37: TAJ PRESIDENTAL SUITE PLAN

4.12 VIEW/INTERIOR OF SPACES



Spa & Sauna



PDR



BANQUET HALL



SWIMMING POOL

RESTRAUNT SEATING

LOUNGE/BAR





4.13 SERVICES

ELECTRICAL SERVICES



L.T. panel room-60 sqm



H.T. panel room-20 sqm



L.T. and H.T. panel room

Access width -4m

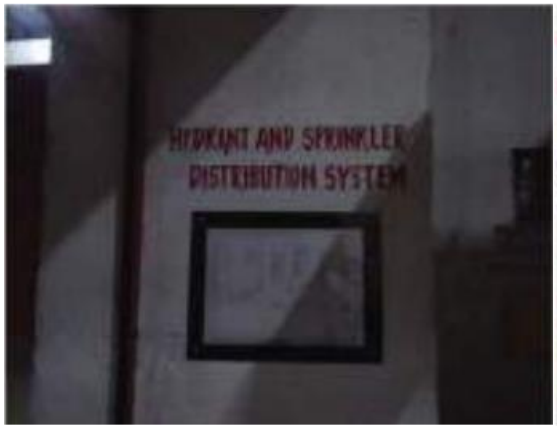


L.T. and H.T. panel room



Fire Fighting

Height-3.9 m





Fire Fighting Electrical Tray

CHILLER PLANT







AREA –150 sqm Access width –1.8 m Access for machinery

Width –6

FIRE PUMP





Control Panel for Fire Room 70 sqm Water Storage 20,00,000

Tank Volume –72 cum

WATER TREATMENT







Water Storage Tank Raw 90 sqm

Tank for swimming Pool (area-12 sqm)



Boiler room with pump and

Heat exchange

STP



Overhead tank





COOLING TOWERS

KITCHEN



DISPOSAL AREA



BIO-DEGREDABLE WASTE
RECYCLING PLANT

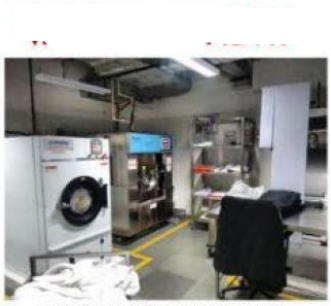


OIL & ELECTRICAL WASTE



METAL, GLASS, PAPER
DISPOSAL

LAUNDARY



WASHING MACHINE



IRONING MACHINES



RECEIVING AND
DISPATCHING AREA



STORE & CHECKING

5 CHAPTER 5: LIVE CASE STUDY 2

HILLTON GARDEN INN, PUNE

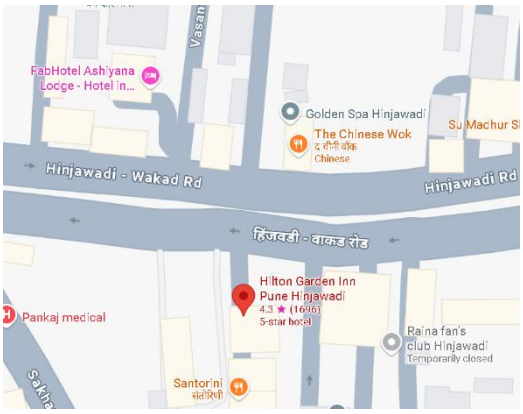
5.2 HILLTON GARDEN INN , PUNE

The Hilton Garden Inn, Pune Hinjawadi is a modern upscale business hotel that epitomises functional luxury and contemporary elegance. Strategically located in the heart of Pune's vibrant IT and corporate hub, the hotel caters to discerning business and leisure travellers seeking comfort, convenience, and global hospitality standards. Just 45 minutes from Pune International Airport, this dynamic property offers seamless connectivity to Rajiv Gandhi Infotech Park, MIDC, and the Mumbai–Pune Expressway.



5.3 LOCATION

Address: Survey No. 40/3, Hinjawadi-Wakad Road, Hinjawadi Phase I, Pune – 411057, Maharashtra



 Landmark: Located next to Shell petrol pump and close to XION Mall

 Strategic Position:

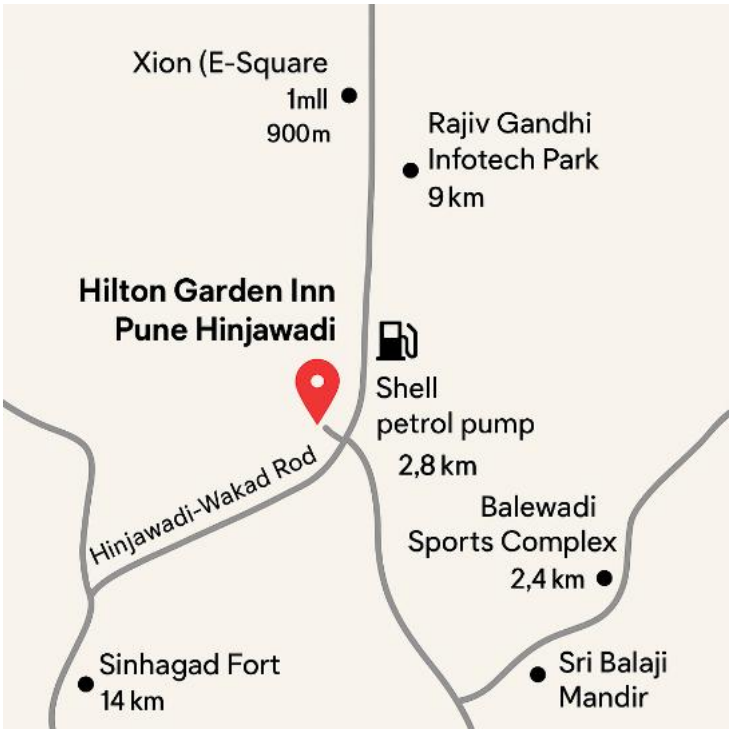
- In the heart of Rajiv Gandhi Infotech Park
- Near International Biotech Park
- Proximity to major IT companies like Infosys, TCS,
- Accenture, Cognizant, etc.

5.4 PROXIMITY

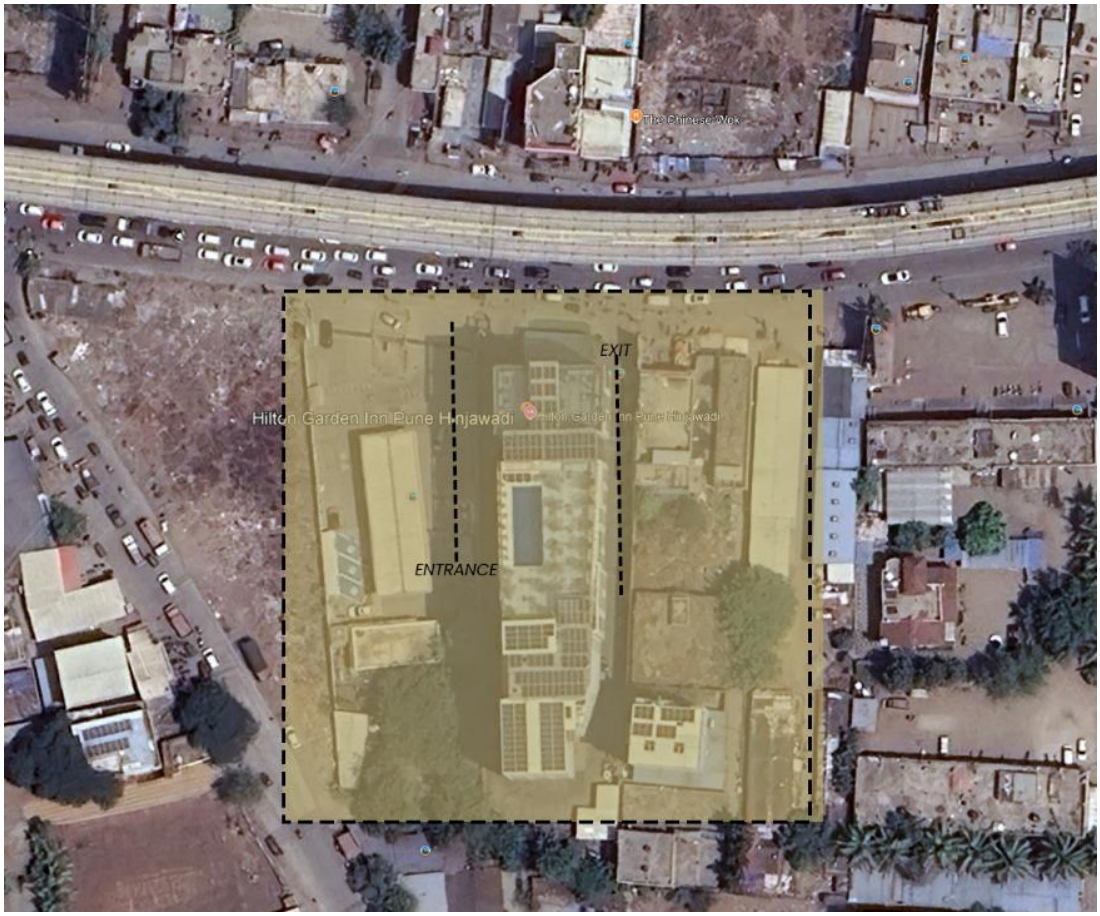
Road Network:

- Excellent connectivity via Mumbai–Pune Expressway
- Easy access to Pimpri-Chinchwad industrial zones
- Approach: Direct access from Hinjawadi–Wakad Road

PROJECT	**HILLTON GARDEN INN**
LOCATION	**PUNE**
CLIMATE	**Humid Subtropical**
TOPOGRAPHY	**PLAIN LAND**
ARCHITECT	**JOI DESIGN**
COMPLITION YEAR	**2021**
NO. OF ROOMS	**144**
SITE AREA	**4.77 ACRE**
FAR	**2**



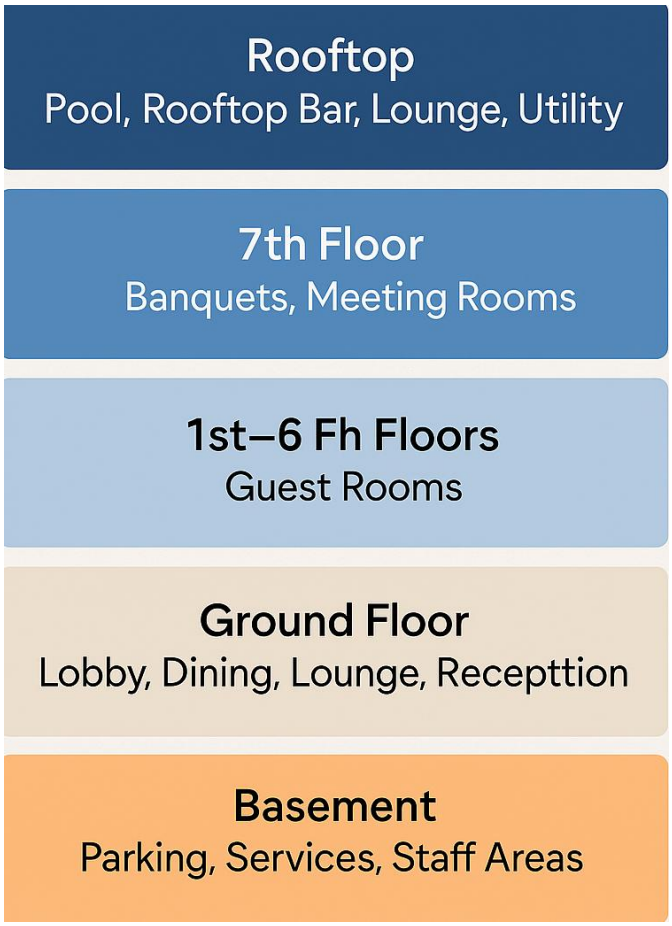
5.5 SITE LOCATION



5.6 FACILITIES

Connecting Rooms	Free parking	Free WiFi
Non-smoking rooms	Digital Key	EV charging
On-site restaurant	Outdoor pool	Fitness center
Room service	Meeting rooms	Pets not allowed

5.7 VERTICAL ZONING



5.8 AREA STATEMENT

Category: 5-Star Business Hotel

Total Guest Rooms: 144

Total Built-Up Area (BUA): ~9,069 m² (≈ 97,600 sq. ft)

Structure: G + 6 Upper Floors + Rooftop Deck + Basement

5.9 GUEST ACCOMMODATION ZONE

Sub-Zone	Qty / Notes	Area (m²)
King Rooms	70 units @ 28 m²	1,960
Twin Rooms	40 units @ 28 m²	1,120
Family Rooms / Suites	34 units @ avg. 32 m²	1,088
Room Corridors	Carpeted, 1.8–2m wide (all floors)	~500
Service Rooms	Housekeeping, janitor closet per floor	~60
Total – Zone 1		~4,728 m²

5.10 F&B (FOOD & BEVERAGE)

Outlet	Capacity / Design Details	Area (m²)
Garden Grille	All-day dining, open kitchen concept, buffet + à la carte	220
Garden Bar / Lounge	Lounge-style seating, bar counter, bar-back wall, TV units	80
Pavilion Pantry	24/7 grab & go retail, chillers, snacks	25
Total – Zone 2		~325 m²

5.11 MEETING & EVENT SPACES

Component	Capacity / Fit-Outs	Area (m²)
Ballroom	Max 400 pax theatre style; divisible partitions	414
Meeting Room	U-shape/boardroom layouts, projector, AV panels	80
Pre-function Area	Waiting zone, buffet service counters	70
Total – Zone 3		~564 m²

5.12 RECREATION & WELLNESS

Facility	Fit-Out / Equipment	Area (m²)
Fitness Center	Cardio machines, weights, changing room	80
Rooftop Pool Deck	Lounge seating, wooden deck, safety barriers	180
Outdoor Lounge	Bar stools, partial pergola, planter beds	50
Total – Zone 4		~310 m²

5.13 LOBBY & PUBLIC INTERFACE

Sub-Zone	Details	Area (m²)
Main Lobby	Double-height, feature lighting, art wall	200
Reception + Concierge	Front desk, check-in kiosk, concierge desk	60
Business Center	3–4 work pods, Wi-Fi, printers, teleconferencing	60
Total – Zone 5		~320 m²

5.14 BACK-OF-HOUSE (BOH) & SERVICES

Functional Areas	Description	Area (m^2)
Main Kitchen + Pantry	Receiving, cooking line, cold storage	~400
Laundry & Linen Room	Washing, drying, sorting zones	~300
Staff Dining & Lockers	Seating for 40, change rooms, WC	~200
Engineering Room	UPS, HVAC, panel boards	~250
Admin Offices & HR	GM cabin, staff meeting room, HR, security	~200
Waste & Garbage Segregation	Organic + Inorganic zones, pest-proofing	~100
Stores (General + F&B)	Dry store, liquor store, chemical room	~200
Total – Zone 6		~1,800–2,200 m^2

5.15 CIRCULATION, LIFTS, VERTICAL CORES

Component	**Features**	**Area (m^2)**
Elevators (3 total)	**2 guest + 1 service lift, SS finish**	**~90**
Fire Staircases	**2 shafts, fire-rated doors**	**~120**
Guest Corridors	**On all floors; 1.8–2m wide**	**~500–600**
MEP Duct Shafts	**Plumbing, HVAC risers, electrical shafts**	**~300**
Total – Zone 7		**~1,050 m^2**

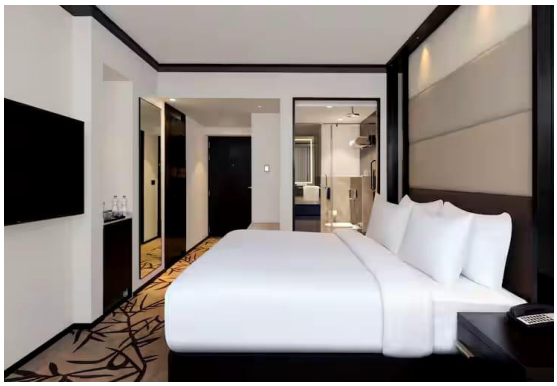
5.16 GUEST ROOM TYPOLOGY

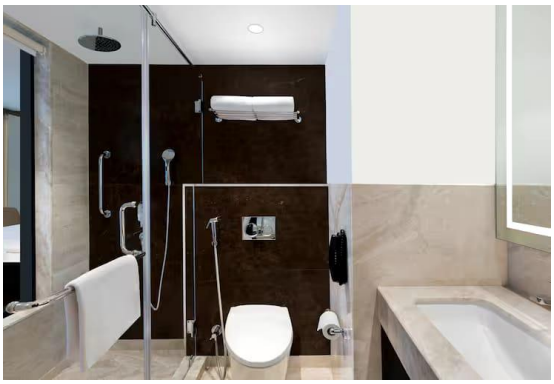
Total there are 152 rooms which are majorly classified into 4 categories:

- **King Room: Standard double bed configuration.**
- **King Guest Room with Hill View: Same as King but with scenic views.**
- **Family Room: Larger layout for families or groups.**
- **Twin Room: Two separate single beds**

KING ROOM

The signature feature of the King Room at Hilton Garden Inn Pune Hinjawadi is its perfect blend of comfort, functionality, and scenic views, tailored for modern travelers. The room offers a spacious king-size bed with ergonomic design, a dedicated work area with an adjustable chair, and floor-to-ceiling windows in select rooms that provide panoramic views of the Pune skyline or Mhatoba Hills.





- Area: Approx. 27–30 sq. m (290–325 sq. ft)
- Occupancy: 2 Adults (1 Child with crib/rollaway bed on request)
- Bed Type: 1 King-size bed
- Amenities:
- 40” HD TV with satellite channels
- Free Wi-Fi
- Work desk with ergonomic chair
- Tea/coffee maker, minibar (on request)
- Digital Key access (via Hilton Honors app)
- Blackout curtains, iron & board, wardrobe
- Bathroom: Walk-in shower, premium toiletries, hairdryer
- Signature Feature: Balanced business-leisure layout with ergonomic furniture and tech conveniences, ideal for solo or couple stays.

King Guest Room with Hill View

This premium variant of the King Room offers a more scenic and tranquil experience, thanks to its floor-to-ceiling windows that frame sweeping views of the Mhatoba Hills and Pune's western skyline. Sized at about 30 square meters (~325 sq ft), it features a luxurious king-size bed, a dedicated work area, blackout curtains, and soundproofing for maximum privacy. Along with standard amenities like Wi-Fi, smart HDTV, and mini-fridge, this room enhances the stay with enhanced lighting, elevated positioning, and premium linens for a serene retreat.







Area: Approx. 30 sq. m (325 sq. ft)

Occupancy: 2 Adults

Bed Type: 1 King-size bed

Amenities:

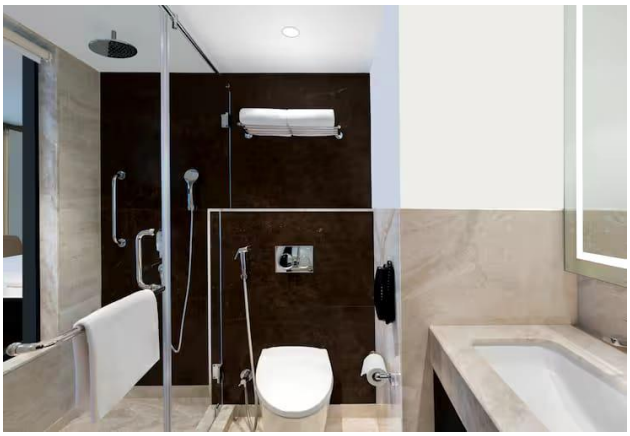
- Large window with hill or skyline views

- All core room amenities: Wi-Fi, TV, tea/coffee, digital key
- Desk with scenic view, plush chair
- Soundproofing and blackout curtains
- Bathroom: Stylish bath with walk-in shower and premium toiletries
- Signature Feature: Panoramic views of Mhatoba Hills, offering a serene, elevated atmosphere perfect for relaxation.

Twin Room

The Twin Room is ideal for friends, colleagues, or travelers seeking separate sleeping arrangements without compromising on comfort. Spanning approximately 27 to 30 square meters (~290 to 325 sq ft), the room features two single beds, ergonomically spaced with plush bedding. It comes with all the core Hilton amenities: a functional work desk, tea/coffee maker, mini-fridge, 40-inch flat-screen TV, and free Wi-Fi. The private bathroom includes a walk-in shower and signature Hilton toiletries. Guests can enjoy natural lighting from large windows and full blackout curtains for privacy and sleep quality.





Area: Approx. 27–30 sq. m (290–325 sq. ft)

Occupancy: 2 Adults (separate beds)

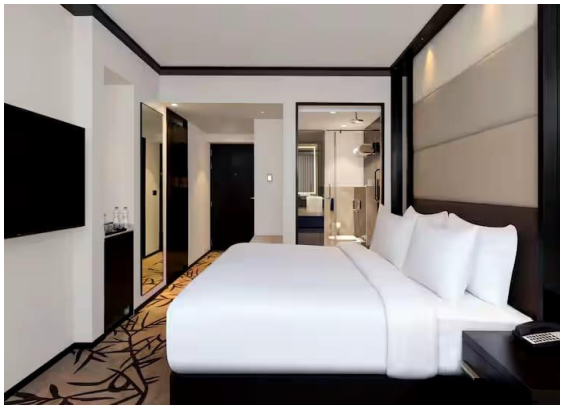
Bed Type: 2 Single beds

Amenities:

- Same core offerings as King Room
- Individual beds with plush linen
- Workstation, blackout curtains
- Tea/coffee maker, minibar (on request)
- 40” TV, free Wi-Fi
- Bathroom: Walk-in shower with toiletries
- Signature Feature: Ideal for colleagues or friends—offering privacy and shared comfort with separate bedding.

Family Room

The Family Room at Hilton Garden Inn Pune is designed with extra space and comfort in mind, catering especially to families or small groups. Covering around 30–32 square meters (~325–345 sq ft), this room includes a king-size bed with plush bedding and can easily accommodate 2 adults and 1–2 children with the option of an extra bed or crib. It includes a comfortable seating area, a generous work desk, and large windows offering a bright, airy ambiance. Like other rooms, it features individual air-conditioning, a 40-inch HD TV, free high-speed Wi-Fi, and a tea/coffee station. The bathroom is equipped with a walk-in shower, premium toiletries, and fresh towels.





Area: Approx. 30–32 sq. m (325–345 sq. ft)

Occupancy: 2 Adults + 1–2 Children

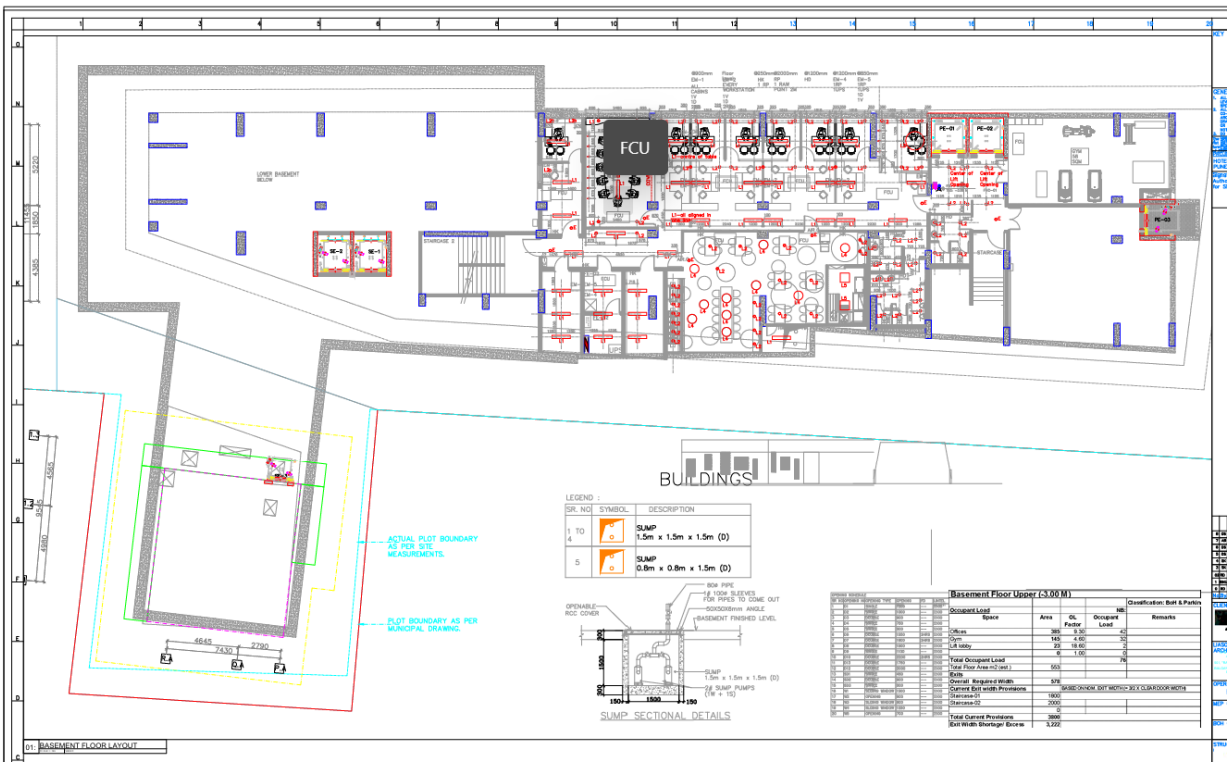
Bed Type: 1 King-size bed + space for crib/rollaway

Amenities:

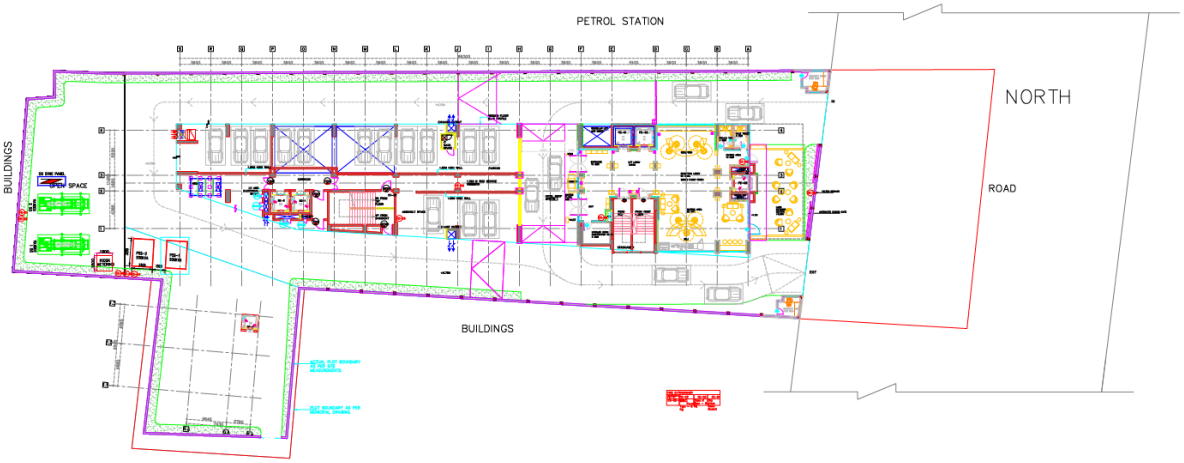
- Larger floor space and seating area
- 40” HD TV, free Wi-Fi
- Tea/coffee setup, mini-fridge
- Work desk, wardrobe, blackout curtains
- Iron & board, extra storage
- Bathroom: Spacious layout with walk-in shower, toiletries
- Signature Feature: Extra space for families or longer stays, with flexibility for additional sleeping arrangements.

5.17 FLOOR PLANS

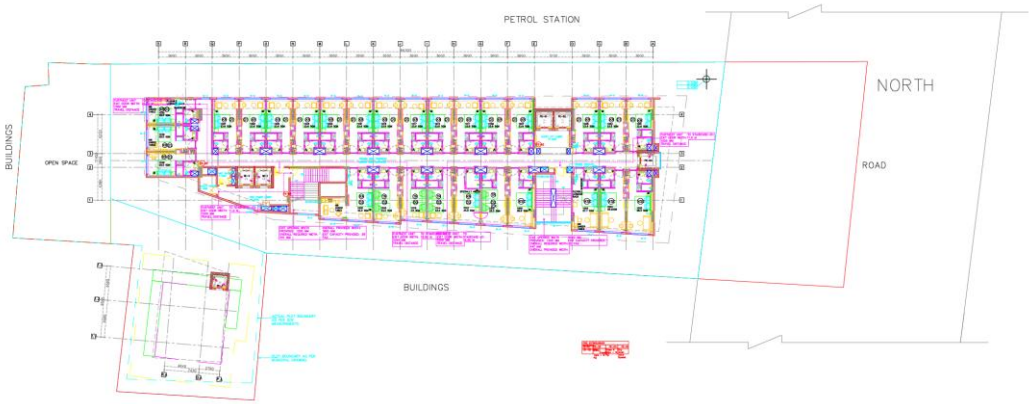
Basement Floor Plan



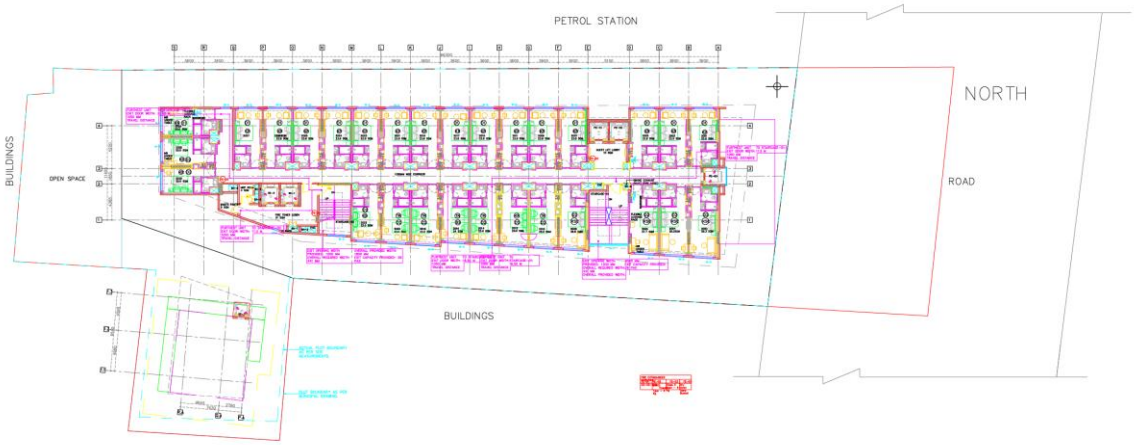
Ground Floor Plan



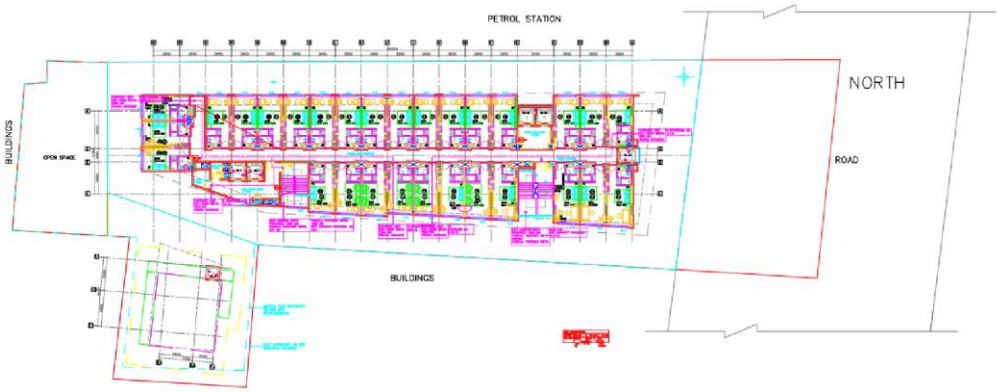
First Floor



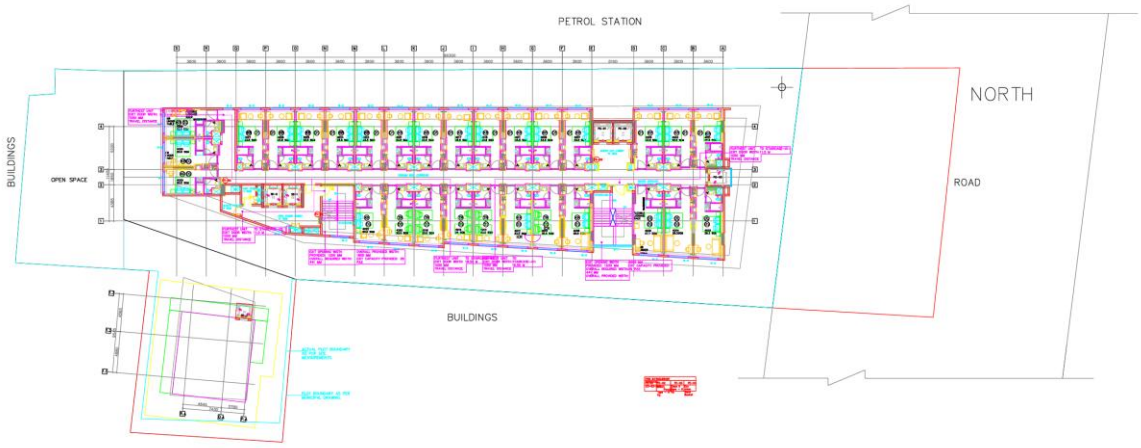
Second Floor



Third Floor



Fourth Floor



Fifth Floor



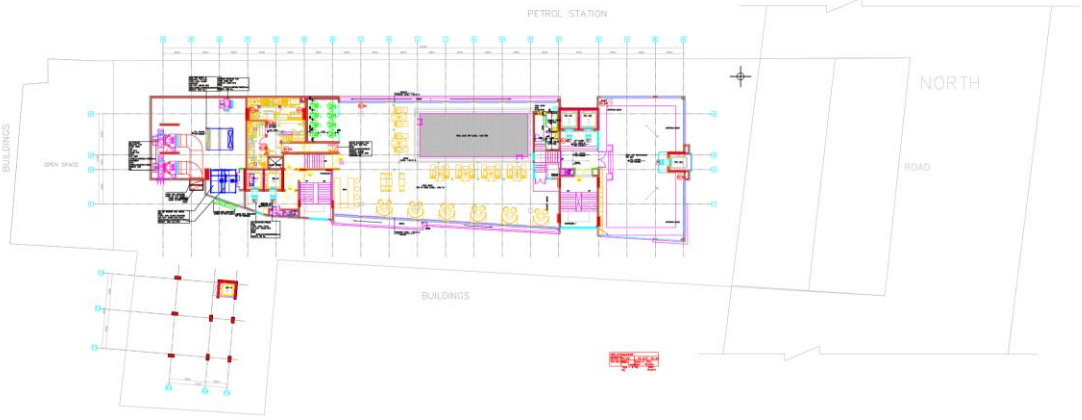
Sixth Floor



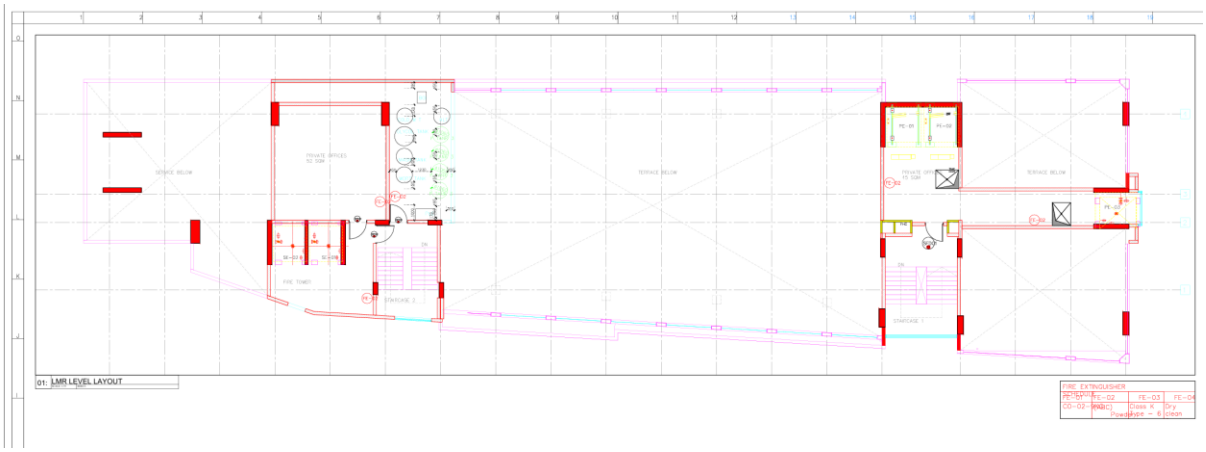
Seventh Floor



Terrace Floor Plan



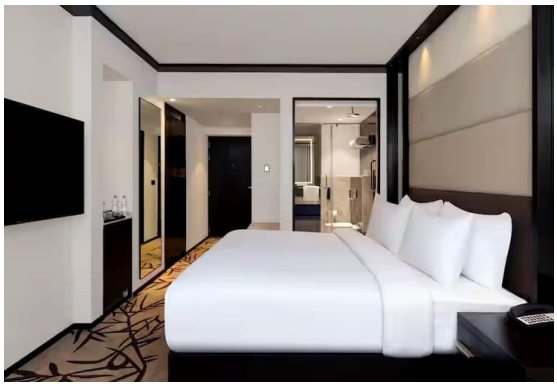
LMR Layout

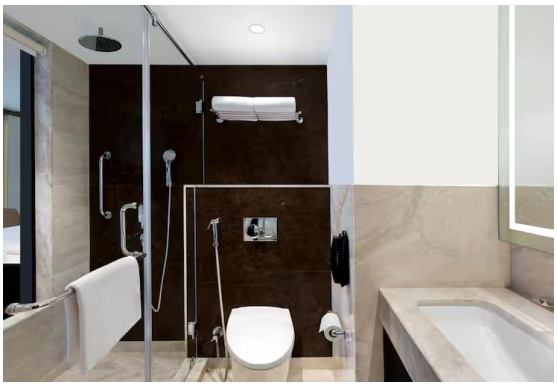


5.18 VIWES / INTERIOR SPACES

1. Guest Room Interiors

- King Room / Twin Room / Family Room / Hill View Room
- Modern, neutral colou.r palettes (beige, grey, soft wood tones)
- Ergonomic furniture with built-in lighting
- Soft carpets or wooden flooring
- Minimalist wall decor with local art accents
- Floor-to-ceiling windows (in select rooms)
- Compact bathrooms with walk-in glass showers and premium fittings

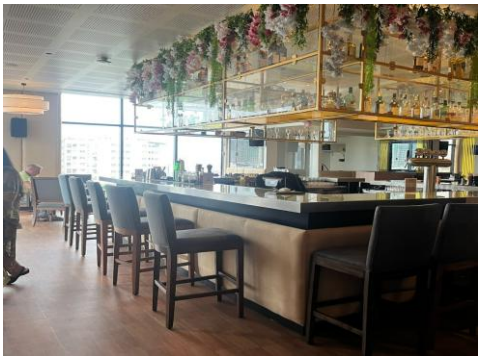




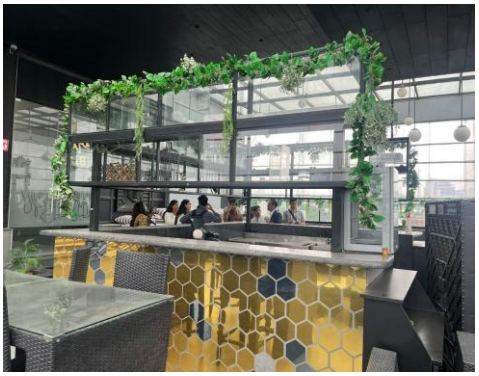
🍽 2. Food & Beverage Areas

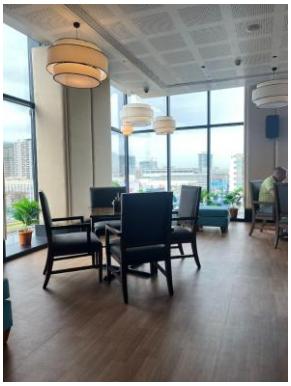
- The Garden Grille (All-Day Dining Restaurant)
- Seating capacity: ~80–100 guests
- Contemporary design with soft lighting and open kitchen
- Buffet and à la carte services

- Indoor + semi-outdoor seating areas
- The Garden Bar
- Lounge-style seating with a chic bar counter
- Cocktail menu and light snacks
- Ambient lighting with casual café-style furniture

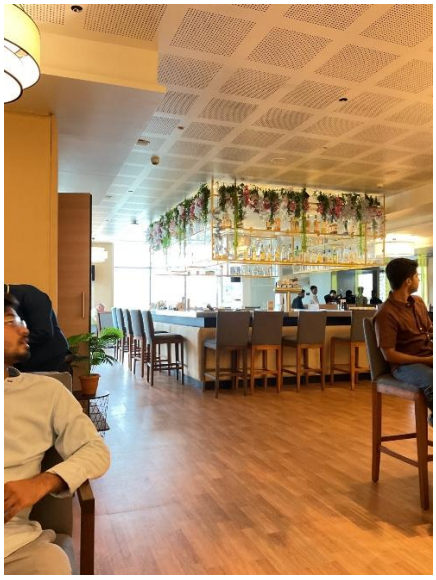



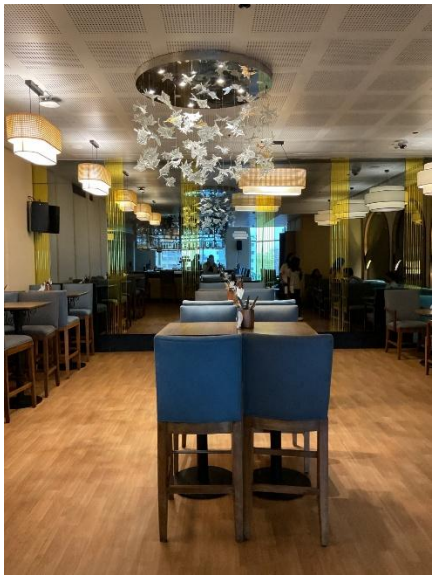




- 24/7 Pavilion Pantry
- Grab-and-go setup near the lobby
- Compact retail-style layout with beverages, snacks and essentials.





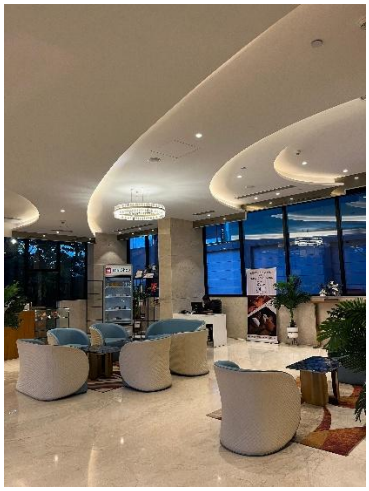
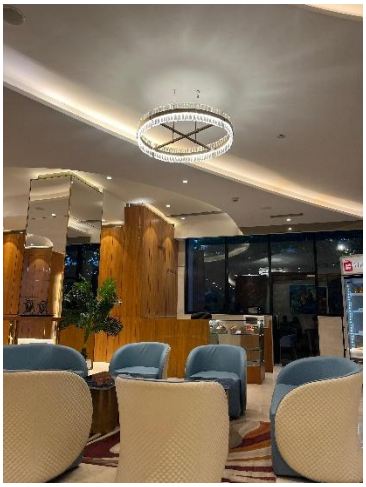
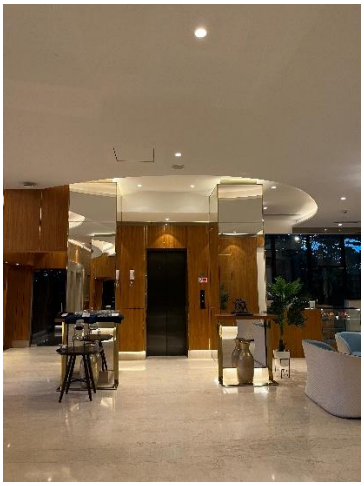
💼 3. Business & Meeting Spaces

- Meeting Rooms / Boardrooms
- Multiple meeting rooms (flexible partitioning)
- Capacity: 10 to 150 guests
- Sleek interiors with foldable seating, projection setup, and acoustic walls
- Neutral walls, wood-finish accents, and integrated A/V equipment
- Business Center
- 24/7 access for guests
- Workstations, printing/scanning stations
- Minimalist layout with enclosed cubicles

🛋️ 4. Lobby & Reception

- Spacious double-height lobby with natural lighting
- Marble/tile flooring with modern chandeliers
- Soft-toned furniture with lounge seating
- Digital check-in kiosks and Hilton Honors Desk
- Art walls featuring local Pune-inspired design



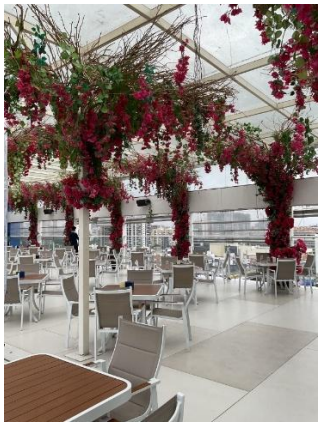





🧘‍♂️🚺 5. Wellness & Fitness

- Fitness Center (Gym)
- Open 24/7
- Modern cardio and strength-training equipment
- Mirrors, rubber flooring, and water station
- TV screens and music system

🏊 6. Rooftop Pool & Lounge

- Rooftop swimming pool with wooden deck and loungers
- Cityscape and hill views from the terrace
- Adjacent outdoor seating for sunbathing or cocktails
- Poolside bar service available in the evenings






5.19 SERVICES

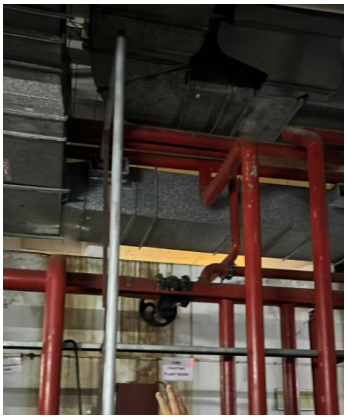
Electrical Services

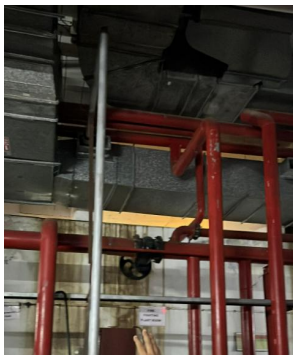





FIRE FIGHTING











Water Supply



STP



RO Plant





HVAC








6 CHAPTER 6: DESK APPRAISAL 1

VIVANTA BY TAJ GURGAON



6.2 EXECUTIVE SUMMARY

Vivanta by Taj Gurgaon, now officially known as Taj City Centre **Gurugram**, represents a significant achievement in contemporary hospitality architecture. **Designed by the internationally acclaimed WOW Architects | Warner Wong** Design, with facade contributions from RKA, this **5-star hotel**, completed in 2013, stands as a sophisticated urban sanctuary within Gurgaon, **India's burgeoning IT and commercial hub**.

The project's foundational design philosophy centers on a revolutionary "**landscaper**" concept. This approach ingeniously reinterprets the traditional hotel typology by manipulating the ground plane into a dynamic, multi-layered podium, thereby blurring the conventional boundaries between the building's architecture, **its interior spaces, and the surrounding landscape. Drawing profound inspiration from traditional Indian palace architecture**, the design prioritizes a sequence of interconnected courtyards and layered public areas.

Ultimately, Taj City Centre Gurugram stands as a compelling exemplar of innovative hospitality design in a rapidly urbanizing landscape. It offers a distinctive "cool luxury" experience that resonates deeply with both the demanding business traveler and the discerning leisure guest, setting a benchmark for integrated and context-sensitive architectural solutions in the region.

6.3 PROJECT OVERVIEW

This architectural case study focuses on the Vivanta by Taj Gurgaon, a prominent 5-star hotel that has been strategically rebranded as Taj City Centre Gurugram. This renaming underscores its integral position within the esteemed Taj Hotels portfolio and its central location in Gurugram, a rapidly evolving and crucial commercial and IT hub in India.



The hotel's location in **Gurgaon (Gurugram), Haryana**, is a defining aspect of its architectural response. This city has undergone a dramatic transformation, emerging as a significant business-focused satellite city of New Delhi, characterized by swift **economic expansion and extensive urbanization**. Its advantageous proximity to the national capital and the **Indira Gandhi International Airport**, coupled with its situation near key recreational destinations such as Kingdom of Dreams and the DLF Golf Course, positions the hotel as a premier choice for a diverse clientele of **global business and leisure travelers**. The urban environment of Gurgaon, often described as a "**messy and chaotic urban fabric**,"

presents a dynamic backdrop where contemporary architectural expressions must coexist with the realities of rapid, often uncoordinated, development.

The architectural design for this distinctive property was primarily executed by **WOW Architects** | Warner Wong Design, a **Singapore-based firm** recognized for its innovative contributions to hospitality projects globally. RKA is also credited for their involvement, particularly in the facade design. The hotel officially commenced operations in March 2013. It is important to note that while some earlier references may indicate a 2009 completion, this date typically pertains to the Vivanta by Taj Bangalore, another project by the same architects that shares a similar design philosophy. The total architectural project area encompasses approximately **25,000 square meters**. The hotel features **208 well-appointed rooms** and suites, including a **presidential suite**, designed to cater to the diverse needs of its guests. The estimated cost for the project was reported to be around **40 million USD**. The Indian Hotels Company Limited (IHCL) served as the client for this ambitious undertaking.



6.4 DESIGN BRIEF AND VISION

The Vivanta brand, a key offering within the Taj Hotels portfolio, is conceptualized to deliver a distinctive "**fresh, vivacious and stylish take on 'cool luxury'**". This brand promise is specifically aimed at the "new age 'work hard-play hard' traveler" and resonates with a cosmopolitan clientele seeking immersive and stimulating experiences. The hotel is envisioned as an "über-cool escape," providing a contemporary haven amidst the urban bustle.

A fundamental aspect of the design brief was to develop an architectural solution that could both align with the classic Indian spatial experience and effectively "**cut through the noise and chaos**" of Gurgaon's surrounding environment. This necessitated a tectonic language robust enough to contend with the visual clutter, the pervasive dust, and the constant reminder that Gurgaon is, in essence, a continuous construction site. The design aimed to create a serene internal world while acknowledging and engaging with its dynamic external context.

Table 1: Project Key Data

Data Point	**Description**
Official Name	**Taj City Centre Gurugram (formerly Vivanta by Taj Gurgaon)**

6.5 ARCHITECTURAL PERSPECTVE

Core Inspirations

The architectural design of Taj City Centre Gurugram is deeply rooted in the principles of traditional Indian palace architecture. This influence is prominently manifested in the hotel's deliberate use of interconnected courtyards and a sequence of layered public spaces, which are fundamental to cultivating an atmosphere of safety, comfort, and relaxation for its guests. These elements are not merely decorative but serve as a structural framework for the guest experience.

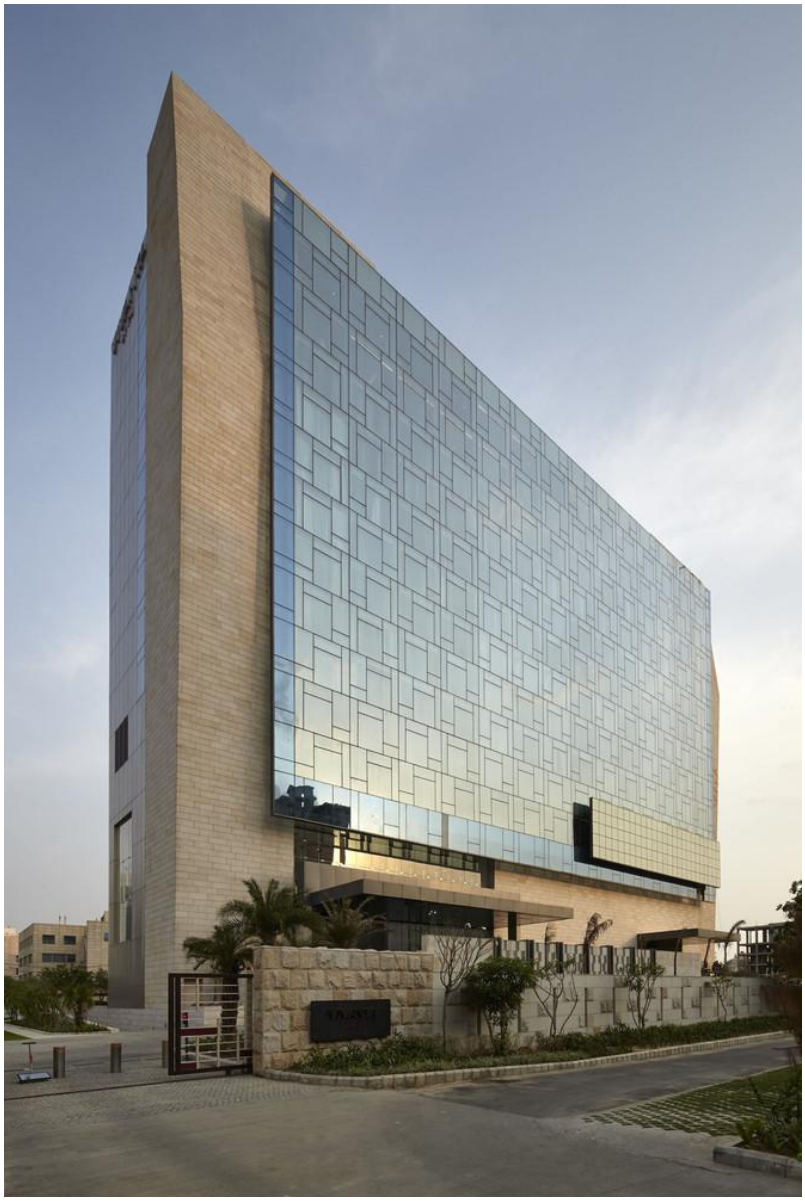




The design endeavors to orchestrate an "**endless promenade of spatial experiences**" throughout the property. This narrative of movement is subtly choreographed to echo the circling and twisting motions characteristic of traditional Indian dance forms, creating a fluid and engaging journey through the hotel's various zones. This approach transforms simple circulation into a continuous, unfolding experience.

A defining characteristic of the hotel's interior is its **triple-height lobby**. This design choice was specifically implemented to maximize the infusion of natural light into the central space, contributing to a profound sense of expansive openness and an inviting, grand atmosphere immediately upon entry. This emphasis on verticality and illumination creates a welcoming and impressive initial impression.

The "Landscraper" Approach



To address the specific urban design challenges of Gurgaon, notably low height restrictions and the imperative for high site coverage, the architects introduced an innovative "landscraper" concept, which stands as a direct counterpoint to the conventional "skyscraper" model.[6] This conceptual framework involves a three-story room block that appears to seamlessly extend from the ground plane, then gracefully hovers and articulates its form around the site.[2] This design effectively maximizes the usable area within the given urban constraints while creating a perceived sense of openness and fluidity. The architectural solution here is a direct manifestation of finding innovative ways to integrate green spaces and fluid designs

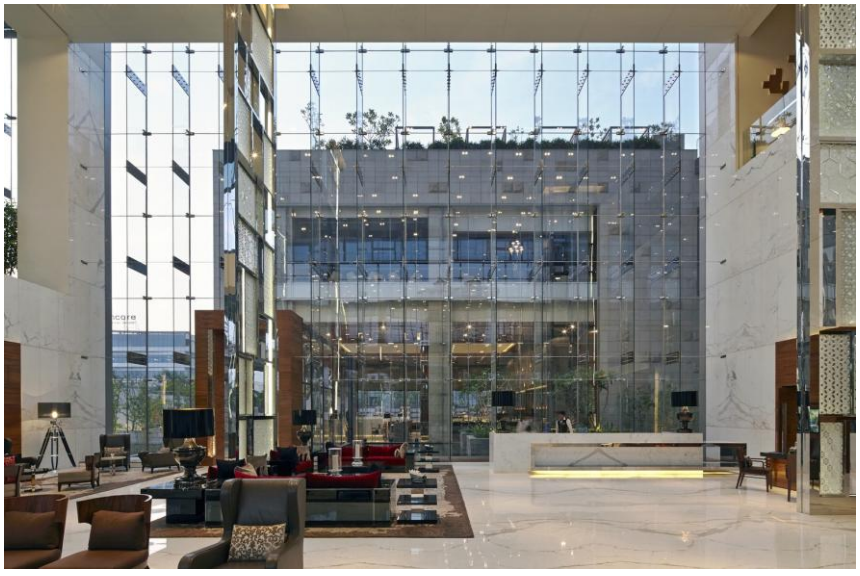
within challenging urban contexts, moving away from isolated, monolithic structures towards more integrated, permeable developments.

Central to the "landscraper" concept is the conceptual manipulation of the ground plane into a Möbius strip, which forms the hotel's podium.[2] The inherent twists and folds of this strip serve to extend the perception of space, seamlessly integrating the landscape back into the folded ground plane. This design strategy effectively blurs the distinction between architecture, interior spaces, and the surrounding natural environment. The exposed concrete structure, a deliberate material choice, visually reinforces this dynamic, flowing nature and its organic integration with the landscape.[8]

The design actively seeks a seamless experiential flow, where the conventional boundaries between indoor and outdoor spaces are dissolved.[2] This fluidity is intended to foster casual interactions and exchanges between hotel guests and local patrons within its public promenade, transforming the hotel into a more accessible and vibrant socio-cultural hub.[6] The lobby, for instance, is conceived as a "garden room," serving as a pivotal central nexus from which various spatial streams flow outwards to courtyards, terraces, and the main pool deck.[2] This approach highlights a significant shift in modern hospitality design, especially within rapidly developing urban centers, where hotels are increasingly expected to serve as community anchors and vibrant public spaces, rather than exclusive, isolated enclaves for transient travelers.

Contextual Dialogue

A primary design challenge involved crafting a spatial organization capable of effectively insulating guests from the "**chaos of the outside world**" while simultaneously allowing the facade design to engage with Gurgaon's "**messy context**". This dual objective required a nuanced architectural response that could provide sanctuary without detachment.



The tectonic language employed serves as a direct reflection of Gurgaon's urban evolution. The main mass of the hotel's two blocks is clad in granite, a material choice that metaphorically renders the building as a "piece of rock emerging from the yellow dirt of Gurgaon". This solid, earthy base is then strategically punctuated and penetrated by layers of glass and metal, which visually "reach out to the emerging world of glass skyscrapers" in the city, symbolizing its rapid modernization and global aspirations. This material interplay functions as a symbolic narrative, visually articulating Gurgaon's rapid transformation from a predominantly rural landscape to a modern IT and business hub. The granite anchors the building to the city's earthy origins, while the transparent and reflective elements project its contemporary, global aspirations. The overall facade experience is described as clean, minimal, and refined, yet its collage of stone, glass, and metal is artfully designed to feel integrated and harmonious with the diverse elements of the modern Indian landscape, characterized by "yellow dirt, concrete, brick and spots of green". This demonstrates how architectural expression directly responds to and interprets the socio-economic and environmental evolution of its immediate urban context.

The design also incorporates strategies to mitigate Gurgaon's challenging composite climate, which experiences significant swings between sweltering summers and cold winters. This is addressed through the provision of spacious interior courtyards, which contribute to creating a more comfortable microclimate within the hotel's confines. While detailed climate-responsive design strategies are more extensively documented for Vivanta Bangalore, which shares the same principal architects, the core philosophy of embracing local climate and integrating landscape for thermal comfort is consistent with the aims of the Gurgaon project.

6.6 ARCHITECTURAL FEATURES & MATERIALS

Exterior Facade Analysis

The exterior facade of Taj City Centre Gurugram is a meticulously crafted composition that actively engages with its urban surroundings and communicates the hotel's identity. The primary material chosen for the main mass of the two hotel blocks is granite cladding. This selection was deliberate, intended to create a powerful visual metaphor of the building as a "piece of rock emerging from the yellow dirt of Gurgaon," thereby firmly rooting the structure in its local context and reflecting the region's geological character.

This solid, earthy granite base is dynamically contrasted and penetrated by layers of glass and metal. These elements are designed to visually "reach out to the emerging world of glass skyscrapers in Gurgaon," symbolizing the city's rapid modernization and global aspirations.[4] The facade covering the guest rooms specifically features an intricate mosaic glass pattern, adding a layer of visual texture and sophistication. The facade, with its distinct combination of granite, glass, and metal elements, further augmented by integrated horizontal LED lights, transcends its role as a mere building envelope. It functions as a dynamic interface that

actively communicates the hotel's identity and its relationship with the urban context, serving as a primary tool for both contextual integration and brand articulation.



A robust stone portal encompasses the main entrance canopy, providing a strong visual anchor and imparting a sense of grandeur upon arrival.[3] The facade design is further enhanced by the incorporation of horizontal LED lights and projections for the curtain wall. This innovative lighting scheme contributes to a "truly unique experience" and significantly amplifies the building's aesthetic presence, particularly during the evening and night, extending its architectural presence beyond daylight hours and reinforcing its "cool luxury" brand positioning.

Despite the juxtaposition of seemingly disparate materials, the overall experience of the facade is described as clean, minimal, and refined. The thoughtful collage of stone, glass, and metal is artfully designed to feel integrated and harmonious with the diverse elements of the modern Indian landscape, including "yellow dirt, concrete, brick and spots of green".

The facade housing the hotel rooms also features a "pixelated greenscape" design. This artistic choice emerged from a desire to visually commemorate the original lush landscape of the site prior to its development. A digitized image of the site's verdant environment was transposed onto the facade, ensuring that from a distance, the building contextually merges with the greens of the earth and the blues of the sky. This low-tech solution, achieved by creatively composing highly reflective glass with dark and light tinted ones, also helped in

achieving optimal Overall Thermal Transfer Value (OTTV) without compromising views from the guest rooms.

Interior Design Elements

The interior design of Taj City Centre Gurugram is conceived as a direct and cohesive extension of the overarching architectural and landscape concepts. Upon entering the lobby, guests experience a seamless transition from outdoors to indoors, finding themselves within an "indoor lounge garden". This fluidity is further reinforced by material patterns that flow from outdoor patios into dining rooms and even wrap up to the ceiling, creating a continuous, immersive experience that blurs interior and exterior boundaries. The seamless transitions between indoor and outdoor spaces and the innovative concept of the lobby as a "garden room" are direct, tangible manifestations of the overarching "landscraper" architectural philosophy. This fluidity significantly enhances the guest experience by creating a continuous, expansive environment that effectively counteracts the potential sense of confinement often associated with high-density urban hotels.



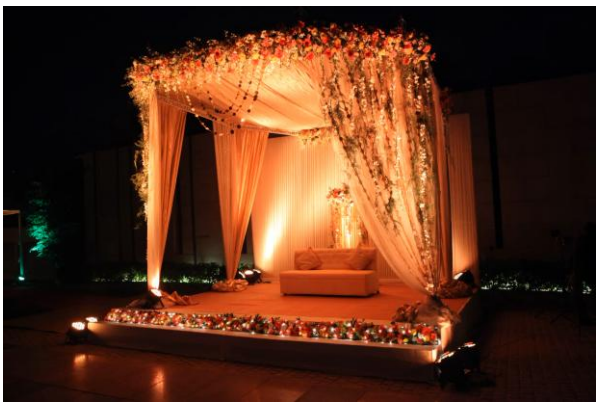


The grand, triple-height lobby functions as the central "nexus and confluence of several space streams".[8] From this pivotal point, circulation flows seamlessly in multiple directions: extending to the courtyards beyond, ascending to upper terraces, and leading to various dining and banquet areas, facilitating intuitive navigation and a sense of discovery.[8]

The guest rooms are based on an "urban studio loft concept," specifically tailored for the "urban nomad". Each room is designed as an open-plan space, approximately **28m²** in area, intelligently zoned to include a bedroom, study corner, relaxation area, a naturally-lit shower, walk-in wardrobe, bathroom, and a glass-enclosed WC. Appliances and AV systems are discreetly built into walls to maximize space conservation, contributing to an open, light, and lifted ambiance. Notably, the bed is positioned as a central circulation element, further promoting spatial fluidity within the private quarters.




The design consciously embraces local construction techniques and craftsmanship. Interior finishes deliberately celebrate a raw and rustic aesthetic; for instance, a robust bush-hammer finish is applied to exposed concrete surfaces to either enhance or subtly conceal their natural roughness. Where concrete is deemed inappropriate, simple timber paneling, stone, or rough bagged render are utilized. The entire material palette, encompassing both exterior and interior elements, including fabric selections, was chosen with sensitivity to local supply chains and procurement conditions, thereby avoiding the high carbon costs associated with importing materials from outside South India. This demonstrates a profound integration between the foundational architectural concept and its interior execution, where the interior spaces are not merely decorative but active participants in the building's overall narrative, spatial experience, and contextual dialogue.

In the hotel's banquet halls, an abstracted Indian motif is skillfully grafted onto a sound-absorbing surface. This innovative solution effectively aids acoustical comfort without appearing intrusive, ensuring a pleasant auditory environment for events.

6.7 TABLE 2: KEY ARCHITECTURAL MATERIALS AND APPLICATIONS

Material	Primary Application	Design Intent/Effect	Specific Features
Granite	Main facade cladding, entrance portal	Evokes "piece of rock," grounds building in local context, provides solidity, contrasts with glass	Stone portal at entrance canopy [3]
Glass	Curtain walls, facade penetrations, interior partitions, layered public spaces	Transparency, visual connectivity, allows natural light, reflects urban context, creates "unveiling" effect	Mosaic glass pattern on guest room facade [3], highly reflective and tinted glass for OTTV values [2]
Metal	Facade penetrations, detailing, structural accents	Modern aesthetic, complements glass, contributes to refined facade collage	Integrated with LED lights and projections [3]
Exposed Cast-in-situ Concrete	Structural elements, interior surfaces, podium	Expresses "landscraper" concept, raw/rustic aesthetic, celebrates workmanship	Robust bush-hammer finish in certain areas, flux lines avoiding traditional

		defects, allows for fluid forms	expansion joints [2]
Timber	Interior paneling, selected finishes	Adds warmth, contrasts with concrete, sensitive to local supply	Simple timber paneling in appropriate areas [2]

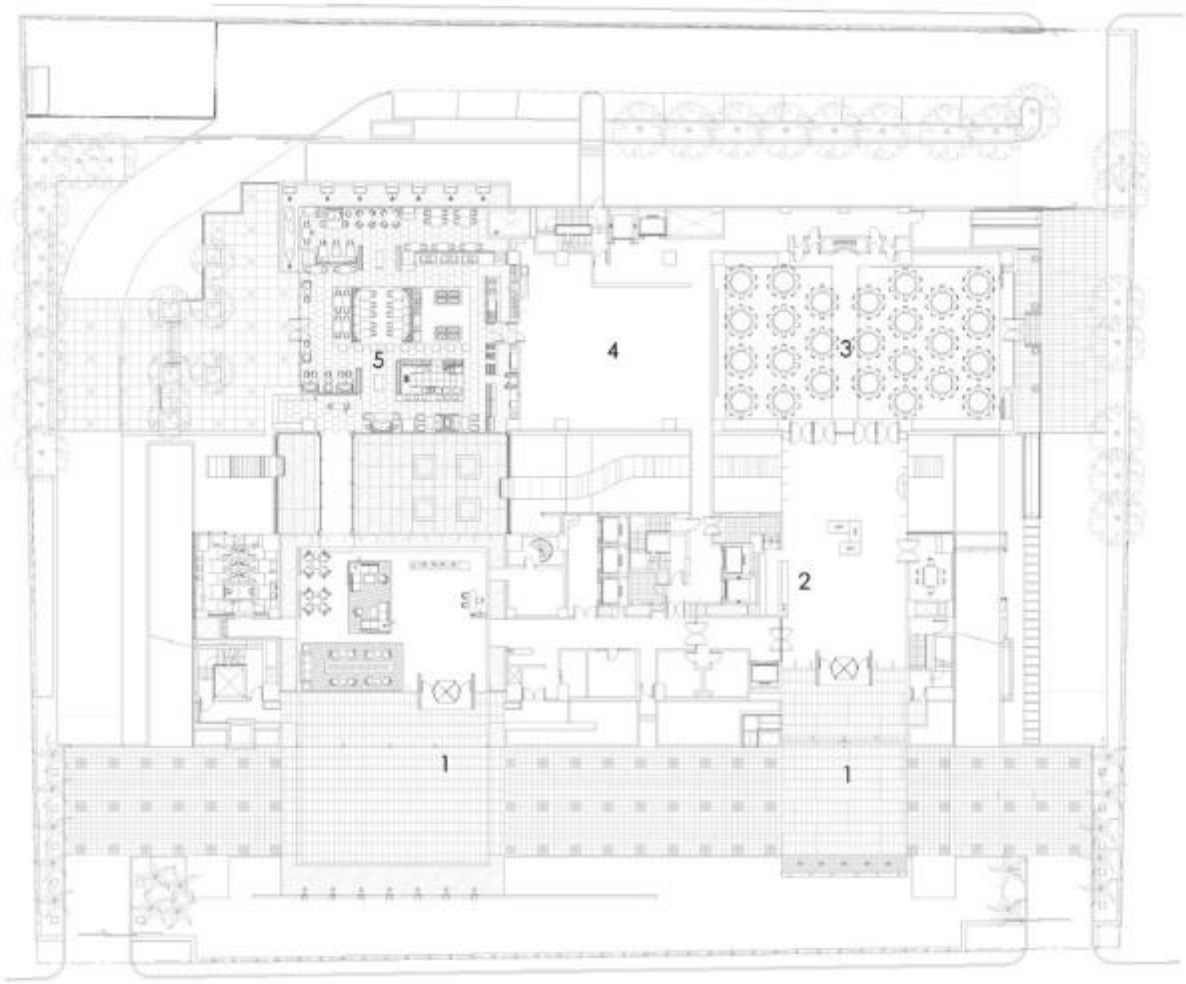
6.8 SPATIAL ORGANIZATION AND FUNCTIONAL ZONING

Public Spaces and Circulation

The hotel's spatial organization is meticulously structured around a system of interconnected courtyards and layered public spaces, directly inspired by traditional Indian palace architecture. These carefully landscaped courtyards are strategically positioned to surround the main public interior spaces. While distinct, these interior and exterior zones maintain visual connectivity through extensive use of glass walls, fostering a profound sense of openness and flow. The concept of "unpeeling layers of screens" from the facade inwards to gradually reveal internal spaces signifies a deliberate design strategy aimed at creating a sensory and experiential journey for guests. This approach builds anticipation and a profound sense of discovery as one navigates the hotel.

The design employs a concept of "**unpeeling layers of screens**," where the experience of the hotel gradually unfolds from the facade inwards.[4] This progressive revelation unveils internal spaces and amenities, such as the swimming pool and various restaurant blocks, creating a sense of discovery and depth for guests. The maintenance of visual connectivity through glass walls while simultaneously defining separate zones allows for a dynamic interplay of views and experiences, which significantly enhances the perceived spaciousness and luxury. This transforms simple movement through the building into a curated sequence of spatial

revelations, thereby enriching the overall guest experience and making it memorable.



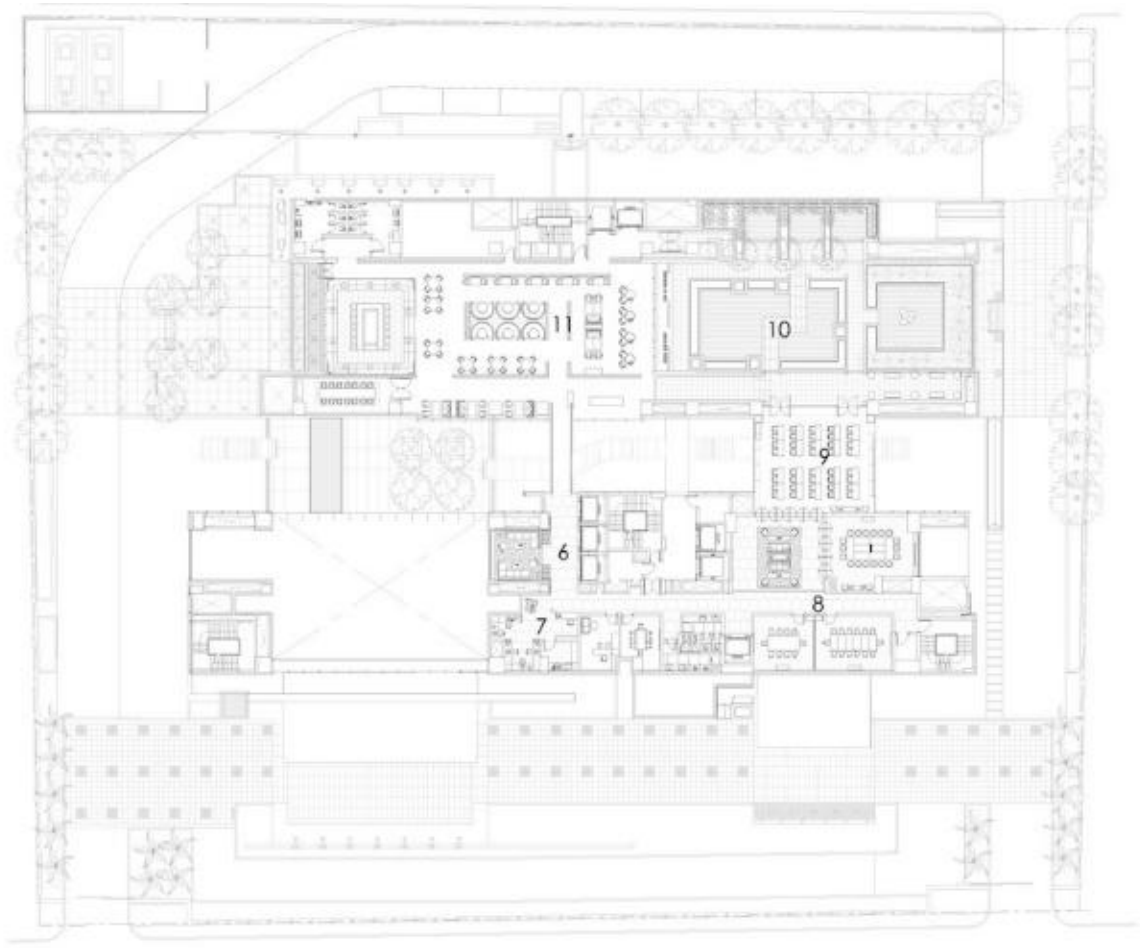
GROUND FLOOR PLAN

LEGEND:

1 DROP-OFF
2 PRE-FUNCTION ROOM
3 BALLROOM
4 MAIN KITCHEN
5 MAIN DINER
6 LIFT LOBBY
7 BUSINESS CENTRE
8 SMALL MEETING ROOMS
9 MEETING ROOM
10 ALFRESCO GARDEN
11 CELEBRITY RESTAURANT

0 10 20 50

N



1ST FLOOR PLAN

LEGEND:

1 DROP-OFF
2 PRE-FUNCTION ROOM
3 BALLROOM
4 MAIN KITCHEN
5 MAIN DINER
6 LIFT LOBBY
7 BUSINESS CENTRE
8 SMALL MEETING ROOMS
9 MEETING ROOM
10 ALFRESCO GARDEN
11 CELEBRITY RESTAURANT

0 10 20 50

N

The spatial experience is carefully orchestrated to be "simultaneously private but connected, interior but also continuous with the exterior landscape". The grandeur of the main lobby is significantly amplified by its transparent connections to the outdoor courtyards and other key public areas, including the main dining room and banquet facilities, multiplying the perceived scale and luxury. The triple-height lobby serves as a pivotal central nexus, a "confluence of



several space streams". From this central point, circulation flows seamlessly in multiple directions: extending to the courtyards beyond, stepping up to upper terraces, and connecting to various dining and banquet areas, facilitating intuitive navigation.

Even within the private quarters, the urban studio loft concept of the guest rooms incorporates the bed as a central circulation element. This strategic placement is intended to evoke a sense of spatial fluidity within the individual rooms, enhancing the feeling of openness and contributing to the overall seamless experience of the hotel.



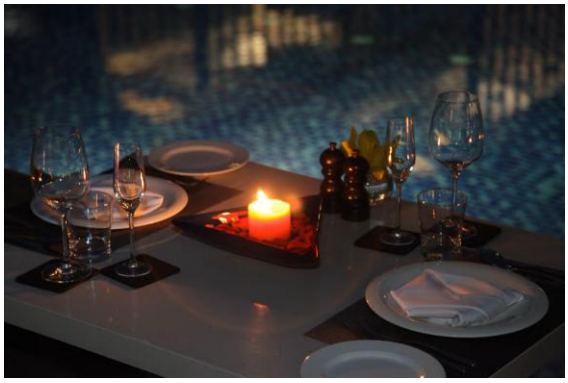


6.9 KEY FUNCTIONAL ZONES

- The hotel provides 208 keys, comprising a diverse range of rooms and suites designed for optimal comfort and business efficiency.[4] These include various types such as Superior, Deluxe, Executive Suites, and Luxury Suites, culminating in a Presidential Nirvana Suite.[16] Each accommodation features contemporary amenities like ergonomic work desks, complimentary high-speed Wi-Fi, and luxurious four-fixture bathrooms.[39]
- The hotel offers a rich array of dining venues:
- **Latitude:** This all-day diner is conceptualized as an "international food theater" providing a vibrant world-cuisine experience.[1] Its tall, voluminous space connects seamlessly to several courtyards, gardens, terraces, and the main pool deck.[2] A notable feature is the open, interactive kitchen, which serves as a backdrop, showcasing culinary processes like the bread oven, tandoor, and grill.
- **Thai Pavilion:** An iconic and award-winning signature Thai cuisine restaurant, this establishment marked its debut in Gurgaon at the Vivanta by Taj, offering an authentic taste of Siam.
- **Tease:** A high-energy bar that extends to a large alfresco dining space, specifically designed to "lift the spirits" and maintain a lively evening vibe.
- **Deli 04:** A gourmet delicatessen, providing convenient options for quick bites and refreshing beverages on the go.
- **Culina | 44:** Also identified as a vibrant world-cuisine restaurant.
- Wellness facilities are a significant component of the hotel's offerings:
- **Jiva Spa:** This is Taj's signature spa, providing a wide array of holistic therapies and rituals, including a specialized jet lag alleviation experience – Jagr – tailored for corporate travelers. The spa is designed as a retreat for "urban rejuvenation".



- **Fitness Center:** The hotel provides a well-equipped fitness center, featuring Life Fitness circuit training and cardio machines, free weights, and a dedicated area for yoga and aerobics.
- **Pool:** A sprawling, turquoise outdoor pool is a prominent feature, complemented by a separate kids' pool for families.
- The hotel boasts extensive state-of-the-art conferencing facilities and fully furnished banquet halls, totaling over 10,000 square feet of meeting space.




- These include:
- **Ballroom (Tango Hall):** A resplendent pillar-less ballroom, spanning 4,555 sq ft (or 49,030 sq ft including pre-function areas), with an alfresco setting, capable of accommodating up to 650 people for various events.
- **Glass House:** A picturesque venue (1,000 sq ft) with an adjoining terrace, designed to host events for up to 300 guests.
- **Boardrooms:** Smaller, more intimate boardrooms such as "Strategy" (642 sq ft) and "Agenda" (301 sq ft) are available for focused meetings and discussions.[21]
- **Rhythm Lounge:** Described as a "work and play" lounge, this chilled-out space is exclusively for guests residing in Indulgence rooms and suites, offering stunning pool views and complimentary hi-tea or select alcoholic beverages during specific hours.
- The detailed breakdown of the hotel's functional zones clearly illustrates a property meticulously designed to cater to a highly diverse array of user needs. It serves discerning business travelers with ergonomic workspaces and dedicated conferencing facilities, offers extensive leisure amenities like the Jiva Spa and pools, and provides versatile event spaces for large-scale gatherings. The "work and play" concept embodied by the Rhythm lounge particularly exemplifies this adaptability. This comprehensive approach indicates a broader trend in luxury hospitality where properties must be exceptionally versatile, capable of accommodating a wide spectrum of activities and demographics, thereby maximizing revenue streams and providing a holistic experience that extends far beyond just accommodation. The integration of "signature restaurants" and a "gourmet delicatessen" further underscores

this, highlighting how food and beverage offerings are increasingly becoming central attractions, rather than merely ancillary services.

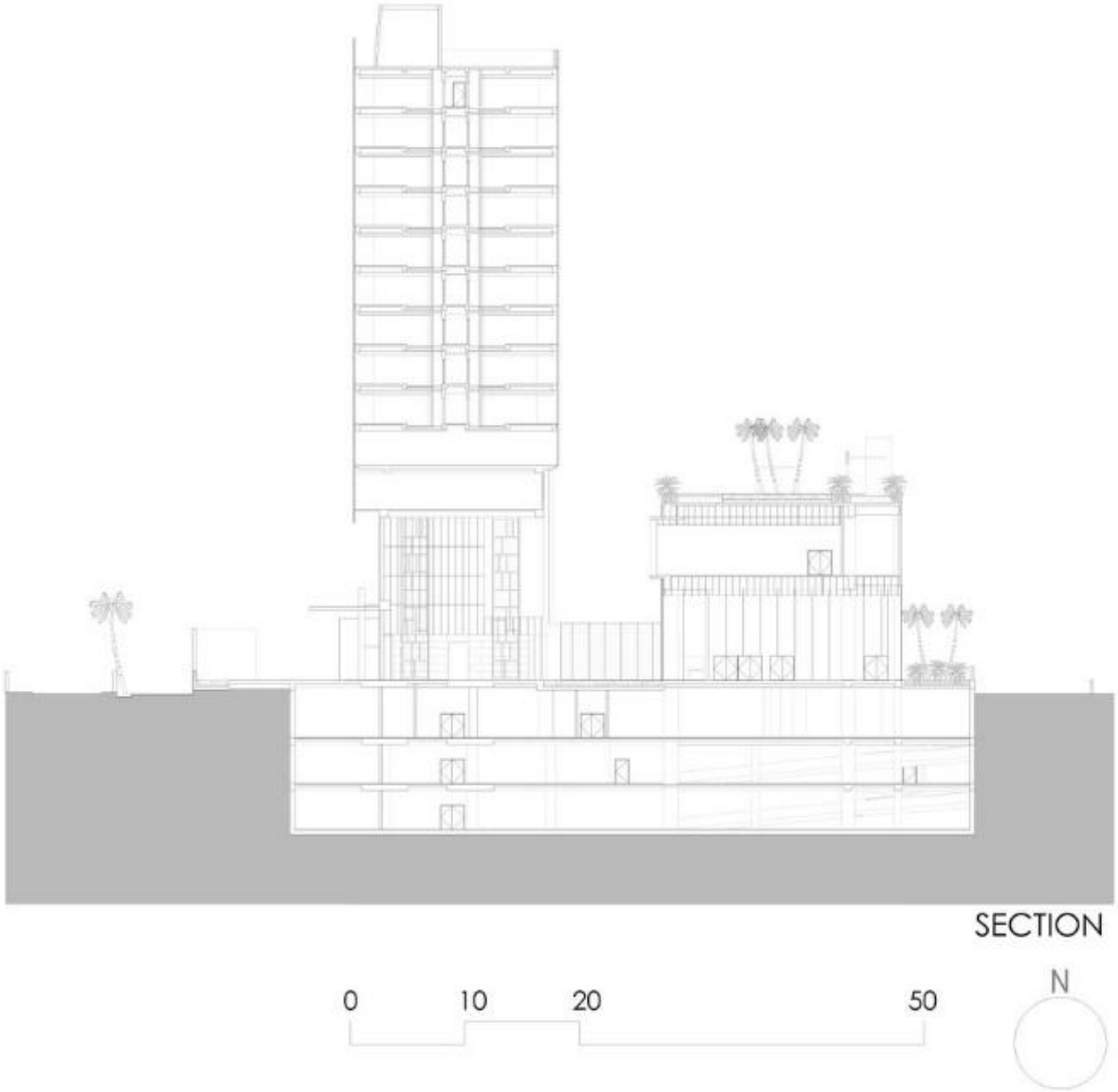


6.10 TABLE 3: MAJOR FUNCTIONAL AREAS AND CAPACITIES

Functional Area	Description / Capacity
Accommodation	208 Rooms & Suites, including Superior, Deluxe, Executive Suite, Luxury Suite, Presidential Nirvana Suite
Total Meeting Space	Over 10,000 sq ft (or 49,030 sq ft including pre-function areas for Ballroom [21])
Ballroom (Tango Hall)	Reception: 850, Theatre: 720, Classroom: 440, Banquet: 610, Boardroom: 100, U-Shape: 50
Glass House	Reception: 50, Theatre: 60, Classroom: 30, Banquet: 100, U-Shape: 22
Boardrooms	"Strategy" (642 sq ft), "Agenda" (301 sq ft)
Restaurants	Latitude (All-day diner), Thai Pavilion (Signature Thai), Culina

Bars/Lounges	Tease (High-energy bar), Rhythm Lounge (Executive lounge)
Wellness Facilities	Jiva Spa, Fitness Center, Outdoor Pool, Children's Pool

6.11 STRUCTURAL SYSTEM AND CONSTRUCTION TECHNOLOGY

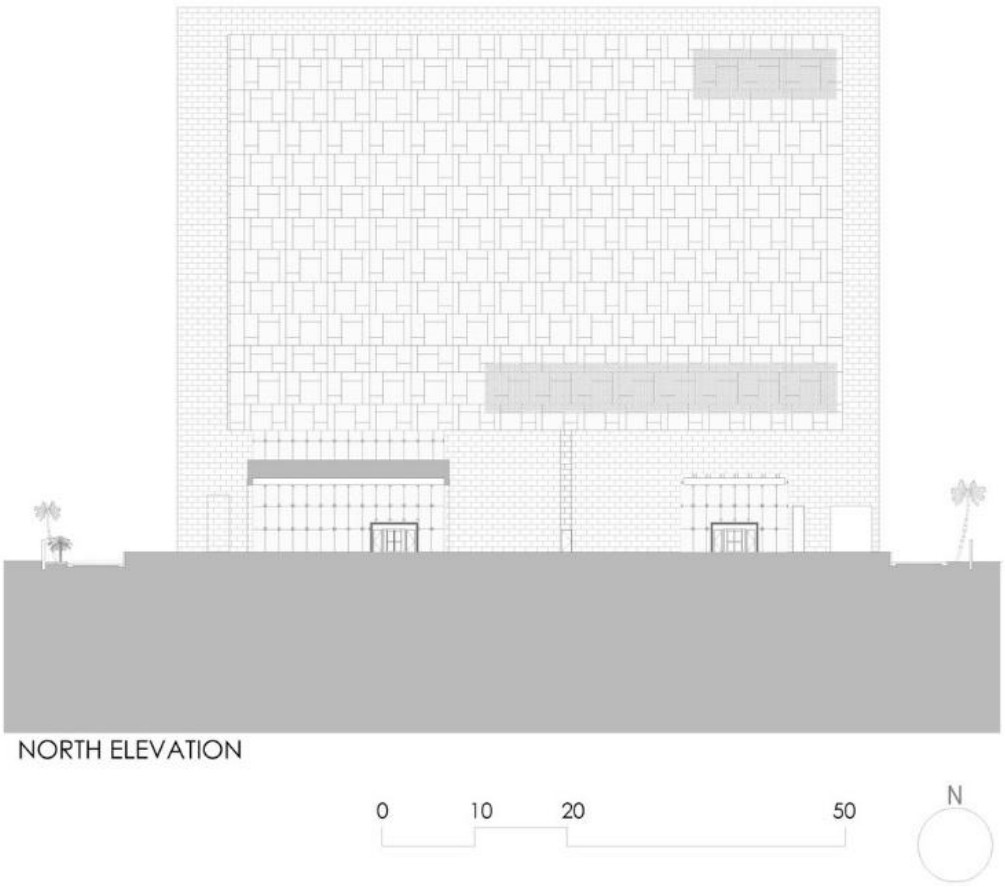


6.12 STRUCTURAL FRAMEWORK

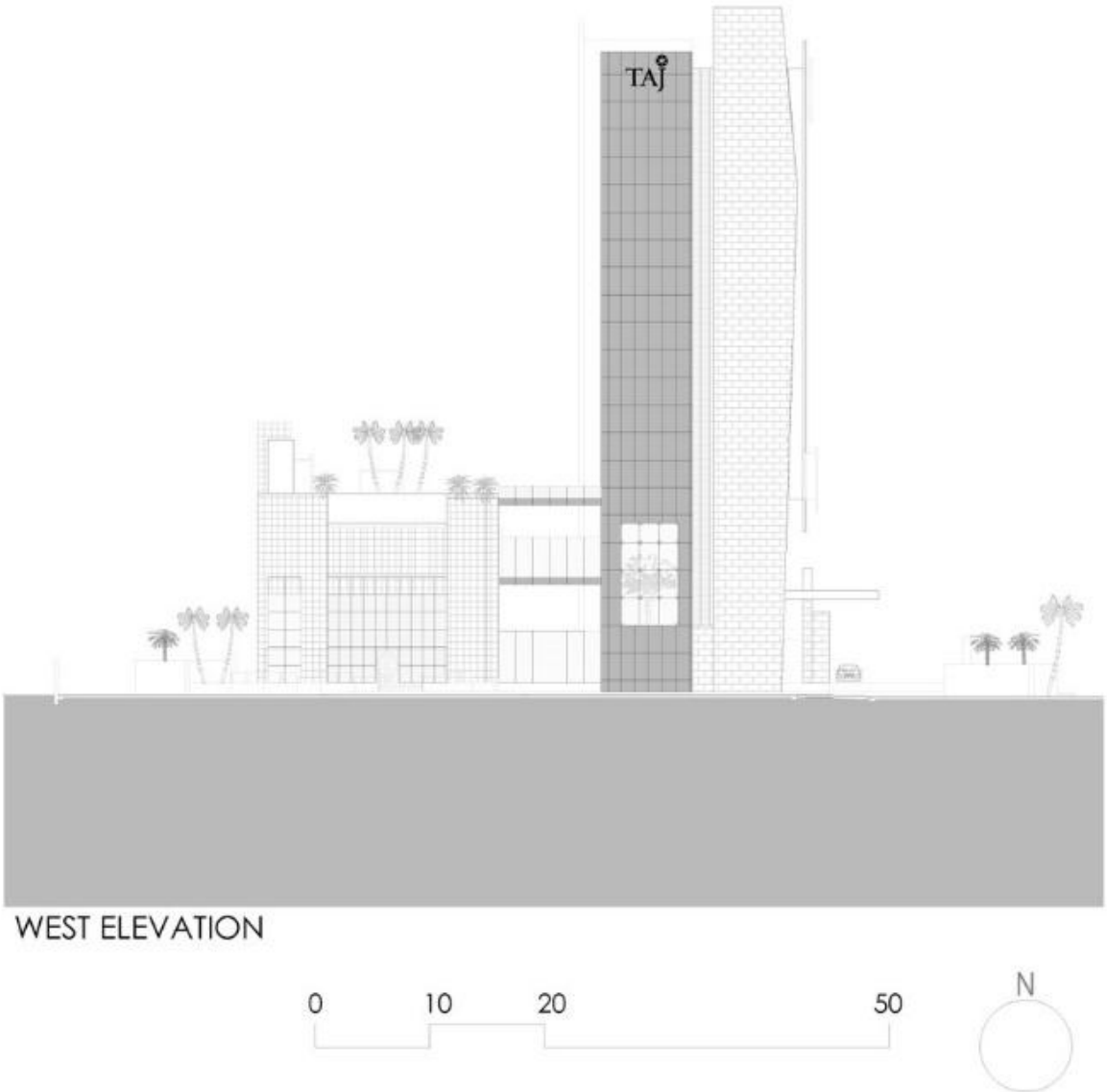
The innovative design concept of the "landscraper" for Taj City Centre Gurugram inherently necessitates a unique and complex structural approach. The description of the three-story

room block "extruding from the ground plane, hovering above it and flexing its way around the site" [2] strongly implies the utilization of advanced structural engineering to achieve these dynamic and seemingly gravity-defying forms. The structural system is not merely a functional necessity but a fundamental and active element of the architectural aesthetic. This approach moves beyond the traditional concealment of structural elements, choosing instead to celebrate their materiality and form, thereby enhancing the building's narrative and tactile qualities.

A significant aspect of the structural expression is the deliberate choice of exposed cast-in-situ concrete as the major construction material, which is left visible wherever feasible.[2] This selection was made to emphatically articulate the landform design approach and to visually convey the dynamic, flowing nature of the design and its integration with the landscape.[8] Notably, the architects even "embraced workmanship defects as part of the aesthetic," utilizing finishes such as a robust bush-hammer finish on exposed concrete to either enhance or subtly conceal its inherent roughness, thereby celebrating a raw and rustic look.[2] This choice directly reinforces the "landscraper" concept's organic and flowing nature, where the building appears to emerge from the landscape.



While specific structural types (e.g., reinforced concrete frame, steel frame) are not explicitly detailed in the provided information for the Gurgaon property, the consistent emphasis on an "exposed concrete structure" [8] and descriptions of the building as a "sleek vertical structure" [41] composed of "two blocks" [4] clad in granite strongly suggest a robust reinforced concrete frame. This type of framework would be essential for supporting the complex geometry, accommodating large spans required for public spaces, and realizing the dynamic forms of the "landscraper" podium. The "landscraper" concept also incorporates a "light-weight roof garden construction" [8], which would necessitate specific structural considerations for load-bearing and waterproofing, further highlighting the interplay of architectural vision and engineering expertise.



Construction and Engineering Highlights

The complex and innovative facade design of Taj City Centre Gurugram necessitated specialized engineering expertise. Firms such as Avante Facades [3] and LB Enclosures [24] were instrumental in providing comprehensive services. These services included schematic design, design development, specification, and construction administration for the facade elements.[3] This highlights the intricate technical requirements for realizing the mosaic glass pattern, the prominent stone portal, and the advanced curtain wall system with integrated LED lights and projections.[3] The involvement of specialized facade consultants in the realization of the complex glass and stone facade underscores the critical and indispensable role of advanced engineering in bringing ambitious architectural visions to fruition. The facade, in this context, is not just a protective skin but a performative element, integrating intricate patterns and dynamic lighting, illustrating the increasing reliance on highly specialized engineering disciplines to execute complex architectural designs.

In response to heightened security concerns, particularly following events like the 26/11 Mumbai attacks, the hotel implemented "highly advanced state of the art Electronic Surveillance" systems.[43] This included a "Pure IP" CCTV solution that underwent a re-architecture process to significantly reduce project costs by over 40% without compromising image quality, coverage area, or storage timelines.[43] This was achieved through the selection of industry-leading cameras with built-in processors and advanced compression technology, and the conversion of multiple storage systems into a common "No-Single-Point-of-Failure" architecture.[43] This demonstrates a substantial investment in cutting-edge security technology as a critical component of the building's operational infrastructure. The detailed description of the hotel's advanced CCTV and electronic surveillance system, explicitly framed within the context of security concerns, reveals a direct and significant link between external geopolitical events and the adoption of cutting-edge building technology within the hospitality sector. The strategic decision to "re-architect the CCTV solution" for both cost-effectiveness and enhanced security demonstrates how stringent security requirements can profoundly influence the technological infrastructure and even the overall project budget of a luxury hotel, implying that modern luxury hospitality design must increasingly integrate sophisticated security systems as a core, high-priority component embedded from the outset.

6.13 BUILDING SERVICES & SUSTAINABILITY

HVAC Systems

While specific HVAC system details for Vivanta by Taj Gurgaon are not extensively documented, the broader Vivanta brand and other properties like Vivanta Bangalore consistently emphasize climate-responsive architecture.[2] This includes design strategies such as orienting key spaces away from intense solar exposure, facilitating natural cross-ventilation throughout interiors, and utilizing the building's thermal mass to moderate indoor

temperatures.[36] These principles were likely integrated into the Gurgaon design to effectively mitigate the challenges posed by its composite climate.[35]

The Taj Group has a demonstrated commitment to energy optimization and efficiency across its properties. An energy conservation project at Taj Vivanta Bangalore (formerly Taj Residency) achieved a significant 7.5% net energy savings in its air conditioning plant operations.[28] This was accomplished through "process optimization"—a no-cost implementation measure—and the strategic installation of harmonic filters to eliminate chiller tripping issues caused by grid voltage fluctuations or sags.[28] The success of this project led the Taj Group to replicate similar energy conservation initiatives across many of its other hotels in South East Asia, indicating a standardized and effective approach to energy efficiency across its portfolio.[28]

General 5-star hotel HVAC standards, as described for other Taj properties, often feature a preference for screw chillers (up to 300-ton capacity) and centrifugal chillers (350-ton and above), selected for their low kW/ton ratings (0.56-0.58) and complemented by variable speed pumps for enhanced energy efficiency.[44] Air Handling Units (AHUs) are typically double-skin construction with vibration isolators, and Fan Coil Units (FCUs) are designed for low noise levels.[44] Fresh air is consistently supplied to guest rooms (50 cfm per room) and public areas, with exhaust systems maintaining a slight negative pressure in toilets.[44] An automation system typically connects all HVAC equipment for efficient control and monitoring.[44] VTS Group, a provider of ventilation systems and Air Handling Units (AHUs), lists Taj Vivanta, Vashi, as a reference, suggesting a brand standard for quality HVAC equipment across Vivanta properties.[45]

Electrical Systems

The electrical system for Taj Vivanta Bangalore, which likely shares common standards with the Gurgaon property, includes an 11 KV high tension power line supplied from a nearby substation.[29] This power is stepped down by two 1000 kva transformers, with a dedicated electrical room and diesel generators providing essential backup power.[29] This setup ensures a robust and redundant power supply system, critical for a 5-star hotel's uninterrupted operations.[29] The hotel's facade prominently features horizontal LED lights and projections for the curtain wall, contributing to its unique and dynamic exterior aesthetic.[3] These integrated lighting elements are part of a sophisticated electrical design that enhances the building's visual presence, especially at night.[3] Energy-saving initiatives, such as timers on external lighting and the replacement of halogen lights with energy-efficient LEDs in guest rooms, are also implemented, aligning with broader sustainability goals.

Plumbing and Water Management Systems

The hotel implements comprehensive water management strategies, including rainwater harvesting and the reuse and recycling of treated water.[21] Empire Tubewells Pvt Ltd, a company specializing in water treatment and rainwater harvesting, lists Taj Vivanta (Gurgaon) as one of its key projects, indicating a professional approach to water resource management.[46] The broader Taj Group is committed to water conservation, with several hotels in Delhi and NCR implementing strategies like reusing treated water and avoiding single-use plastics.[47] For instance, Taj Surajkund Resort & Spa treats approximately 3,500 KL of water monthly for gardening and cooling, and uses dual-flush toilets and sensor taps to reduce waste.[47] Taj Damdama Lake Resort & Spa also treats wastewater for reuse in irrigation and cleaning.[47] These practices reflect a commitment to water use optimization and minimizing environmental footprint.

Waste Management Practices

Taj City Centre Gurugram actively engages in waste segregation and has a strong focus on waste management.[14] The broader Taj Hotels & Resorts group has implemented several green practices to reduce its environmental impact, including minimizing plastic and packaging waste.[48] This includes initiatives such as introducing in-house water bottling plants to transition from single-use plastic bottles to reusable glass bottles, and addressing plastic packaging for bathroom amenities by using refillable ceramic dispensers, biodegradable toothbrushes, and jute or cotton laundry bags.[48] These efforts highlight a commitment to reducing waste generation and promoting sustainable practices, aligning with a broader industry trend towards zero waste management.[50]

Green Building Certifications and Initiatives

Taj City Centre Gurugram holds an EarthCheck Certified Gold status, a significant independent sustainability certification.[13] This certification signifies the hotel's commitment to maximizing guest experiences while minimizing its environmental footprint and benefiting the local community.[21] EarthCheck's six-step process, which includes benchmarking, lays the foundation for robust sustainable practices.[21] The broader Indian Hotels Company Limited (IHCL), under its ESG+ framework "Paathya," strategically enhances its brand by embedding sustainability at the core of its operations, with 77 EarthCheck-certified hotels, including 57 Platinum-certified properties, underscoring this dedication.[51]

The hotel's sustainability efforts are multi-faceted:

Energy Efficiency: The hotel utilizes solar power for heating water.[14] The broader Taj Group has achieved significant energy savings through process optimization in HVAC systems and the installation of harmonic filters to improve power quality.[28]

Water Conservation: Beyond rainwater harvesting and treated water reuse, the hotel focuses on reducing per room night water consumption.[14]

Sustainable Materials and Sourcing: The use of biodegradable products and locally sourced food ingredients further enhances the hotel's sustainability efforts.[14] The broader IHCL initiative to eliminate plastics from its hotels by replacing plastic water bottles, bathroom amenities, and room keys with biodegradable alternatives demonstrates a commitment to environmentally conscious hospitality.[48] This integration of local sourcing, renewable energy, waste reduction, and water conservation reflects a holistic approach to sustainability.[51]

These initiatives collectively demonstrate that sustainability is not merely an add-on but a fundamental aspect of the hotel's operational and design philosophy, reflecting a growing expectation for responsible practices in the hospitality industry.

6.14 CONCLUSION

Taj City Centre Gurugram, originally known as Vivanta by Taj Gurgaon, stands as a compelling architectural case study that successfully navigates the complexities of modern urban development while drawing deeply from traditional Indian design principles. The "landscraper" concept, a central tenet of its design, represents a sophisticated response to the challenges of high-density urban sites, transforming constraints into opportunities for fluid, interconnected spaces. This manipulation of the ground plane into a Mobius strip effectively blurs the boundaries between architecture, interior, and landscape, creating a perceived openness and continuous flow that counters the typical confinement of urban hotels. This demonstrates an evolving trend in contemporary Indian architecture to integrate green spaces and permeable designs within challenging urban contexts.

The hotel's facade serves as a dynamic interface and a powerful brand statement. The deliberate juxtaposition of granite, evoking the region's earthy origins, with glass and metal, reflecting Gurgaon's modern aspirations, creates a visual narrative of the city's rapid transformation. This architectural expression is not merely aesthetic but functions as a cultural and contextual mediator, grounding the building while projecting its contemporary identity. The integration of advanced lighting further extends this narrative into the night, reinforcing the hotel's "cool luxury" positioning.

Internally, the design seamlessly extends the architectural philosophy, with the lobby acting as a "garden room" and a central nexus for various flowing spaces. This "unveiling" of layered public areas creates a sensory journey for guests, enhancing their experience through a curated sequence of spatial revelations. The meticulous planning of multi-functional zones, from diverse accommodation types to extensive dining, wellness, and event facilities, underscores the hotel's adaptability and its role as a contemporary socio-cultural hub. This reflects a broader shift in luxury hospitality, where properties are increasingly expected to be versatile community anchors, maximizing revenue streams while providing a holistic experience.

The structural system, particularly the exposed concrete, is not merely functional but an integral part of the design expression, celebrating materiality and form to reinforce the organic nature of the "landscraper." The collaboration with specialized facade engineers highlights the indispensable role of advanced engineering in realizing such ambitious architectural visions. Furthermore, the significant investment in cutting-edge electronic surveillance, driven by post-event security concerns, illustrates how external factors can profoundly influence the integration of sophisticated technology as a core component of building design.

Finally, the hotel's commitment to sustainability, evidenced by its EarthCheck Certified Gold status and proactive initiatives in water management, waste reduction, and energy efficiency, positions it as a leader in responsible hospitality. These integrated building services and green practices demonstrate that environmental stewardship is deeply embedded in the hotel's operational and design philosophy, aligning with global expectations for sustainable development.

In sum, Taj City Centre Gurugram is more than just a 5-star hotel; it is a thoughtfully conceived architectural entity that responds intelligently to its specific urban and cultural context, offering a harmonious blend of tradition and modernity, functional excellence, and environmental responsibility.







7 CHAPTER 7: DESK APPRAISAL 2

HYATT REGENCY GURGAON

EXECUTIVE SUMMARY

The Hyatt Regency Gurgaon, a prominent 5-star business hotel located in the rapidly expanding urban landscape of Gurgaon, India. Opened in June 2013, the hotel stands as a significant hospitality landmark, distinguished by its extensive meeting and room inventory, and its strategic positioning within the National Capital Region's commercial hub.



The architectural design, executed by **Jasko International** in collaboration with **Kothari Associates**, emphasizes contemporary luxury, spaciousness, and functional excellence. It aims to create a comfortable and relaxing ambiance for guests, while subtly addressing the challenges of its bustling urban context through features like soundproofed rooms.

Key architectural aspects include its meticulously **planned spatial organization**, particularly its large, **pillarless convention facilities**, and a thoughtful approach to materials and finishes that blend elegance with durability. The hotel integrates advanced building services, including efficient HVAC, robust electrical infrastructure, and an integrated water management system encompassing rainwater harvesting and water recycling.

Hyatt Regency Gurgaon aligns with Hyatt's global sustainability commitments, implementing initiatives in energy efficiency, waste reduction, and responsible sourcing, demonstrating a

commitment to environmental stewardship. The analysis concludes with a critique of its design strengths and operational performance, highlighting its role in shaping contemporary hospitality architecture in India.

7.1 INTRODUCTION

Project Overview and Context

The Hyatt Regency Gurgaon is strategically positioned in Gurgaon, a dynamic and rapidly expanding business and residential city within India's National Capital Region (NCR). Its location off the Delhi-Jaipur Highway (NH 8) provides convenient access to Gurgaon's commercial district and the industrial corridor of IMT Manesar, making it an ideal base for business travelers and large-scale events. The hotel is approximately **30 minutes from Indira Gandhi International Airport**, further enhancing its accessibility for both domestic and international guests.



Total Plot Area: 24,417.47 sq.m (6.03 acres)
Built-Up Area: 6,662.50 sq.m (1.60 acres)
The site features two primary blocks – the hotel building (G+14) and a banquet block (G+1), with designated open spaces.

Spanning over six acres, the hotel is recognized for having the largest meeting space and room inventory in Gurgaon, positioning it as a premier destination for conventions and

significant gatherings. It functions as a luxury-cum-business hotel, catering to a diverse clientele that includes corporate travelers, event attendees, and those seeking a premium hospitality experience in the region. The hotel officially opened its doors in June 2013, marking a significant addition to Gurgaon's burgeoning hospitality landscape. It is owned by M/S Piccadilly Hotels.

The architectural design of Hyatt Regency Gurgaon was led by Jasko International, a Dubai-based company, with Kothari Associates serving as the associated local architectural firm. It is important to note that while some information pertaining to "Hyatt Gurgaon" may reference the Grand Hyatt Gurgaon and its acclaimed architects, Foster + Partners and Tony Chi & Associates, these refer to a distinct property within the city. The specific focus of this case study is the Hyatt Regency Gurgaon, and its architectural authorship is attributed to Jasko International and Kothari Associates based on direct evidence available. This distinction is crucial for maintaining factual accuracy in the architectural analysis of this particular hotel.

7.2 ARCHITECTURAL VISION AND OBJECTIVES

The design of Hyatt Regency Gurgaon aligns with the core principles of the Hyatt Regency brand, which emphasizes providing elaborate meeting and convention facilities in key business destinations globally. The overarching goal is to enable guests—whether traveling for work, leisure, or celebration—to feel productive and revitalized during their stay.





A primary objective of the architectural vision was to create a stylish, comfortable, and relaxing ambiance for guests. This is achieved through meticulously crafted, generously sized rooms and suites, complemented by a wide array of modern amenities and services designed to enhance the overall guest experience. The hotel aims to offer an ideal destination for both discerning business travelers and those seeking a weekend getaway or staycation in the Delhi NCR region.

Furthermore, the hotel's architectural vision encompasses state-of-the-art meeting rooms and event venues, making it a versatile choice for a wide range of gatherings. This functional

versatility is a key component of its design, allowing it to cater effectively to diverse event types, from intimate business meetings to large-scale conferences and social celebrations.

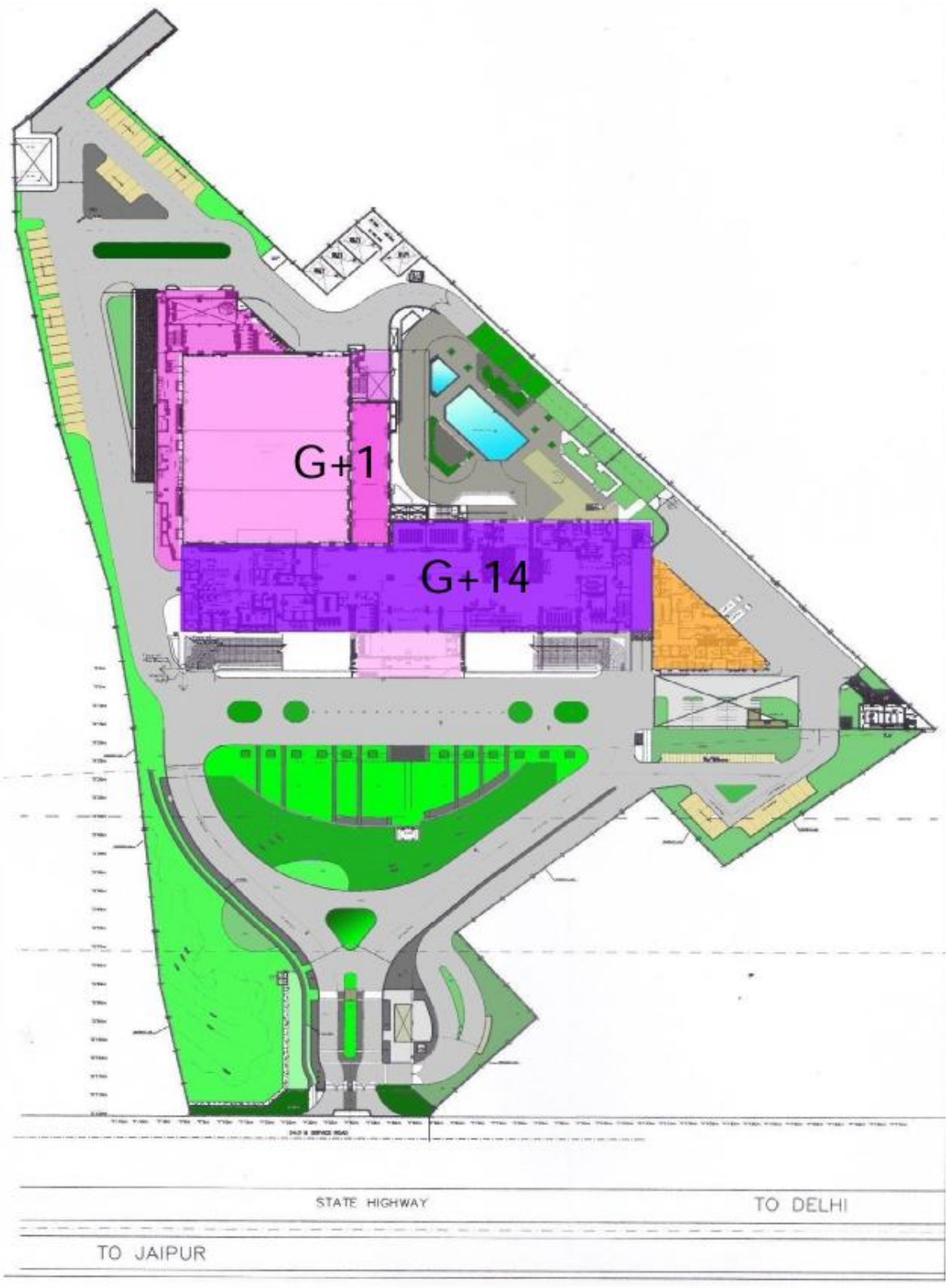




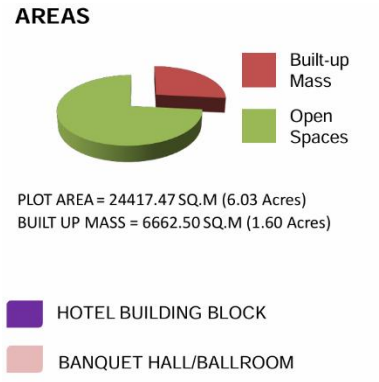
7.3 ARCHITECTURAL DESIGN PHILOSOPHY

Core Design Principles and Aesthetic Approach

The architectural design of Hyatt Regency Gurgaon embodies a contemporary luxury aesthetic, characterized by vibrant hues and modern décor that permeate the lobby and guest



floors. This approach aims to create a sophisticated yet inviting atmosphere, aligning with the expectations of a premium 5-star hotel. The interiors are conceived to provide a relaxing ambiance, offering guests a spacious and comfortable environment amidst the bustling city.



A fundamental principle guiding the design is the provision of expansive and comfortable spaces. This is evident in the generous dimensions of guestrooms and suites, which are meticulously crafted to contribute to a stylish and comfortable ambiance. The spaciousness extends to public areas, ensuring an unconfined and relaxing experience for all guests.

The architectural and interior design meticulously crafts spaces that are not only aesthetically pleasing but also highly functional. This harmonious blend of form and function ensures that every area, from guest accommodations to event venues, serves its purpose efficiently while contributing to the overall luxurious ambiance.

The design also aligns with broader Hyatt brand interior design themes, which often prioritize elegance and simplicity. This includes a preference for warm, subtle, and neutral color palettes, which contribute to a sense of calm and effortlessness in the usage of spaces. The integration of natural materials, such as wood and stone, is a striking feature across Hyatt hotels, aiming to make the atmosphere as authentic as possible by drawing elements from the immediate and local climate and culture. The guest rooms at Hyatt Regency Gurgaon feature "elegant Anigure furniture". Anigure, being a type of wood, fits perfectly within the broader Hyatt brand's inclination towards natural materials. This consistent specification of a particular type of elegant wooden furniture across the guest rooms signifies a deliberate strategy to reinforce the hotel's luxury positioning and brand identity through its material palette. This indicates that material selection is not merely an aesthetic choice but a key component in conveying quality, comfort, and adherence to the brand's global design standards. The thoughtful placement of unique art pieces further enhances the aesthetic, creating an authentic and calming atmosphere.

Response to Site and Urban Environment

Positioned in Gurgaon, a bustling and rapidly developing urban environment, the hotel's design aims to function as a key business destination while simultaneously providing a tranquil retreat for its guests. This involves a delicate balance between maximizing connectivity to the urban fabric and creating a sense of insulation from external chaos.

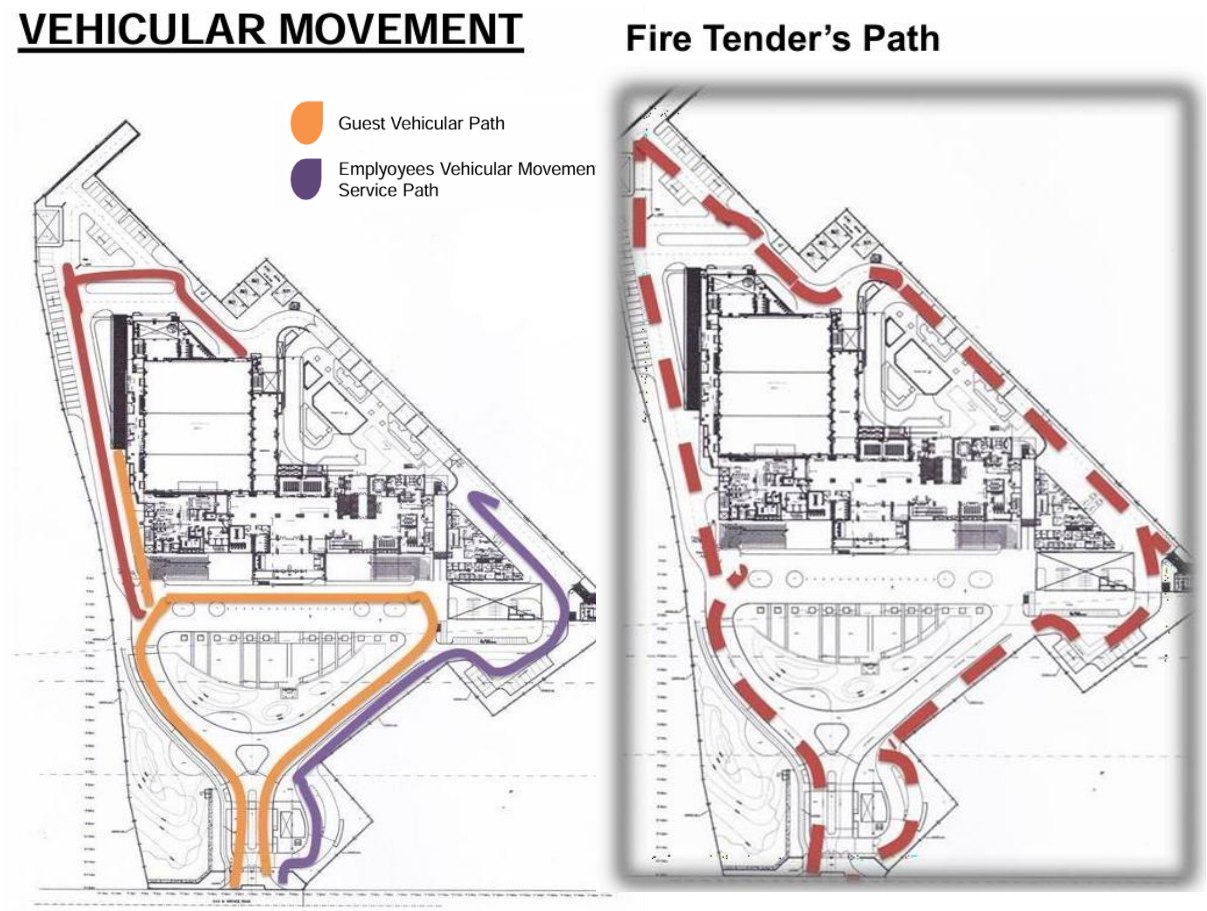
A direct architectural response to the urban context is the incorporation of soundproof windows in guest rooms. This feature is crucial for mitigating external noise pollution, which

is a common characteristic of dense and developing urban areas like Gurgaon, ensuring a peaceful and restful environment for guests.[21] The explicit inclusion of soundproof windows in guest rooms is a clear and practical design decision that directly addresses the challenges posed by a busy urban environment. This demonstrates a pragmatic approach to guest comfort and well-being, acknowledging the site's specific conditions rather than solely focusing on superficial aesthetics. This design choice underscores a commitment to providing a high-quality indoor environment that prioritizes acoustic comfort, which is essential for a luxury hospitality experience in a vibrant urban setting.

Spatial Planning and Functional Zoning

Public and Semi-Public Spaces (Lobby, Lounges, Dining Areas)

The hotel's lobby is characterized by contemporary décor and vibrant hues, designed to be a spacious and comfortable welcoming area. It often features elegant lighting, including chandeliers, and unique sculptures, contributing to a grand ambiance upon arrival. The lobby lounge provides a versatile space, ideal for informal gatherings such as quick breakfasts, casual business meetings, or early evening snacks and drinks. The bar, a stylish and intimate



venue, offers an eclectic selection of premium spirits, wines, and innovative cocktails, designed for relaxation and social interaction.

Dining experiences are central to the hotel's offerings. The Kitchen District, an all-day dining restaurant, presents a vibrant tapestry of culinary delights through five independent kitchens. It features a lavish buffet for breakfast and an à la carte menu for lunch and dinner, showcasing a diverse selection of Asian, Indian, and Western cuisines. Lavana, a signature restaurant, is dedicated to offering a delectable selection of Awadhi specialities, providing a distinct fine-dining experience.

For guest wellness and recreation, the hotel provides an outdoor swimming pool, a well-equipped fitness center with personal trainers, and comprehensive spa facilities including private treatment rooms and a steam room. These amenities are designed to offer a holistic approach to guest well-being and relaxation.

Meeting, Convention, and Event Facilities

Hyatt Regency Gurgaon boasts the largest multi-purpose convention space in the city, covering over **40,000 square feet** (3,700 square meters), positioning it as a significant venue for large-scale events.





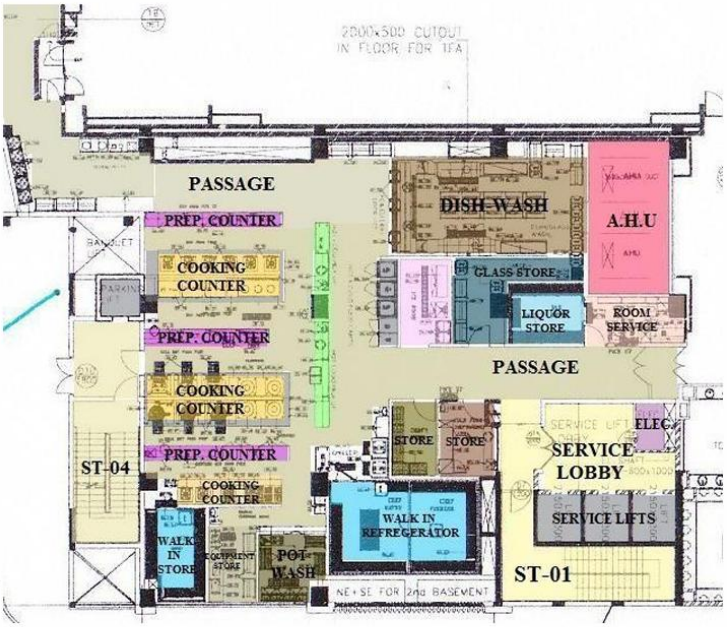
The centerpiece of the event facilities is the pillarless Regency Ballroom, spanning 20,710 sq ft (1,936 sq m) with a majestic 28-foot (8.5 meters) ceiling height.[2] This grand space can be flexibly divided into three soundproof halls and is capable of accommodating up to 3,000 guests (or 1,800 in theatre style).[2] The "pillarless" design of the Regency Ballroom is not merely an aesthetic choice but a significant functional advantage for a convention hotel. It demonstrates a commitment to providing highly flexible and adaptable event spaces, which is enabled by sophisticated structural engineering. This design choice directly enhances the hotel's marketability and operational efficiency for large gatherings by allowing for maximum versatility in seating arrangements and unobstructed views for attendees.

The ballroom is equipped with state-of-the-art technology, including a surround sound system, drop-down screens, high-fidelity audiovisual systems, 144 inbuilt LED Par Cans, eight moving heads, and a Christie projector of 35,000 lumens, ensuring an unparalleled

audio-visual experience. In addition to the ballroom, the hotel offers eight meeting rooms and boardrooms, ranging from 245 to 518 sq ft, suitable for smaller and more intimate gatherings. Some of these feature dedicated plasma screens and BOSE audio systems.

KITCHEN

The hotel has three different kitchens
a) Banquet Kitchen [Ground floor]
b) Hotel kitchen [Second floor]
c) Indian kitchen (serving Lavana) [2nd floor]
The size of kitchen varies as per the no. of different types of cuisines which are to be Prepared.
Only cooking, fine chopping & platting is done in these kitchens rest things are done on basement 1 level andare issued right from there.
Like purchasing, receiving , weighing and washing are done at ground floor and then further moved to dry stores, cold stores, commissary, grade, veg. prep., etc. in basement 1.
Gas being supplied from the gas bank places at ground floor in open area.



BANQUET KITCHEN PLAN

Over 8,000 sq ft (743 sq m) of dedicated pre-function space is available, providing ample room for receptions, registration, and networking before events. The Regency Lawns offer a substantial 14,200 sq ft (1,319 sq m) of lush green outdoor space, ideal for receptions, parties, and other al-fresco events.[6] The hotel provides a dedicated Events Gallery with enthusiastic on-site event planners and offers creative catering services, including themed buffets and elegantly plated dinners. For large events, the facilities include dedicated cargo access and two separate exclusive entrances, streamlining logistics and guest flow.

7.4 TABLE 1: KEY MEETING & EVENT SPACE CAPACITIES

This table provides precise, quantitative data on the hotel's core business function as a convention and event destination. For architects, developers, and event planners, these figures are critical for assessing the venue's capabilities, planning layouts, and determining feasibility for various event types. It transforms raw data into actionable information, enabling a clear understanding of the hotel's scale and functional versatility for MICE (Meetings, Incentives, Conferences, and Exhibitions) events, which is a primary focus for a business hotel like Hyatt Regency Gurgaon.

Venue Name	Dimensions (L x W x H)	Area (Sq. Ft. / Sq. M.)	Reception	Theatre	Classroom	Banquet	Boardroom	U-Shape	Hollow Square	Exhibit
Regency Ballroom	161.8' x 128' x 27.8' (49.4 m x 39.2 m x 8.5m)	20,710 / 1,936	1,080	3,000	1,800	720	-	-	-	108
Regency Ballroom 1	128' x 44.2' x 27.8' (39.2 m x 13.5 m x 8.5m)	5,658 / 529	270	550	400	192	-	110	126	27
Regency Ballroom 2	128' x 52' x 27.8' (39.2 m x 15.9 m x 8.5m)	6,656 / 623	360	650	500	240	-	110	132	36
Regency Ballroom 3	128' x 65.6' x 27.8' (39.2 m x 20m	8,397 / 784	450	800	600	336	-	117	144	45

	x 8.5m)									
Regency Ballroom 1&2	128' x 96.2' x 27.8' (39.2 m x 29.4 m x 8.5m)	12,314 / 1,152	630	1,200	900	432	-	-	-	60
Regency Ballroom 2&3	128' x 117.6' x 27.8' (39.2 m x 35.9 m x 8.5m)	15,053 / 1,407	810	1,450	1,100	576	-	-	-	80
Regency Ballroom Prefunction 1	130.3' x 38.6' x 8.8' (39.7 m x 11.8 m x 2.7m)	8,826 / 820	500	-	-	-	-	-	-	-
Regency Ballroom Prefunction 2	123.6' x 27.8' x 14' (37.7 m x 8.5m x 4.3m)	3,436 / 320	250	-	-	-	-	-	-	-

Regency Ballroom Prefunction 3	46.6' x 40' x 8.8' (14.2 m x 12.3 m x 2.7m)	1,864 / 175	75	-	-	-	-	-	-	-
Regency Lawns	-	7,000 / 650	-	300	-	-	-	-	-	650
Regency Salon	52.4' x 24.2' x 8.8' (16m x 7.4m x 2.7m)	1,268 / 118	80	100	84	48	54	45	54	-
Salon 1	24.9' x 24.2' x 8.8' (7.6m x 7.4m x 2.7m)	603 / 56	-	-	35	24	36	27	36	-
Salon 2	24.2' x 27.5' x 8.8' (8.4m x 7.4m x 2.7m)	666 / 62	-	-	42	24	36	27	36	-

Board room 1	25.9' x 20' x 8.3' (7.9m x 6.2m x 2.5m)	518 / 49	30	30	42	24	22	24	30	-
Board room 2	18.3' x 13.4' x 8.3' (5.6m x 4.1m x 2.5m)	245 / 23	-	-	-	-	10	-	-	-
Board room 3	25.2' x 14.4' x 8.3' (4.4m x 7.7m x 2.5m)	363 / 34	30	30	36	24	22	21	24	-

7.5 GUEST ACCOMMODATIONS (ROOM AND SUITE LAYOUTS, AMENITIES)

The hotel features 451 well-appointed, spacious guestrooms, including 37 luxurious suites. Standard rooms begin at a generous 44 square meters (474 sq ft), while suites can range up to 264 sq m (2,843 sq ft), offering ample space for comfort and relaxation.

Rooms and suites are thoughtfully designed to create a stylish and comfortable ambiance, featuring elegant Anigure furniture and expansive floor-to-ceiling windows that offer views of landscaped gardens or the swimming pool.[2] Each accommodation is equipped with a range of modern conveniences, including plush king or twin beds, ergonomic workstations with high-speed internet access, 40-inch televisions with international satellite channels, MP3 docking stations, fully-stocked mini-bars, in-room safes, tea/coffee making stations, and iron/ironing boards. Bathrooms are well-appointed, featuring both bathtubs and walk-in showers, complemented by premium bath amenities.

Four dedicated Regency Club floors offer exclusive benefits, including access to the Regency Club Lounge, complimentary buffet breakfast, evening cocktails, private check-in and check-out facilities, and limited access to a private boardroom. To ensure a peaceful and restful environment, rooms are equipped with soundproof windows and blackout drapes, effectively mitigating external noise and light.




7.6 VERTICAL AND HORIZONTAL CIRCULATION ANALYSIS

The hotel's circulation system is designed for efficiency and guest comfort, featuring a comprehensive network of elevators, escalators, and ramps. The hotel features a total of 13 elevators, strategically categorized for different user groups: 6 guest elevators, 3 service elevators (6'x6'), 1 freight elevator (operational from basement 3 to ground floor with a 1500kg capacity), 1 administration block service elevator (6'x3'), and 2 dedicated laundry service elevators.[9] A set of escalators connects the ground floor to the second floor, facilitating easy movement between key public levels.[9] Additionally, a ramp with a slope of 1:9 provides access to the first-floor lobby.

Basement lvl 3:- Parking, Plant rooms (chiller, L.T. Panel room, Pump room), Laundry, Water reservoirs{ fire, raw, domestic, soft water tanks}

Basement lvl 2:- Parking, Back of the house areas (workshops, H.R. offices, Engineering office, I.T. Office).

Basement lvl 1:- Parking, Service areas (Boiler Room, Kitchen service corridor- comissary, veg prepration, backery, Stores) G.M."s office, other office spaces, Housekeeping office).

TYPICAL FLOOR PLAN

- Each floor has 38 guest rooms with no suites on floors (3-5) and one suite on each floor from (6-12).
- The guests rooms are approached by 6 guest lifts and are served by 3 service lifts with a housekeeping area n pantry on each floor.
- Each floor has its own A.H.U. and electrical room.
- At one extreme end of the floor there is a provision of linen chute that runs right from the 15th floor till the basement lvl1 where laundry is located.
- Refugee Area provided after every 5 floors.



REFUGEE AREA

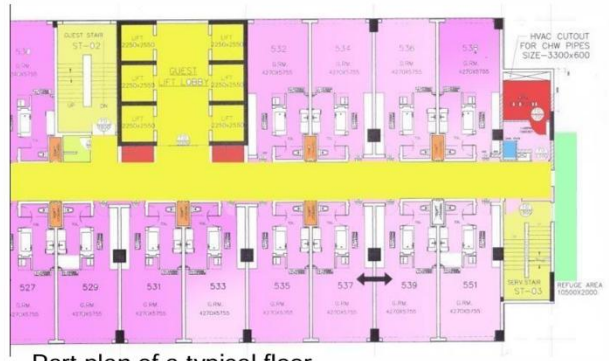


ENTRY TO FLOOR AREA



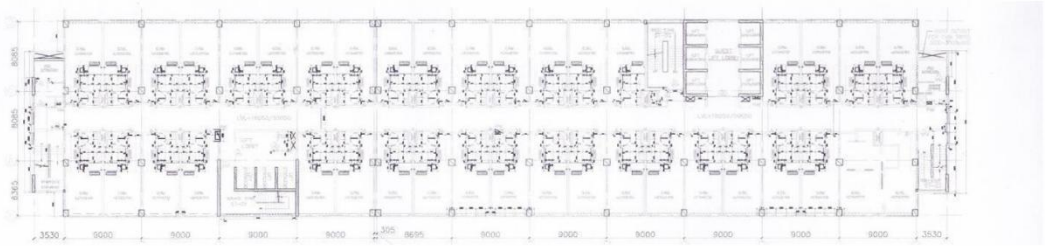
TWIN ROOM

TYPICAL FLOOR PLAN



Part plan of a typical floor

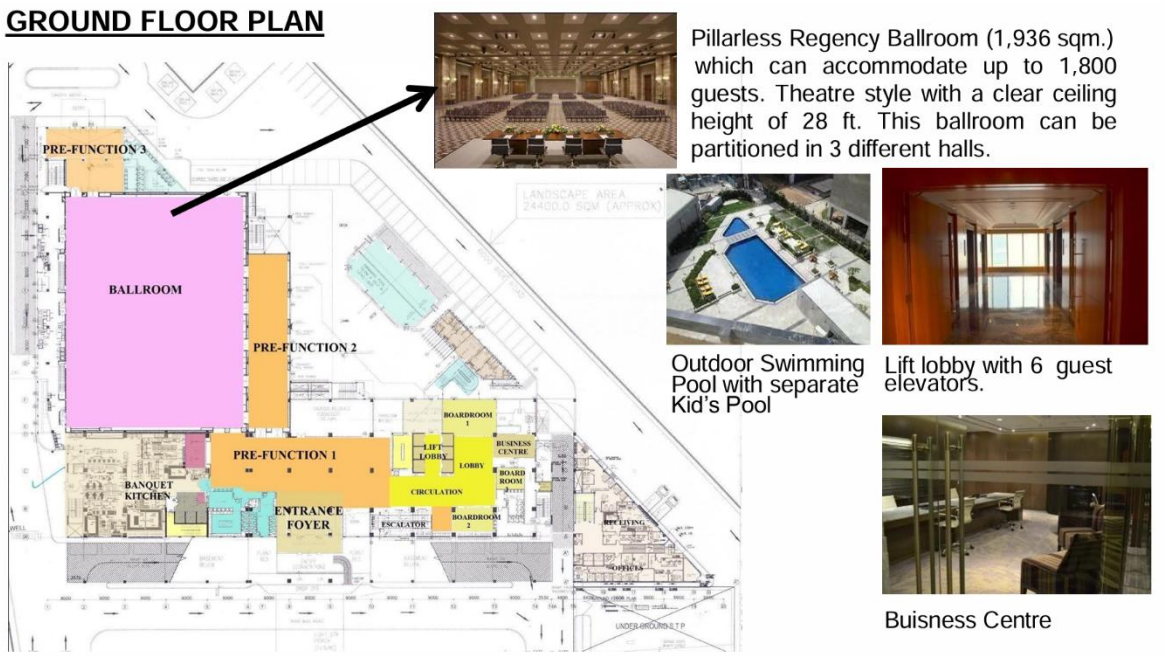
- Typical king / twin room
- Shaft
- Corridoor and Lift Lobby
- Fire Exit Staircase
- Refugee Area provided after every 5 floors
- A.H.U.
- Laundary Chute

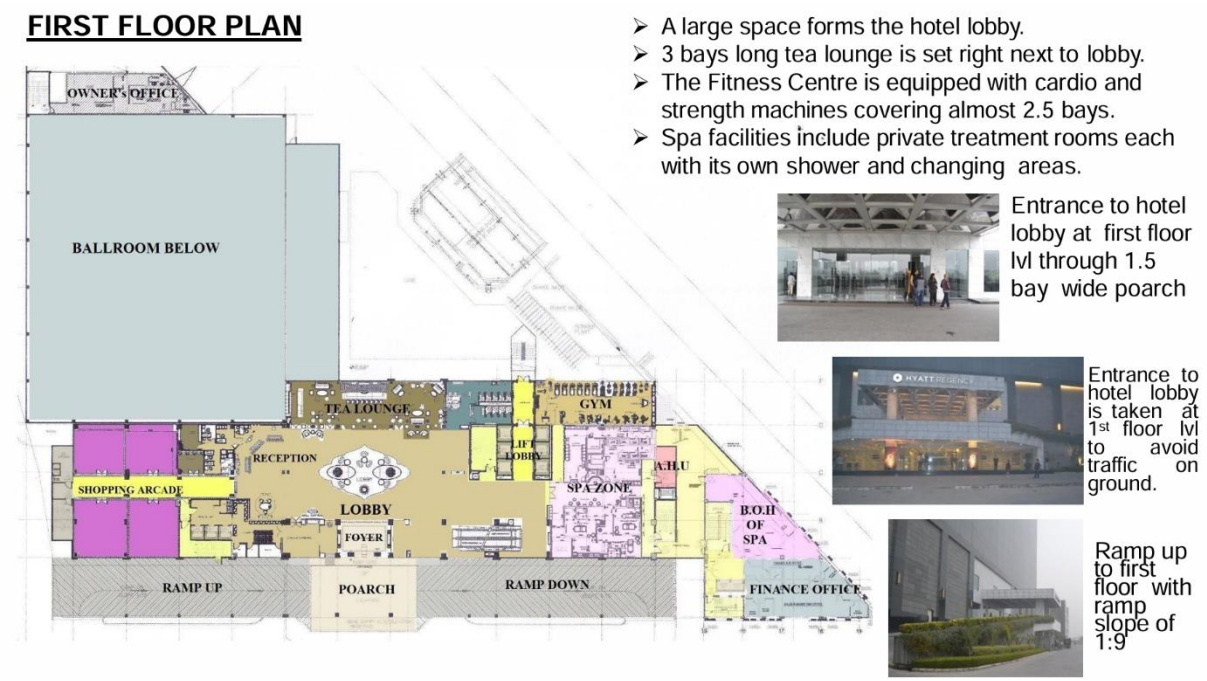




Ground floor :- Ballroom, 3 Pre-function areas, outdoor Swimming pool, 2saloons, 3 Meeting rooms, Business centre, Receiving & Purchase, Banquet kitchen, other administration offices, S.T.P, Metering room, Director‟s office).

First floor:- Lobby lounge, Shopping arcade, Spa, Gymnasium, Front offices and Back offices.





Second floor:- Indian Restaurant (Lavana), Coffee Shop (Kitchen District), Bar (D‟Lounge Bar), Resturant Kitchens.

Third floor (Service floor):- All shafts from the above floor terminate here.

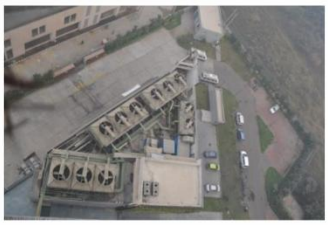
Fourth floor (Typical floor):- Guest Rooms (38 rooms on each floor), Houskeeping, Pantry , service areas Each floor has one suite **(6th to 12 th).**

14th floor:- (Silent floor) All suites (18 suites + G.M. Appartment) • Regency floor:- Regency club, executive suite, 5 base category suites.

16th floor:- Presidential suite, 5 base category suites • Terrace:- Cooling towers on the terrace of administration building, shaft vent, machine rooms, solar system and its reservoir, make up tanks, maintenance ladder.

TERRACE PLAN

Terrace houses all the machinery that drives various systems to makes the building functional.



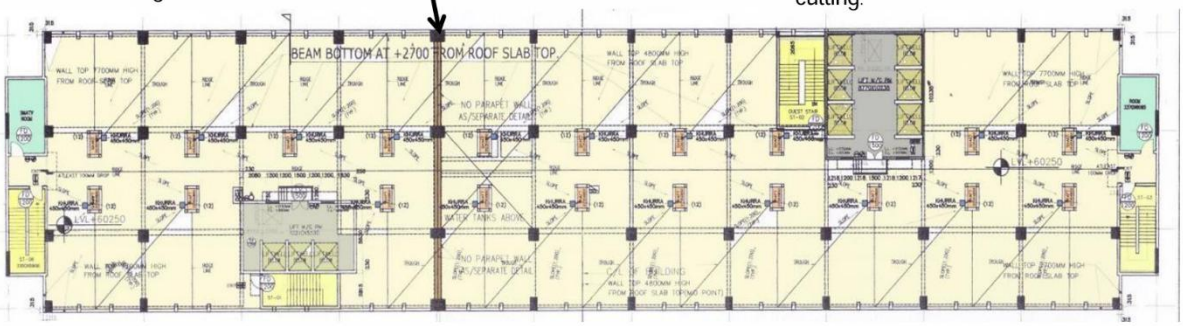
On ADMINISTRATION BLOCK"s terrace, cooling towers are hoisted.



50mm wide expansion joint provided throughout the building at a distance of 63m from one extreme end of building.



Solar system used for heating water in addition to boiler system for cost cutting.

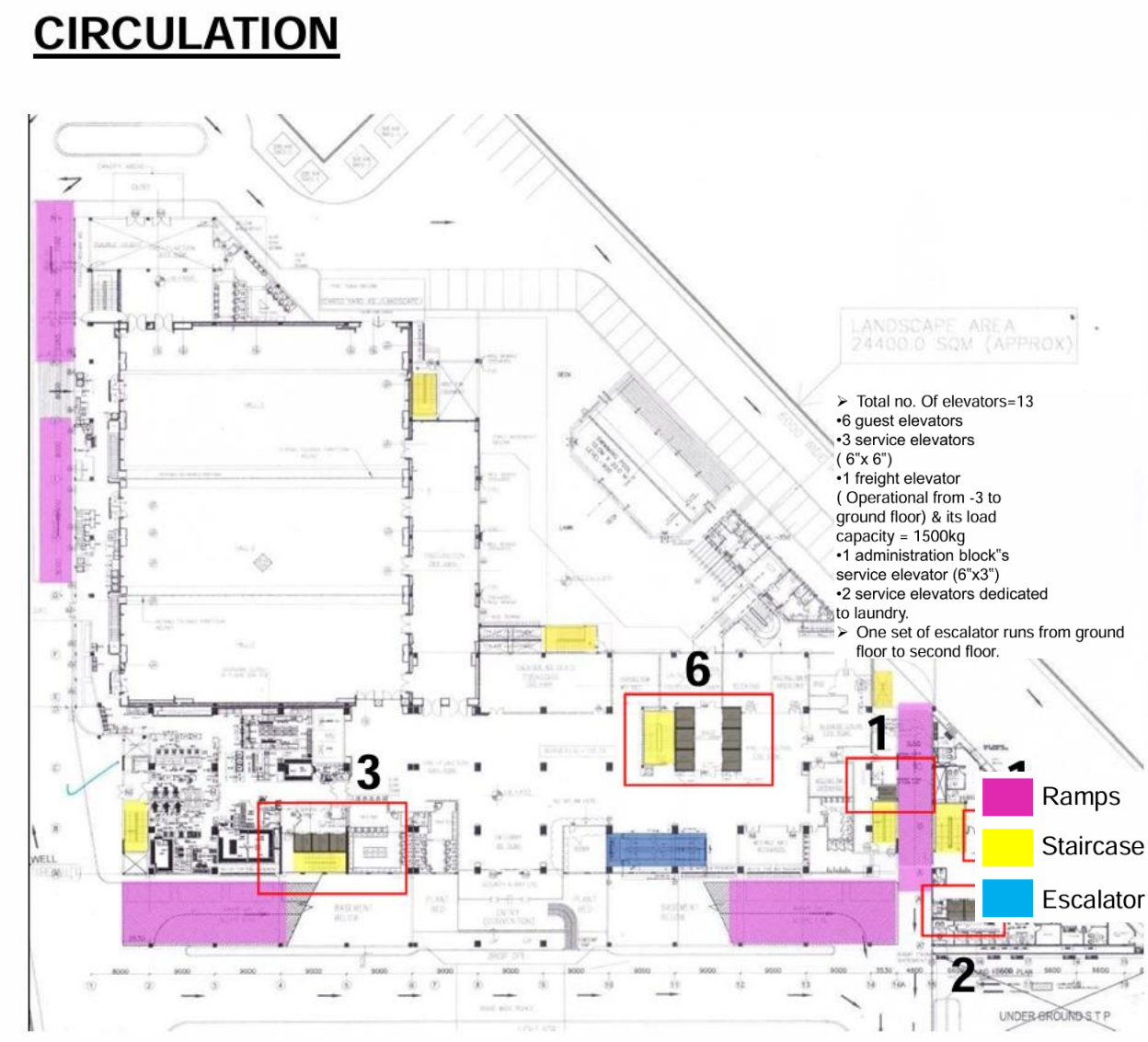


The hotel’s spatial organization is meticulously planned across multiple levels, demonstrating a clear hierarchy and separation of functions. The basement levels (B1, B2, B3) are primarily dedicated to essential services and back-of-house operations, including extensive parking, plant rooms (chiller, LT panel, pump), laundry facilities, various water reservoirs (fire, raw, domestic, soft water tanks), workshops, HR, Engineering, and IT offices, a boiler room, and kitchen service corridors (commissary, vegetable preparation, bakery). The General Manager's office and other administrative spaces are also located here.

The ground floor serves as a major hub for large-scale events, housing the expansive Ballroom, three pre-function areas, the outdoor swimming pool, two salons, three meeting rooms, a business center, receiving & purchase areas, the banquet kitchen, and additional administration offices, along with the Sewage.

The first floor is designed as the primary guest arrival and public interaction level, featuring the Lobby Lounge, a Shopping Arcade, the Spa, and the Gymnasium, along with front and back offices. The main hotel lobby entrance is strategically located on this floor, accessed via

a 1.5-bay wide porch and the aforementioned ramp.[9] The deliberate placement of the main lobby entrance on the first floor, accessed via a ramp, is a sophisticated design choice. This elevation likely serves to manage and segregate high volumes of vehicular and pedestrian traffic at ground level, a common challenge in dense urban environments. By elevating the primary guest arrival experience, the design creates a more exclusive and controlled entry sequence, providing a clear separation between public event spaces (ground floor) and guest-focused areas (first floor and above). This demonstrates a thoughtful approach to optimizing circulation, enhancing guest experience, and streamlining operational logistics guest-focused areas (first floor and above). This demonstrates a thoughtful approach to optimizing circulation, enhancing guest experience, and streamlining operational logistics



The second floor is dedicated to the hotel's main dining experiences, including the Indian Restaurant (Lavana), the Coffee Shop (Kitchen District), and the Bar (D'Lounge Bar), complete with their respective kitchens.[9] The third floor functions as a critical service level where all vertical shafts from the upper floors terminate, indicating a concentration of

mechanical and utility infrastructure.[9] The majority of the guest rooms are located on the fourth floor and typical guest floors above, approximately 38 rooms per floor, along with dedicated housekeeping and pantry areas. Each typical floor also includes at least one suite.[9] The upper floors (14th and 16th) are reserved for more exclusive accommodations, including various suites, the General Manager’s apartment (on the 14th floor), and the Presidential Suite (on the 16th floor), along with additional base category suites.[9] Finally, the rooftop area is utilized for essential building machinery, including cooling towers, shaft vents, machine rooms, a solar system for water heating, and makeup tanks.

7.7 MATERIALS, FINISHES, AND CONSTRUCTION

Exterior Facade Elements and Material Palette

The hotel presents a "stunning hotel exterior with a sleek glass facade" that is "beautifully set amidst lush gardens". It is also described as a "Modern hotel with granite facade," suggesting a sophisticated blend of contemporary and robust materials.[29] The primary exterior materials appear to be a combination of glass and granite, reflecting a design that balances transparency and modernity with solidity and a connection to the local context. This material choice is reminiscent of other local architectural approaches where granite is used to evoke a sense of the building emerging as a "piece of rock from the yellow dirt of Gurgaon," blending with the urban landscape.

Guest rooms and suites feature expansive floor-to-ceiling windows, which not only maximize natural light and offer views of landscaped gardens or the swimming pool but are also soundproofed to ensure guest comfort.[16] While specific construction technologies for Hyatt Regency Gurgaon are not detailed, Hyatt's global strategy emphasizes collaboration with hotel developers to design, build, and renovate more efficient and lower-impact hotels, suggesting a commitment to quality construction practices.




Interior Finishes and Aesthetic Details

The interiors of Hyatt Regency Gurgaon are characterized by contemporary décor and vibrant hues, creating a relaxing ambiance. The lobby, in particular, features elegant lighting, including chandeliers, and unique sculptures, contributing to a grand and inviting atmosphere upon arrival.

Guest rooms and suites are meticulously designed for a stylish and comfortable ambiance, featuring elegant Anigure furniture and plush bedding. Bathrooms are appointed with premium bath amenities, contributing to the luxurious experience. Dining and event spaces feature modern interiors with neutral colors, high ceilings, and customized lighting, designed to be versatile for various events and dining experiences.

Consistent with the broader Hyatt brand, the interior design emphasizes simplicity, elegance, and functionality, avoiding excessive ornamentation.[17] The palette generally favors warm, subtle, dark, and neutral shades, complemented by the extensive use of natural materials like wood and stone.[17] This approach aims to create an authentic and calming atmosphere, often integrating unique art pieces to enhance the aesthetic.[17] The consistent use of specific materials like "elegant Anigure furniture" [16] and the broader Hyatt emphasis on natural materials [17] indicates a deliberate strategy to convey a sense of curated luxury. This choice of materials contributes significantly to the hotel's high-end positioning, ensuring durability, aesthetic appeal, and a tactile experience that aligns with the premium brand promise.





7.8 STRUCTURAL SYSTEM

Structural Framework and Key Components

While explicit structural system details for Hyatt Regency Gurgaon are not fully available in the provided information, similar Hyatt Regency properties utilize robust structural solutions. For instance, Hyatt Regency Kasauli employs an "RCC Frame Structure with Steel & Timber Elements" [34], and a Hyatt Regency project in Nashville features "concrete shear walls and post-tensioned construction for the floor levels".[35] Given the scale and height of a modern 5-star hotel, it is highly probable that Hyatt Regency Gurgaon employs a similar reinforced concrete (RCC) frame structure, possibly incorporating shear walls for lateral stability.

A notable structural achievement is the design of the Regency Ballroom, which is explicitly "pillarless".[2] This expansive space, covering 20,710 sq ft (1,936 sq m) with a 28-foot (8.5 meters) clear ceiling height, necessitates advanced structural engineering solutions to achieve such an unobstructed span.[2] This likely involves the use of long-span structural elements such as large steel trusses or deep concrete beams to ensure stability and clear sightlines for events. The "pillarless" design of the Regency Ballroom is not merely an aesthetic choice but a

significant functional advantage for a convention hotel. It demonstrates a commitment to providing highly flexible and adaptable event spaces, which is enabled by sophisticated structural engineering. This design choice directly enhances the hotel's marketability and operational efficiency for large gatherings by allowing for maximum versatility in seating arrangements and unobstructed views for attendees.

The building also incorporates a 50mm wide expansion joint provided throughout at a distance of 63m from one extreme end. This detail indicates a careful consideration for thermal expansion and contraction, as well as potential seismic or differential settlement movements in a large-scale structure. The terrace is designed to support substantial loads from essential building machinery, including cooling towers, shaft vents, and machine rooms, requiring a robust roof structural system.

7.9 BUILDING SERVICES AND TECHNOLOGY INTEGRATION

HVAC Systems and Climate Control

The hotel employs a sophisticated HVAC system designed for optimal climate control and guest comfort. This system includes cooling towers located on the terrace, six chillers (comprising both screw and centrifugal types) operating on a two-way circuit, Treated Fresh Air (TFA) units, and Fan Coil Units (FCUs) for localized climate control in smaller areas.[9]

Energy efficiency is a significant focus, as the HVAC system is a major energy consumer, typically accounting for 38-42% of total electrical energy.[36] To mitigate this, chillers are selected for their low kW/ton ratings (0.56-0.58), and variable speed pumps are utilized to optimize energy consumption based on demand.[36] The detailed specifications for the HVAC system, encompassing fresh air rates, noise attenuation measures, and automated controls,

SERVICES

A building functions efficiently because of the n no. of services behind.
It essentially brings buildings and structures to life.
Services are required for the safe, comfortable and environmentally friendly operation of modern buildings.

HVAC

Air conditioning is perhaps a very important aspect of services. It is needed to provide year round comfort with help of economical and efficient air-conditioning System.

Treated fresh air unit

The only difference from a.h.u is that it works on one way principle and no return i.e. there is a continuous input of treated fresh air and the air is sucked in from the outside atmosphere through the louvers.

HVAC
FIRE FIGHTING
ELECTRICAL SUPPLY
WATER SUPPLY
WASTE DISCHARGE



Ultimate change in temperature is facilitated as the water comes in contact with atmosphere while passing through the cooling towers and heat is released in the air.





Chillers total 6 in number works on two way circuit # condensed circuit and chilled water circuit.



Fan coil unit(f.C.U) for small areas e.g walk in refregerators



A.H.U – A separate unit is hoisted at each floor for conditioning the air for a particular area.

demonstrate a design philosophy that extends beyond basic thermal comfort. It reflects a holistic approach to creating a high-quality indoor environment that prioritizes air quality, acoustic comfort, and energy efficiency, contributing significantly to the luxury guest experience.

The system ensures a continuous supply of cool, dehumidified fresh air to all guest rooms (50 cfm per room) and public areas. Toilets are exhausted at 60 cfm to maintain slight negative pressure. Air Handling Units (AHUs) and FCUs feature double-skin construction and are mounted on vibration isolators to minimize noise, with specified noise levels not exceeding 45 dbs for AHUs and 40 dbs for FCUs.[36] Guest rooms feature individual climate control [16], and the entire HVAC system is integrated into an automation system for efficient and precise operation.

Electrical Infrastructure and Power Management

The hotel is equipped with a robust electrical infrastructure to ensure uninterrupted operations. It has a 24/7 power backup system, including generators and inverters, which is crucial for a 5-star operation.37 Efficient power distribution is managed through Power Distribution Units (PDUs), with mentions of a Ring Main Unit (RMU) 630A 11kV IP54 for main power distribution.38

In-room technology is comprehensive, with guest rooms equipped with modern amenities such as high-speed internet access, 40-inch televisions with international satellite channels, and MP3 docking stations, catering to the needs of contemporary travelers.4 The Regency Ballroom features sophisticated lighting technology, including 144 inbuilt LED Par Cans and eight moving heads, complemented by a powerful 35,000 lumens Christie projector for high-

ELECTRICAL SUPPLY

Electrical supply is sanctioned by government . Supply at high voltage is received at (11KV) and is metered in the metering room and is stepped down by the transformers at 440v and moved to the electrical panels from where the supply is directed to the entire building . At every floor there is an electrical room.



Electrical rooms seen at every floor to manage the supply of particular area.



LT Panels



D.G sets 5 in number are housed in building. Used without connection to power grid, as an emergency power supply (stand-by).



Transformers set towards the rear of the building (4 in number.)



LT panels for chillers

LT Panel is an electrical distribution board that receives power from transformer and distributes the same to various electronic devices and distribution board.

impact events.2 Guest rooms are also designed with enhanced lighting at workstations.16 Consistent with Hyatt's broader sustainability goals, the hotel likely incorporates energy-saving technologies such as smart wireless switches and double-glazed windows (as seen in Grand Hyatt Gurgaon) to minimize heat loss and optimize energy consumption.

Plumbing and Water Management Systems

The hotel implements a comprehensive water management system. Essential water reservoirs, including tanks for fire suppression, raw water, domestic use, and soft water, are strategically located in the basement levels. The property actively utilizes rainwater harvesting techniques, contributing to its water conservation efforts.

A key feature is the integrated water treatment and reuse system. Treated water from its on-site Sewage Treatment Plant (STP) is effectively reused, notably for the cooling towers and the condenser water cooling circuit, significantly reducing fresh water demand.9 In line with Hyatt's global commitment to water conservation, the hotel is expected to incorporate water-saving fixtures such as water-saving WCs throughout the property.11 Hyatt's overall approach to water stewardship emphasizes robust improvements to water use efficiency and prioritization of water conservation, addressing locally specific water-related risks like scarcity, flooding, and quality.32 The use of an online tool, Hyatt EcoTrack, aids in gathering and analyzing sustainability data for continuous improvement in water management.

LAUNDARY

An area of 677sq.mt. forming complete floor of the administration block is occupied by the hotel laundry.
Which works on the steam supply from the boiler. The waste water generated here is pumped up by sump pump and channelized to S.T.P and the treated water is then used for irrigation and flushing.
A laundry chute runs through all floors.



DRYING ZONE



WACHING MACHINE OF DIFFERENT CAPACITIES



LAUNDARY CHUTE



Waste Management and Circularity

Hyatt Regency Gurgaon participates in Hyatt's broader waste management and circularity initiatives. Hyatt is committed to reducing overall waste generated at properties, including food waste and single-use items, and increasing recycling and composting.[32]

Food waste management strategies include scaling opportunities to reduce excess food during meetings and events, evaluating purchased products, and improving waste sorting.[32] This involves practices such as smaller buffet displays and à la minute food preparation.[32] To reduce single-use plastics, the hotel has transitioned to large-format bathroom amenities and encourages guests to use hydration stations instead of bottled water.[32] A comprehensive recycling plan is in place, and the hotel aims for a significant portion of its food to be locally sourced, further enhancing its sustainability efforts.

FIRE FIGHTING

Fire fighting is done after fire detection.
For fire detection fire alarms and smoke detectors are installed which break out 68 degree c.
For fire fighting
(a) Fire extinguishers were installed.
(b) Fire hose cabinets were made.
(c) Automatic sprinklers system is built.
(b) & (c) measures are operational with the water supply.
2 fire water tanks of 20kl are in the basement.
In case of fire this water is pumped up through main hydrant pump, sprinkler pump and jokey pump (makeup pump), diesel engine fire pump.
I fire water makeup tank in on the terrace of 1000l capacity.
Pump room and fire water tanks are in 3rd basement.



Sprinkler s installed in the ceiling at regular intervals throughout.



Fire Water Tank Capacity = 20KL



Fire Extinguisher



Smoke Detector



Fire Hose Cabinet

7.10 SUSTAINABILITY FEATURES AND GREEN BUILDING INITIATIVES

Environmental Stewardship Philosophy

Hyatt Regency Gurgaon operates within Hyatt's overarching "World of Care" platform, which signifies a global commitment to environmental action.40 This philosophy is rooted in caring for the planet, people, and responsible business practices, ensuring that destinations remain vibrant for guests, colleagues, and communities.

Hyatt has established ambitious 2030 environmental goals, including science-based targets approved by the Science Based Target initiative (SBTi), aimed at significantly reducing greenhouse gas emissions and water use intensities. This commitment extends to accelerating climate action and water resource protection, reflecting a proactive approach to environmental challenges.

Specific Green Initiatives

The hotel implements various green initiatives to minimize its environmental footprint. In terms of energy efficiency, Hyatt's efforts include the adoption of renewable electricity (e.g., through Renewable Energy Certificates and onsite solar energy where feasible), upgraded equipment with improved efficiency, and diligent resource management.

Water conservation is a high priority, with practices such as water use optimization through rainwater harvesting and the increased use of gray water.[39] The hotel also focuses on addressing locally specific water-related risks like scarcity, flooding, and quality.[41]

Waste reduction and circularity efforts involve minimizing overall waste, increasing recycling and composting, and implementing specific food waste management plans.[32] This includes reducing single-use plastics by transitioning to large-format bathroom amenities and providing hydration stations.[32] Responsible sourcing is also emphasized, with efforts to increase the procurement of sustainable products and services through collaboration with suppliers.[32] The use of locally sourced building materials and textiles further contributes to its sustainable practices.[44]

Green Building Certifications

While Hyatt as a corporation is deeply committed to sustainability and many of its properties globally have achieved various green building certifications, direct evidence of LEED (Leadership in Energy and Environmental Design) or IGBC (Indian Green Building Council) certification specifically for Hyatt Regency Gurgaon is not explicitly stated in the provided information.[32] For example, Hyatt Regency Delhi is LEED Platinum certified [52], and Taj City Centre Gurugram (a different property) is EarthCheck Certified Gold.

The absence of specific LEED or IGBC certification for Hyatt Regency Gurgaon, despite general mentions of Hyatt's sustainability efforts and certifications for other properties, highlights a crucial distinction. It is important not to assume certification without direct evidence. Instead, the analysis focuses on the implemented sustainable practices which align with green building principles, even if a formal certification for this specific hotel is not explicitly stated. This emphasizes a commitment to sustainability in practice rather than solely relying on a label. Hyatt's general commitment includes collaborating with hotel developers to design, build, and renovate more efficient, lower-impact hotels [32], suggesting that sustainable design principles are inherent in their development process.

7.11 ARCHITECTURAL REVIEW AND CRITIQUE

Design Strengths

Hyatt Regency Gurgaon exhibits several notable design strengths that contribute to its success as a 5-star hospitality establishment. Its functional excellence is paramount, particularly evident in the meticulously planned large event spaces, including the pillarless Regency Ballroom, which offers unparalleled flexibility for conventions and gatherings.[2] This design choice allows for diverse configurations and unobstructed views, a significant advantage in the competitive MICE market. The guest-centric design, with its spacious rooms and suites, contributes significantly to guest comfort and satisfaction.

Aesthetically, the hotel projects an image of contemporary luxury. Its vibrant décor, elegant lighting, and sophisticated material palette in public areas create a grand and inviting ambiance.[2] The interior spaces, consistent with Hyatt's brand philosophy, prioritize simplicity, natural materials, and the thoughtful integration of art, fostering a calming and authentic atmosphere.

The design demonstrates contextual sensitivity, particularly through the inclusion of soundproof windows in guest rooms. This practical measure effectively mitigates urban noise pollution from the bustling Gurgaon environment, ensuring a peaceful retreat for guests. While not explicitly detailed, the integration of landscaped elements and consideration for views also suggests an attempt to harmonize with the local setting.

Technological integration is another strong point, with advanced audiovisual and lighting systems in event spaces, including high-lumen projectors and LED installations, providing state-of-the-art facilities for various events.[2] In-room technology and smart systems further enhance the guest experience and operational efficiency.

Challenges and Considerations

The primary challenge for Hyatt Regency Gurgaon, as with many urban hotels in rapidly developing areas, lies in its immediate urban environment. Gurgaon is characterized by visual clutter, dust, and ongoing construction.[30] While the hotel's design incorporates elements to mitigate urban noise, the broader chaotic context remains an external factor that architectural design can only partially insulate from.

Long-term maintenance and longevity are perpetual considerations for large-scale hospitality projects. The extensive use of glass facades, while contributing to a sleek aesthetic, necessitates rigorous cleaning and maintenance in a dusty urban climate. Similarly, the complex MEP systems and advanced technologies require continuous upkeep to ensure optimal performance and energy efficiency over time.

Overall Impact and Contribution

Hyatt Regency Gurgaon plays a significant role in Gurgaon's development as a premier business and IT hub. Its substantial meeting and room inventory positions it as a key player in the city's convention and hospitality sector, attracting both domestic and international business.[2]

The hotel's architectural design and functional excellence contribute to shaping contemporary hospitality architecture in India. It exemplifies the trend of luxury business hotels that prioritize spaciousness, advanced technology, and guest comfort while attempting to integrate with, and provide respite from, a dynamic urban context.[2] Its commitment to sustainability, aligned with Hyatt's global initiatives in energy, water, and waste management, further positions it as a model for responsible luxury development in the region.

7.12 CONCLUSION

The Hyatt Regency Gurgaon stands as a testament to contemporary hospitality architecture, successfully integrating luxury, functionality, and a degree of contextual responsiveness within a rapidly evolving urban landscape. Its strategic location, coupled with its extensive meeting facilities and comfortable accommodations, solidifies its position as a leading 5-star business and convention hotel in Gurgaon.

The architectural design, led by Jasko International and Kothari Associates, effectively prioritizes spaciousness, guest comfort through features like soundproofed rooms, and a sophisticated aesthetic achieved through a blend of modern and natural materials. The pillarless ballroom exemplifies an engineering solution that directly enhances functional versatility, a critical aspect for a high-volume event venue.

Furthermore, the hotel's operational practices align with Hyatt's global "World of Care" sustainability platform, demonstrating a commitment to environmental stewardship through initiatives in energy efficiency, water conservation (including rainwater harvesting and water reuse), and comprehensive waste management. While specific LEED or IGBC certifications for this particular property are not explicitly stated, the implemented sustainable practices reflect a dedication to green building principles.

In conclusion, Hyatt Regency Gurgaon serves as a compelling architectural case study, showcasing how thoughtful design, advanced building services, and a commitment to sustainability can converge to create a successful and impactful hospitality landmark in a dynamic urban setting.


HYATT REGENCY

8 CHAPTER 8: REFRENCES

REFRENCES

- Hotel Design, Planning and development, by Richard Penner, Lawrence Adams, Stephani K.
- Robson
- HRACC (2011) Guidelines for Star Rating of Hotels, New Delhi: Ministry of Tourism
- Neufert, P. and Neufert, E. (n.d) Architect's Data, 3rd edition, Oxford: Blackwell Science
- https://crda.ap.gov.in/crda_norifications/NOT12085176/01~APCRDA%20Project%20status
- %20Report%20Edition3.pdf.
- http://adcl.in/tenders.html
- http://environmentclearance.nic.in/writereaddata/formB/MODIEC/20112018DTYL5GRFfina
- lEIA.pdf
- http://environmentclearance.nic.in/writereaddata/FormB/TOR/ConceptualPlan/25_Jun_2019_
- 1528406604WHFBL6J Form1.pdf
- https://www.marriott.com/hotels/travel/delwi-the-westin-gurgaon-new-delhi/
- https://www.archdaily.com/935858/aria-hotel-sanjay-puri-architects
- The_Impact_of_Using_Smart_Architecture_on_Architec.pdf