

# DUBAI SOUTH – RESIDENTIAL DISTRICT



دبي الجنوب  
**DUBAI  
SOUTH**

**PLANNING REGULATIONS & DEVELOPMENT GUIDELINES v 3.0**

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## 1.0 INTRODUCTION

### 1.1 Context

The Residential District has been conceived as residential fold back of the vast employment numbers produced by Al Maktoum International Airport and the surrounding aviation and Logistics related operations which are expected to flourish. Its main function is to provide livable communities for middle-income segment of the employees and their families; on the south limit, a staff village will provide accommodation to the workers that are involved in construction of Dubai South.

### 1.2 Site Context

The Residential District covers an approximate total site area of 760 ha (including the Staff Village.). The city is located to the North East of Dubai South; it is bounded by Al Maktoum International Airport from the South by the Jebel Ali - Al Habab Road from the North and Emirates Road (E611) from the East.

### 1.3 Development Context

The site lies within Dubai South. As one of the largest new development zones in Dubai, Dubai South is anchored around the new Al Maktoum International Airport and comprise, in addition to the Residential District, a number of significant new city- scale projects:

- Al Maktoum International Airport
- Logistics District
- Aviation District
- Golf District
- Commercial District
- Exhibition District / Expo2020 Venue
- Humanitarian District

Figure 1: The Residential District Location within Dubai South



### 1.4 The Residential District

It is located to the North East of Dubai South; bounded by Al Maktoum International Airport from the South, by the Jebel Ali - Al Habab road from the North and Emirates Road (E611) from the East. A seventy meter wide main road crossing from East to West with central part of the road is reserved for an elevated light rail train (LRT). This main road with light rail train will be developed as main residential avenue.

The Residential District consists of roughly 760 hectares of land with good quality accommodation for middle-income households, in addition to providing adequate staff accommodation, working for the urban aviation community.

Figure 2: The Residential District



#### 1.4.1 Site Constraints

Due to its close proximity to the airport, the Residential District Master Plan and land-use distribution took into consideration both physical and non-physical constraints:

- Airport Height and Obstacle Constraints
- Airport Noise Contours
- Airport Flight Path and Safety Zones
- Layout Structure and Utility Reservations
- Access Points

These constraints are considered to have an impact in the flexibility of the adopted planning approach.

#### 1.4.2 Design Approach and Principals

The six basic principles used in the Residential District master planning are:

- Acknowledge contextual constraints and address site limitations
- Provision of centralized amenities.
- Provision of adequate green spaces for leisure and recreational purposes
- Create neighborhood clustering to achieve equal and balanced distribution of services
- Maximize Land utilization with respect to BUA within allowable height limits.
- Organize self-contained neighborhood communities connected with a viable and efficient road network.

The development of the Residential District is closely related to the general concept of self-contained development in Dubai South, and is geared to service the new airport and main facilities in terms of providing suitable and appropriate housing for employees and their families. The development vision depends on three main pillars: the first is the convenience of living close to their workplace and decreasing daily generated trips; the second is the availability of end-users that ensures housing demand; and the third is affordability and compatibility of such development to specific income groups as the residences were designed according to the needs of each group.

The approach to design a predominantly residential character city revolves around injecting a variety of characters for the development to utilize and maximize their exposure to green open spaces. The green “pockets” are envisaged as the key element to act as meeting grounds and outdoor activities for the residents.

The Residential District BUA was maximized along the mixed use spine, allowing G+9 heights to clearly define The Residential Avenue/ The Boulevard. At the same time, the design approach adopted a concentric BUA model that gradually decreases floor height from G+7 to G+3 in an attempt to emphasize the common public space nodes and give an exclusive and distinctive urban environment to every neighborhood cluster.

### 1.4.3 Design and Planning Objectives

The Residential District Master Plan was subject to various design constraints which needed a realistic planning and design vision in order to create and deliver a logical and functional master plan.

The objective is not tied or limited to one planning aspect i.e. creating an exclusive Residential District that cater to one or two accommodation categories rather the vision is extended to cover all support facilities such as Education, Offices, Mixed Use, leisure and Entertainment, in other words, to be an exclusive urban aviation community serviced by high range of facilities.

The adopted design and planning objectives were addressed to:

- Create a multi-functional city structure with an organized land-use program that offers various living accommodation and income categories
- Provide high-end facilities and services
- Create an ideal living environment
- Create an efficient low-cost transit system that link the city to Dubai South districts.
- Create a comprehensive and integrated road network and offers various modes of transport to ensure easy accessibility between various components of the city. The planning and design regulations will help to achieve these objectives.

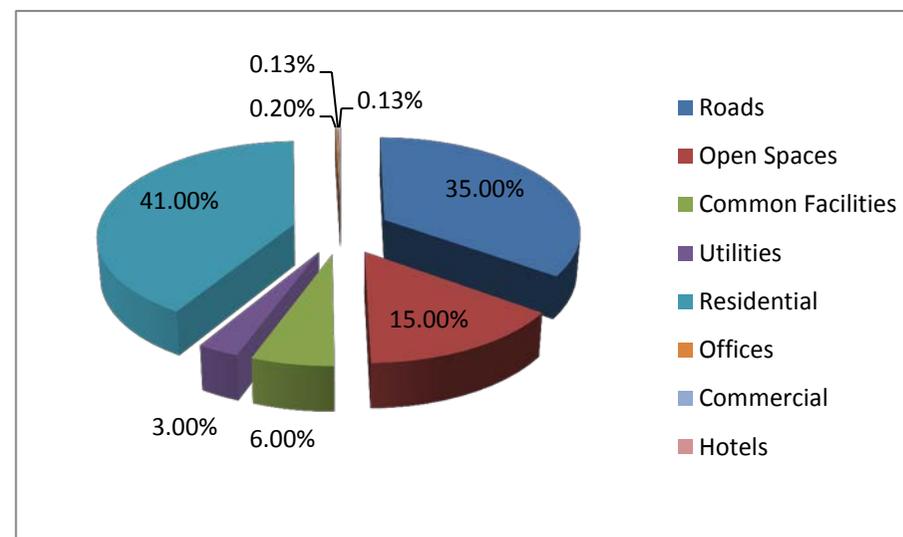
### 1.4.4 Master Plan Land-Uses

The main function of the Residential District is to provide accommodations for middle and middle-to-low income households working for Al Maktoum International Airport and related facilities.

The Master Plan for the Residential District takes into account the need for providing adequate living standards and support facilities for the city's residents and staff. This is manifested in the open public space, public facilities and health care centers. As per the planning parameters estimates, the whole Residential District will ultimately be inhabited by around 245,000 people. Most of the population will be the employees of

adjoining functions or supporting components/facilities. In the spirit of the prevailing vision to create a self-contained project, the Residential District will offer a resident friendly living environment with all the desired community facilities and services.

Figure 3 Land Use Distribution Chart



This concentric layer form of land use development will provide segregation between different staff segments and at the same time creates public open spaces. The layout placed the different staff category buildings to be joined through major public open spaces, amenities, and mosques. The green spaces and visual corridors pleasingly provide a continuous character towards the core of the entire city and create favorable living conditions to all residents.

The land use budget within Residential District is mainly comprised of about 40% Residential Use, 24% for open spaces, community facilities and utilities and remaining 36% area distributed between roads, hotels, commercial and offices etc. (see figure 3)

## 2.0 GLOSSARY OF TERMS

<b>AUTHORITY</b>	Shall mean the Dubai World Central Corporation (DWCC) - Dubai South or any other entity delegated by Dubai South.
<b>SERVICE AUTHORITY</b>	shall mean the following entities for the projects within Dubai South : <ul style="list-style-type: none"> <li>○ Water &amp; Electrical - DEWA</li> <li>○ Waste Water – Dubai South</li> <li>○ Storm water – Dubai South</li> <li>○ Fire &amp; LPG - Dubai Civil Defense</li> <li>○ Telecom - Etisalat</li> <li>○ District Cooling – Dubai South</li> <li>○ Tetra Radio System - TRA</li> <li>○ Police and Security - Dubai Police</li> <li>○ Traffic Impact Study - RTA</li> <li>○ Health, Safety &amp; Environment – Dubai South</li> <li>○ Height and Flight navigations – Dubai International Airport representing DCAA</li> </ul>
<b>REGULATIONS</b>	The rules and statutes listed in this publication and other regulations issued by the “Authority” or any other rules issued in the future.
<b>DEVELOPER</b>	The lessee or his authorized agent who submits an application to the Authority on behalf of the lessee.
<b>CONSULTANT</b>	A locally registered consultant holding a valid consulting Engineers trade license from DED and registered with Dubai South
<b>CONTRACTOR</b>	A locally registered contractor holding a valid contracting trade license from DED for the type of works and classification therein and registered with Dubai South
<b>PROJECT</b>	The construction of a permanent building, any other civil work on a leased\ sold property including any modifications or installations in pre-built facilities.
<b>PLOT</b>	A parcel of land defined by clear boundaries and coordinates. “Plot Area” is the total area of a plot within the plot lines as measured on a horizontal plan.
<b>PLOT FRONTAGE</b>	The portion of the plot construed nearest to the street. All sides of a plot adjacent to streets shall be considered frontage.
<b>PLOT LINE</b>	Any line bounding a plot herein defined.

<b>BUILDING</b>	Any walled and roofed structure erected inside a plot above the ground level, used for living, working, storing or fabricating, and which abide to the conditions of the Planning Regulations of the plot.
<b>SETBACK</b>	The distance separating the building line from the plot boundary line that must be left free of building. A setback may be specified as mandatory; in which case it will define a built to line that all buildings must adhere to. A setback may be specified as a minimum setback and in this case, the building line may adhere to it or be setback a distance larger than the specified minimum. “Structure” denotes any constructed, erected material or combination of materials which requires being located on the ground or attached to something located on the ground.
<b>BUILDING HEIGHT</b>	The height of a building in meters measured from the finished sidewalk level to the top of the roof parapet or to the top of the coping tile of the pitched roof. The building height is measured along the midpoint of the building elevation facing the street that provides access to the plot. In cases where the plot is bounded by more than one street, the façade facing the main street, (or if not applicable, the façade having the longest frontage to the street) will be taken for reference.
<b>BUILDING LINE</b>	The vertical line that defines the outer face of the building façade. Decorative elements and cornices may project a maximum of 0.60m from the building line. Other projecting elements such as balconies must comply with current building regulations and specifications issued by Dubai Municipality.
<b>GROUND FLOOR</b>	The floor directly accessed from the finished level fronting the main entrance to the building. It can be at the same level as the ground level, higher by a maximum of 1.2m, or lower by a maximum 1.0m from the finished site level.
<b>PODIUM</b>	The lower part of a building acting as a base on which the upper part, often a higher part of the building, is located. Podium may be used for commercial, recreational, offices and parking, while the upper building may be dedicated for residential, hotel and offices.
<b>MEZZANINE FLOOR</b>	A floor that can be accessed from the ground floor only and which covers a maximum of 60% of the ground floor area excluding communal entrances, stairs and lift areas. The minimum height of the Mezzanine floor has to comply with applicable Dubai Municipality Building regulations and specifications.

**TYPICAL FLOOR** A floor that is similar to the floor that follows it or precedes it or both in area and structure.

**FLOOR AREA RATIO (F.A.R.)** Co-efficient that denotes the ratio of the total built up area of buildings and structures on a given plot over the total land area of the plot.

When calculating the F.A.R., the areas of the following shall not be counted :

- Basement floors with no direct natural lighting, intended for use for parking, building services and storage.
- Balconies and terraces.
- Garden sheds (of up to 2.20m clear height) and non-enclosed shade structures (i.e. completely open on 2 sides at least).
- Mechanical floors with maximum clear height of 2.20m, elevator rooms, stairwells and areas reserved for water tanks and other mechanical equipment on the roof.
- Roof Attics, or parts thereof, which are not used and cannot be converted for habitation.
- Mezzanine floor having direct access only from the ground floor and not from any common stair or lift lobby, and that has an area less than or equal to 50% of the gross Ground Floor area of the building.
- Shafts, openings (ex: garbage shoot ...)
- Standalone parking structures
- Podium level parking
- Standard Services on ground floor independent from the main building (ex: substation, LV room, ETS room ...)

**Note:** *The measurements must be taken from center line to center line of the walls.*

*FAR calculations include:*

- All sellable areas (ex: apartment's offices ...)
- Circulation areas (ex: corridors, lobbies, open staircases that are not part of a stairwell ...)
- Repeated Services in all typical floors (ex: telephone rooms, electrical rooms ...)
- Guardian room.
- Garbage rooms in typical floors only (not on ground floor).
- Any other room/area not stated above inclusions and exclusions.

## BUILT-UP AREA (BUA)

When calculating the BUA, the areas stated below must be included:

- All sellable areas (ex: apartment's offices ...)
- Circulation areas (ex: corridors, lobbies, open staircases that are not part of a stairwell ...)
- Balconies (covered and uncovered)
- Basements
- Podium car parks
- MEP Plant Areas, mechanical floors
- Common Facilities (ex: Gymnasium, enclosed swimming pool ...)
- Storage areas
- Roof slab areas that were not defined as the stated above (ex: Mechanical rooms).
- Any other room/area not stated above.

**Note:** *All external walls must be included. For internal wall: the measurements must be taken from center line to center line of the walls.*

*BUA calculations exclude:*

- MEP Shafts, openings
- Stairwells and lift's shafts.
- Garbage shoots.

**Note:** *Calculations of areas to be measured in the inside face of the shafts.*

## LANDSCAPING

The treatment and maintenance of a plot area or property with predominant vegetation such as ground cover, plants, shrubs or trees. It includes paving, bricks, rock work and other natural or decorative features in an organized manner designed to create a specific appearance.

## PERMANENT BUILDING OR FACILITIES

Buildings or structures designed and constructed in reinforced concrete, or steel with block or metal cladding, or with a combination of steel or precast concrete or reinforced bearing block walls or brick, or other durable material.

<b>TEMPORARY BUILDING OR FACILITIES</b>	A building used as a site office or to house construction equipment for the purpose of construction only.	<b>BUILDING COMPLETION CERTIFICATE</b>	A certificate granted by the Authority, acknowledging completion of construction and finishing and enabling connection to public utilities and occupation.
<b>HABITABLE ROOM</b>	A room used for office, shop, workshop or other purpose involving occupation by human beings for continuous periods of time, but not including a W.C.	<b>OPERATION FITNESS CERTIFICATE / BUILDING FITNESS CERTIFICATE</b>	A certificate granted by the Authority after a Building Completion Certificate is issued, acknowledging completion of installation, testing, commissioning & certification of building systems by the relevant authorities, and confirming the facility is safe for occupation.
<b>LOADING SPACE</b>	An area used for loading or unloading of vehicles, located entirely on private property with a minimum vertical clearance of 4 meters and provided with permanent independent access.		
<b>VENTILATION OPENING</b>	Any means of ventilation whether permanently open or closable and which opens directly on to the external air, such as parts of a window which can be opened, louvers, ventilators, and any door opening directly to the external air. Any openings associated with mechanical systems are excluded.		
<b>WELFARE OR WELFARE FACILITIES</b>	Mean ablution, washing and toilet provision standards for personnel working in buildings.		
<b>GREEN BUILDING</b>	Is an environmentally responsible, profitable and healthy place to live and work.		
<b>HAZARDOUS GOODS</b>	Means: <ul style="list-style-type: none"> <li>i. Any compressed, liquefied or dissolved gases.</li> <li>ii. Any substance which becomes dangerous by interaction with water or air.</li> <li>iii. Any liquid substance with a flash point below 75°C.</li> <li>iv. Any corrosive substance or a substance which emits poisonous concentrations of fumes when heated.</li> <li>v. Any substance liable to spontaneous combustion.</li> <li>vi. Any radioactive material and any substance which readily emits heat or other harmful radiations when it changes state or decomposes.</li> <li>vii. Sheds which contain vehicles loaded with hazardous materials.</li> <li>viii. Any other substance considered hazardous by the suppliers.</li> </ul>		
<b>BUILDING PERMIT</b>	A permit that the Authority issues to allow construction work to proceed on a specific piece of plot, in accordance with approved plans, specifications and conditions.		

## 3.0 DEVELOPMENT CONTROL PROCEDURES

The Development Guidelines and Planning Regulations and Standards contained in this booklet are intended for use by approved Developers seeking to construct residential and/or commercial buildings, on serviced sites in the Residential District. They should be applied in conjunction with the local and international standards and codes of building construction.

The regulations contained in this document shall be considered to be the minimum standards for the design of the Project and contain some, but not all, of the criteria pertinent to the design of the Project. Developers shall comply with these regulations along with all relevant legislative requirements of the Authority. Note that where technical design criteria contained in this guideline is lacking in detail or clarity, the architectural and engineering consultants shall contact Dubai South Development Control department for guidance.

The Authority reserves the right to change any of these regulations as and when required and it shall be the duty of the consultants, contractors and developers to ensure that they possess the latest updates.

These regulations include:

- a) Procedures for development covering building permits, construction procedures, alterations to rebuilt units, building completion certificates, power of the Authority and responsibilities and disputes.
- b) General planning Regulations governing plot coverage, building setbacks and heights, provision of parking, fencing and site landscaping and the external appearance of buildings.
- c) Performance standards governing:
  - The provision of utility services including Chilled water services, Storm water drainage and refuse disposal.
  - The design of buildings including structure, materials and finishes, mechanical, electrical, and telecom installations.

### 3.1 General

- 3.1.1 A Developer wishing to construct a building on a serviced plot in the Residential District must apply to the Authority, stating his intended development program and his land requirements. All development within the Residential District must comply with the development guidelines and planning regulations stated in this booklet, in

addition to the current building regulations and specifications issued by Dubai Municipality.

- 3.1.2 The Developer must appoint a qualified Architectural / Engineering Consultant, having valid trade license in Dubai, and registered with the Authority, to carry out the design tasks connected to his project, and to act on his behalf regarding all technical matters related to the design, construction and completion of his project.
- 3.1.3 **The development shall adopt the Dubai Universal Accessibility codes And Regulations.**
- 3.1.4 The development shall adopt and house the Dubai Municipality Green Buildings regulations as minimum requirement.
- 3.1.5 **Preliminary Design** - All Developers through their consultant shall approach the Authority with the initial design documentation, in order to obtain the approval on the building volume, built up area, setbacks, external character and elevations material specifications.
- 3.1.6 **Final Design** - All Developers through their consultant shall prepare detailed design documentation and submit for authority approval prior to applying for Building Permit. The Final Design shall be reviewed by the authority in order to assure that:
  - Structural & MEP standards are adhered to
  - Master planning guidelines and regulation are followed
  - Value engineering principles are applied
- 3.1.7 **Land Demarcation** - All developers through their consultant or contractor shall apply to the authority to issue the Land Demarcation Certificate at two stages during the construction of project as per the plot coordinates of Affection Plan;
  - Pre-construction: requested by contractor prior to applying for the building permit.
  - Post-construction: requested by contractor prior to applying for the building completion.
- 3.1.8 **Mobilization Permit** – The appointed contractors shall prepare detailed mobilization plan and submit for approval. The Authority shall review the submission in order to ensure that all required insurance, bonds and permits are obtained. This permit shall enable

the contractor to start preparatory work and operations necessary for the movement of personnel, equipment, furnishing and erecting field offices, construction fence, construction signboard and other facilities necessary for work on the project.

3.1.9 **Enabling Works Permit** – The appointed contractors shall prepare Enabling Works Permit application and submit for approval. The Authority shall review the submission in order to ensure that all required insurance, bonds and permits are obtained. Enabling works might be preceded by mobilization activities, carried out after the client has selected the contractor, but before the Building Permit is issued by the authority. These are preparatory activities, such as; excavation for basements, arranging road closures etc.

3.1.10 **Building Permit** - Please refer section 3.2.

3.1.11 **Structural Inspections** – The Authority representative shall carry out Structural Inspection for all horizontal elements (slab, foundations etc.) The contractor shall submit request for inspection prior to concreting.

3.1.12 **Building Completion** - No buildings or facilities may be occupied by the owner's representatives after construction prior to obtaining a Building Completion Certificate from the Authority. Please refer section 3.4 for further details.

3.1.13 **Building Fitness Certificate** - No facilities may be occupied by the actual tenants unless a Building Fitness Certificate is issued by the Authority.

**Note:**

1. Application forms for the above mentioned services by Development Control department can be downloaded from [www.dubaisouth.ae](http://www.dubaisouth.ae) website.
2. Any approvals issued by the Authority for item nos. 3.1.5 to 3.1.10 will expire after six months if no subsequent request for approval is submitted to the authority.

## 3.2 Procedures and Requirements for a Building Permit

3.2.1 A building permit shall be issued subject to:

- a) Obtaining the No objection certificate from the Service Authorities for water, electricity, fire alarm/firefighting, LPG and telecom.

- b) Fulfilling the submission requirements of the Authority.
- c) Building Permit Fees and any other fees as per fee schedule

3.2.2 The Building Permit becomes null and void if:

- ✓ Construction authorized is not commenced within 180 days.
- ✓ Construction on work is suspended or abandoned for a period of 180 days at any time after work is commenced.
- ✓ Main contractor and/or Consultant is changed.

3.2.3 Any amendments to approved drawings or deviations from the conditions stipulated in the building permit shall not be allowed unless explicit and written consent of the Authority is granted by applying Design Revision Process. In case of violation, the Authority reserves its right to demolish any illegal addition to the buildings or part thereof. The cost of demolition shall be borne by the contractor and consultant.

3.2.4 Documents to be submitted to the Authority for obtaining a building permit must include:

- Copy of Final Design Review Approval
- Contractor Appointment Letter from Owner (Original)
- Contractors Acceptance Letter (Original)
- Copy of Consultants Professional License & DS Reg.
- Copy of Contractors Trade License & DS Reg.
- Outline Programme of Work in Primavera format
- DS QHSE NOC
- Site Allocation Layout with Adjacent Plots
- An invoice for the payment of the submission fee & refundable deposit.

## 3.3 Construction Procedures

3.3.1 The Developer shall appoint a Contractor for the execution of his project. The Consultant shall supervise all construction works and shall liaise with the Authority regarding any problems encountered during execution. No direct communication concerning the management of the construction process shall be established between the Authority and the Contractor.

- 3.3.2 The Contractor shall demarcate the site in accordance with the affection plan. This work shall be checked by the Consultant and approved by the Authority prior to fencing works.
- 3.3.3 The Contractor shall obtain approval from the Authority after submitting his mobilization plan showing layouts and details of his temporary offices, fencing, sign boards, storage facility, etc.
- 3.3.4 The Contractor shall execute the project in accordance with the approved working drawings and specifications. The Contractor shall be allowed to erect temporary offices or porta-cabins during the construction stage provided; he will provide a written undertaking to remove them at the completion of construction.
- 3.3.5 The Contractor shall apply to the Authority and/or relevant service Authority and pay all charges associated with temporary electrical, water, drainage including dewatering, HSE approvals, fencing, storage and telecom installations and connections during the construction period. All temporary installations and connections must comply with the Authority and/or relevant Service Authorities standards and must be terminated following the completion of construction with suitable local isolation switches.
- 3.3.6 Prior to initiating any construction work, the Contractor shall pay the Authority a refundable deposit or unconditional bank guarantee. The amount of this deposit or bank guarantee shall be fixed by the Authority in local currency based on the built-up area. The deposit shall be refunded upon completion of the works and upon the satisfaction of the Authority that the Contractor has completed the clearance of all debris from the site.
- 3.3.7 The Contractor shall collect the Construction HSE Guideline from the Authority. The Contractor is responsible to comply with the requirements of these guidelines.
- 3.3.8 All building operations must be confined within the boundary fence or wall of the plot. Construction sites are required to be enclosed with temporary hoarding during the period of construction to avoid any hazard to public thoroughfares or adjacent buildings. Temporary fence/hoarding shall be erected within the plot boundary.
- 3.3.9 The Developer must obtain the approval of the Authority for the siting of temporary buildings like site canteen and sheds required during construction and must ensure that adequate provisions for safety and the prevention of health hazards related to sanitation, dusting and drainage disposal are taken.
- 3.3.10 All necessary safety precautions shall be taken to protect existing buildings and fences from damage due to excavations, earthworks or any other building operation. The Developer and his agent are entirely responsible in case of damage.
- 3.3.11 The Authority shall have free and uninterrupted access to the construction site at any time.
- 3.3.12 The Developer or his agent must give the Authority no less than seven days' notice following the completion of the building for inspection and prior to obtaining a building completion certificate.
- 2.3.13 All construction works must be adequately supervised, and a signed copy of the approved drawings and building permit must be kept on site during construction.
- 3.3.14 Any deviation from the approved drawings, or commencement of a construction operation without approval shall be fined. The payment of this fine shall not absolve the Developer from correcting the deviation.
- 3.3.15 Labor accommodation shall not be permitted within the site premises.
- ### 3.4 Completion Procedures
- 3.4.1 A Building Completion Certificate must be applied for by the Consultant upon completion of building works with external finishes and basic electrical, mechanical and fire installations.
- 3.4.2 The Authority shall authorize the following services and utilities to be connected to the building only after the issue of the Building Completion Certificate:
- a) Water supply
  - b) Power supply
  - c) Chilled water
  - d) Sewerage discharge
  - e) Irrigation
  - f) Telecom
  - g) Data lines (fiber optics)
  - h) Gas

3.4.3 The Building Completion Certificate shall be issued following a satisfactory inspection visit by the Authority and/or relevant Service Authority. If the inspection of the buildings reveals that further work has to be carried out, the Building Completion Certificate shall be delayed until those works are completed.

3.4.4 The application for a Building Completion Certificate must be accompanied by the following documents:

- ✓ Copy of Building Permit
- ✓ Copy of Building Inspection Log
- ✓ Copy of Final Inspection Comments from DEWA
- ✓ Copy of DEWA estimate
- ✓ Civil Defense Certificate (Original)
- ✓ Compliance Certificate from Consultant (Original)
- ✓ Compliance Certificate for External Connections (Original)
- ✓ Compliance Certificate from Etisalat for Telecom (Original)
- ✓ HSE NOC from DS
- ✓ NOC from Owner to issue Completion Certificate (Original)
- ✓ LAND Demarcation Certificate
- ✓ Soft copy of as-built drawings stamped the consultant

3.4.5 For Electric and Water Supplies, the Contractor shall be required to submit to the relevant Service Authority “Inspection Certificates” in accordance with the prescribed forms. All installations and equipment installed therein shall be subject to the Service Authority inspection, testing and final approval before connecting the power supply. All relevant documents shall be submitted to the Authority after the final approval by the Service Authority.

### 3.5 Alterations and Additions to Buildings

3.5.1 Any alterations or additions to existing building units shall be subject to the issue of a no objection certificate (N.O.C.) by the Authority. To obtain an N.O.C for alteration works, the Developer must present the same set of drawings required for a building permit, covering the areas of proposed alterations.

3.5.2 Any extensions or alterations to the electrical installations shall require the approval of the relevant Service Authority.

3.5.3 Any extension/alteration to the sewage installation shall require service authority approvals

### 3.6 Powers of the Authorities

3.6.1 It is the discretion of the Authority to cancel the Building Permit if:

- a) Work was carried out in contravention of the conditions of the Building Permit or any regulations issued by the Authority.
- b) If the Authority subsequently revealed that the Building Permit was issued on the basis of erroneous information supplied by the developer or his agent.

3.6.2 Building Permit shall not be withheld unreasonably, but the Authority shall have the discretionary power, while issuing a Building Permit to attach such special conditions thereto as related to all or any of the following matters:

- a) Filling or Excavation within the plot.
- b) Construction of boundary walls or fences.
- c) Construction of the external appearance of the building, in relation to fitness to its intended purpose and location.
- d) Disposal of soil, waste and rain water.
- e) Health and safety of personnel and environmental conditions of the workplace and surroundings.
- f) The engineering standards to which any process installation is constructed.

3.6.3 The Authority is empowered to change, amend, replace and/or update the regulations without prior notice. It is the developer’s responsibility to obtain updated regulations and ensure compliance.

3.6.4 It is the responsibility of the developer or his agent to apply in accordance with the up-to-date regulations, the Authority notices, etc. that may supersede ones mentioned in these regulations.

3.6.5 The Authority reserves the right to reject the appointment of consultants or contractors for particular jobs if they are not deemed competent enough to fulfill the related responsibilities

3.6.6 The Authority reserves the right to suspend a consultant or a contractor for non-compliance with the regulations.

### 3.7 Responsibilities and Disputes

- 3.7.1 Neither the checking of the drawings, nor the checking of the structural calculations, nor inspection of the work during the progress of construction, shall be construed in any way to impose responsibility and/or liability on the Authority or their agents. The developer and his agents shall remain responsible for all errors in the design and execution of the project and for the stability of construction during the progress of the works and after completion.
- 3.7.2 All complaints and disputes concerning Building Permits and the erection of buildings shall be referred to the Authority. Any financial disputes shall be referred to Dubai courts.
- 3.7.3 Authority shall carryout HSE inspections periodically during and post construction. However developer and his agent shall be held responsible for any accidents and/or damages arising out of any lapses to their own property and/or adjoining property for any consequential physical and / or financial damages and liabilities. All such incidents shall be reported to the authority.



## 4.0 GENERAL PLANNING REGULATIONS

The Residential District is mainly dedicated for multi density residential apartment buildings with heights varying from 5 to 10 floors. Other buildings include residential, commercial and office buildings on the spine road up to ten floors high, as well as community facility and utility buildings.

### 4.1 General Provisions

The Regulations described in this document apply to developments within the Residential District. These shall be applied along with the current Building Regulations and Specifications issued by Dubai Municipality.

- 4.1.1 All plots located within the Residential District are reserved for construction of buildings subject to the use restrictions set out by these regulations. These plots cannot be subject to any further subdivision. However, two or more plots may be combined subject to approval by the Authority.
- 4.1.2 Each individual building must be connected to the internal utility networks provided by the Authority.
- 4.1.3 All buildings shall be of good quality construction. Architectural materials shall conform to any specific requirement set out by the Authority and shall comply with Dubai Municipality Standards and Dubai Central Laboratory.
- 4.1.4 The Residential District is divided in terms of Land use in to five main zones. (Figure 6)
- Zone “H” (Residential Use)
  - Zone “M” ( Mixed Use)
  - Zone “C” (Commercial Use)
  - Zone “O” (Office Use)
  - Zone “S” (Amenities and Utilities)
- I. Residential Apartments Zone (H). This zone is further sub-divided into five sub-zones each with different building regulations:
- Sub-Zone “Ha”
  - Sub-Zone “Hb”

- Sub-Zone “Hc”
- Sub-Zone “Hd”
- Sub-Zone “He”

II. Mixed Residential Commercial Zone (M). This zone is further sub-divided into two sub-zones each with different building regulations:

- Sub-Zone “Ma”
- Sub-Zone “Mb”

III. Offices Zone (O).

IV. Commercial Zone (C).

V. Community facilities and utility services Zone (S) including all the community facilities and utility buildings / structures serving the residential area.

*(Refer Figure 5: The Residential District Land Use)*

4.1.5 All the installations and Buildings to follow Dubai Municipality Green Building Regulations and specifications through design to operation.

### 4.2 General Architectural Design Standards

#### 4.2.1 Intent and Theme

The intents of these guidelines are:

- ✓ To create a community of harmony and continuity while allowing a number of modern architectural alternatives.
- ✓ To control the external appearance of the buildings.
- ✓ To preserve the design integrity.
- ✓ To maintain the aesthetics standards to create a desirable place to live in.

The Authority reserves the right to make changes to these design guidelines at any time.

## 4.2.2 Building Character

- 4.2.2.1 The building mass, exterior materials and elements shall create aesthetically pleasing building that will follow the harmony or will be an upgrade from the surrounding buildings.
- 4.2.2.2 Architectural creativity is encouraged but design integrity must be maintained.
- 4.2.2.3 Architecture (where adjacent to pedestrian walks and paths) should complement the pedestrian environment to create an aesthetically pleasing image and should be of human scale. There must be attention to detail and materials and colors should relate to the surroundings.
- 4.2.2.4 All sides of a building that are open to public view (including views from adjacent residential plots) shall receive equal architectural design consideration (i.e. windows, doors, architectural treatments, etc.). No building shall have blank, flat walls. Large uninterrupted expanses of a single material are prohibited.
- 4.2.2.5 Massing forms should reflect building functions. Entrances must be well defined from access drives, pedestrian links, public plazas and major parking areas.
- The apparent mass of large buildings shall be reduced and a varied street appearance created by manipulating the building form using: offsets, recesses, changes in plane, changes in height, windows, trellis.
- 4.2.2.6 Acceptable railing designs and materials must be presented. It should match the architectural theme. Height must correspond to Dubai Municipality and Dubai Civil Defense regulations.
- 4.2.2.7 Fencing must be decorative and should be constructed of durable materials. The design must follow the integrity of the building architecture. Transparent fencing such as modern wrought iron or aluminum is permitted and the design must be aesthetically pleasant. The maximum height allowed is 2.4 m.
- 4.2.2.8 The height of the roof parapet in general, measured from the finished roof level to the top of the roof parapet can vary between 0.90 meters (min.) and 1.10 meters (max).

If roof mounted mechanical units (including evaporative coolers, HVAC units, vents, etc.) are necessary to be placed on the roof, they shall be located or screened so as not to be visible from adjacent public and private streets as well as from adjacent properties.

Screens shall be aesthetically incorporated into the design of the building and have screen materials that are compatible with those of the building. All secondary roof equipment screens shall have continual maintenance.

In no case shall wooden or vinyl fences or chain link fencing with slats be used as a roof top equipment screen.

Satellite dishes must not be visible from the streets.

## 4.2.3 Materials and colors

- 4.2.3.1 Primary building materials shall be limited to no more than four types of materials per building. The use of paint shall be limited to architectural accent elements only and shall be limited to no more than 20% of each exterior building elevation.
- 4.2.3.2 Color of exterior building materials (excluding accent colors) shall be limited to no more than four major colors per development and shall be composed predominately of neutral tones to encourage buildings to blend into the environment. Color tones may vary if found to be compatible with surrounding developments.
- 4.2.3.3 The following list of materials is acceptable for the building facades:
- ✓ Stone cladding
  - ✓ Ceramic façade cladding
  - ✓ Composite façade cladding
  - ✓ Wooden façade cladding
  - ✓ Concrete façade cladding
- All materials must be 2 hours fire resistant and must comply with DCD and DM regulations.
- 4.2.3.4 Attention to the main entrances materials must be taken into consideration. Wall foundation cladding (ground floor) must be of a high resistance such as granite or stone.

- 4.2.3.5 Bright colors such as pink, orange, etc. will not be permitted.
- 4.2.3.6 Sustainable products shall be used in all the building construction.
- 4.2.3.7 All materials used in any construction shall be of a type and quality that fulfils the purpose for which they are used. They must be safe and durable. Where and to the extent that materials, products and workmanship are not fully detailed or specified, they are to be of a standard appropriate to the works and suitable for the functions stated in or reasonably to be inferred from the project documents, in accordance with good building practice.
- 4.2.3.8 Products must be new and previously unused. For products specified with approved standards, certificates of compliance shall be obtained from manufacturers. Where a choice of manufacturer or source of supply is allowed for any particular product, the whole quantity required to complete the work must be of the same type, manufacture and/or source.

#### 4.2.4 Landscaping

All areas within the plot boundaries not covered by building must be adequately landscaped with appropriate planting/hard landscaping to provide visual interest, shade and circulation within the plot. This requirement applies to areas assigned for open air car parking which must be properly paved and shaded. Sustainable plants to the area to be significant part of landscaping..

- 4.2.4.1 **Hard Landscaping:**
- It is encouraged that these areas be further detailed using materials such as stone paving, decorative pavers, exposed aggregate, brick pavers, or approved alternatives.
- 4.2.4.2 **Soft Landscaping:**
- The proposed landscape plan for each plot should incorporate generous plantings of trees and shrubs both in attractive groupings. Water features and exterior lighting are encouraged. Large expanses of lawn, uninterrupted by plantings, will not be acceptable.
- 4.2.4.3 **Vegetation maintenance:**

Plots must be well maintained by the Developer at all times. Each Developer's maintenance responsibility will also include the strip of vegetation located between his/her front property line and the asphalt edge of the public roadway.

#### 4.2.5 Parking

##### 4.2.5.1 General:

On plot parking requirements must observe the minimum standards stated in Dubai Municipality building regulations and standards applicable to uses permitted in this zone which are:

- ✓ A minimum of one car parking space required for each apartment with a total area of 145 m<sup>2</sup> (1600 ft<sup>2</sup>) or less.
- ✓ A minimum of two car parking spaces required for each apartment with a total area more than 145 m<sup>2</sup> (1600 ft<sup>2</sup>).
- ✓ A minimum of one car parking space required for each studio apartment.
- ✓ One car parking place required for each 45 m<sup>2</sup> of Gross commercial space.
- ✓ 5% of the total parking needed for visitors.

The Authority reserves its right to increase the above parking requirements as and when it deems necessary.

##### 4.2.5.2 Basement Parking:

When a basement parking level is required, it is highly recommended to raise the ground floor of residential building up to a maximum of 1.20 meter above the mean ground level in order to ensure natural ventilation for the basement floor and to ensure privacy to the ground floor flats.

##### 4.2.5.3 Ground Parking:

The periphery of all surface parking areas shall be designed to hide the major portions (i.e. height) of automobiles from view from the streets. No parking shall be permitted within the front setbacks of the plot. If the site doesn't allow any other alternative then a screening must be provided using walls and/or hedges of shrubs.

#### 4.2.6 Apartment's Ratios

The product mix / types of apartments (studio, 1 bedroom, 2 bedrooms or more) in each building and development in Residential District shall be subject to the Authority's review and approval.

#### 4.3 Zone "H" – Residential Apartments Zone

This zone; as shown in Figure 6, occupies most of the Residential District area. It is divided into five sub-zones, HA, HB, HC, HD, HE. In sub- zone HE, located along the main spine road, commercial uses are permitted (retail) at ground floor level. In all other sub-zones HA, HB, HC, AND HD, uses are restricted to residential only.



Figure 4: The Residential District and other Dubai South Developments

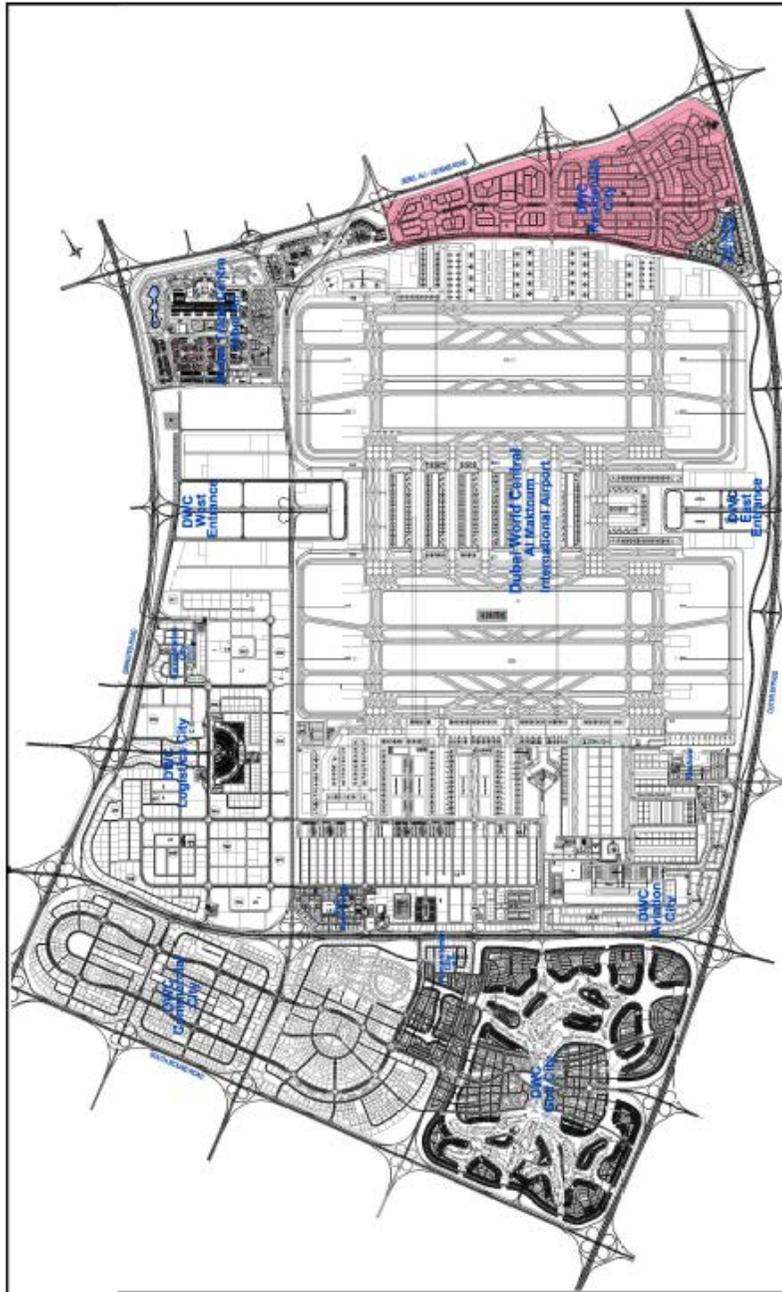


Figure 5: The Residential District Land Use

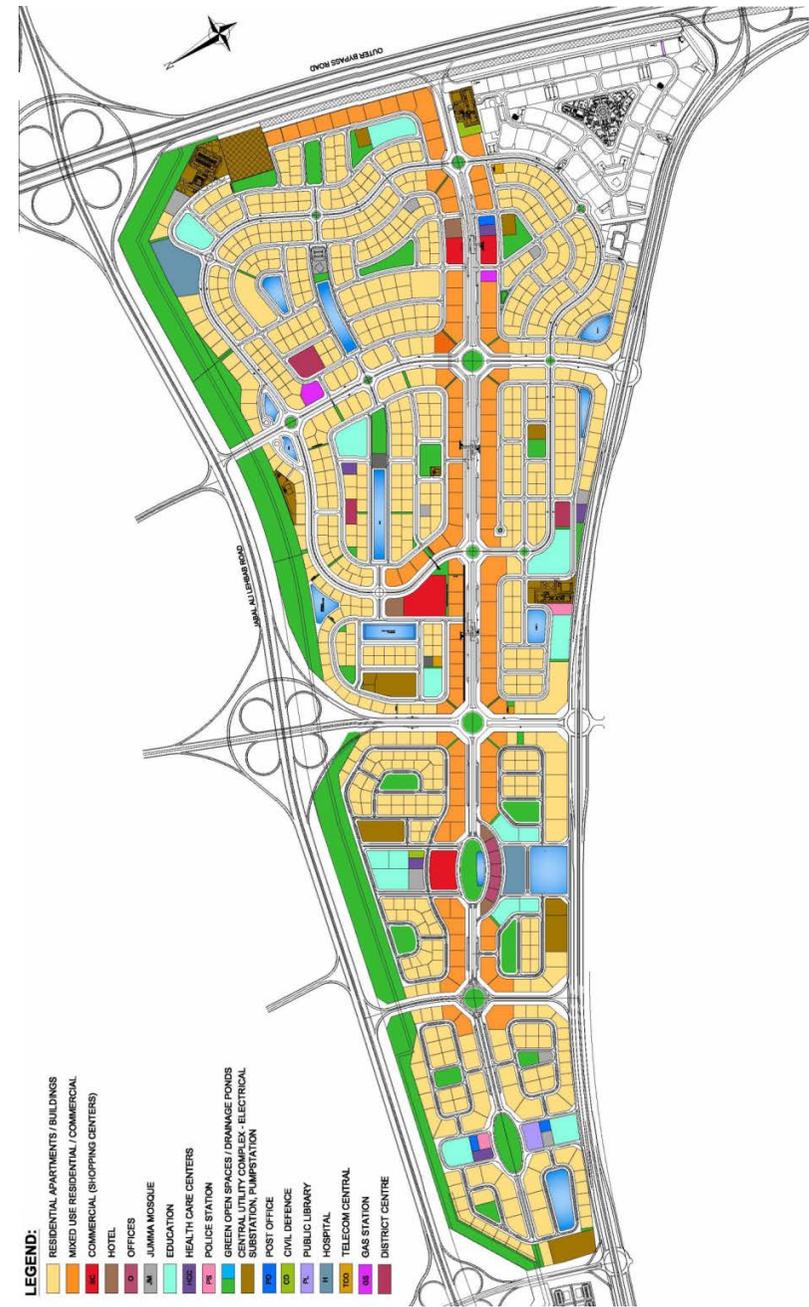
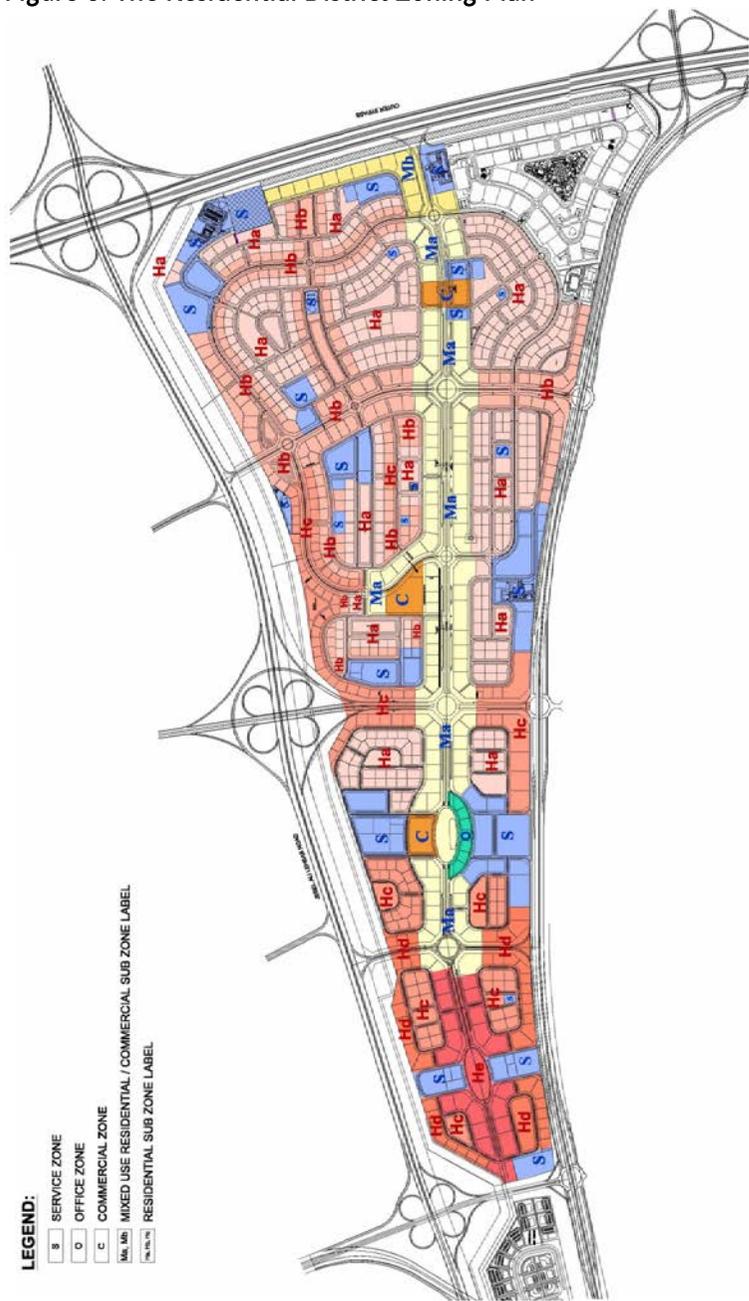


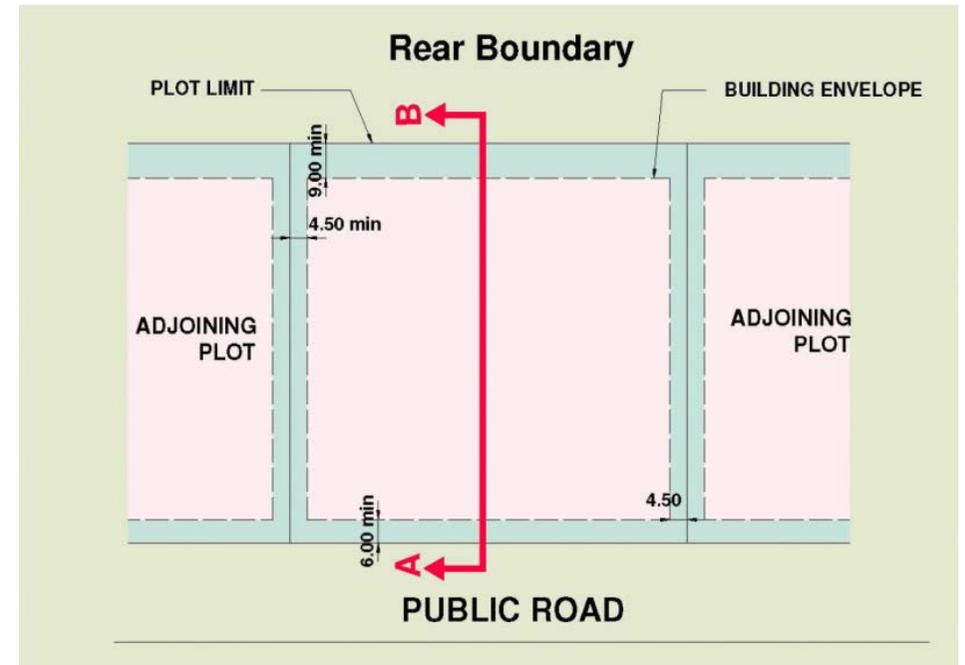
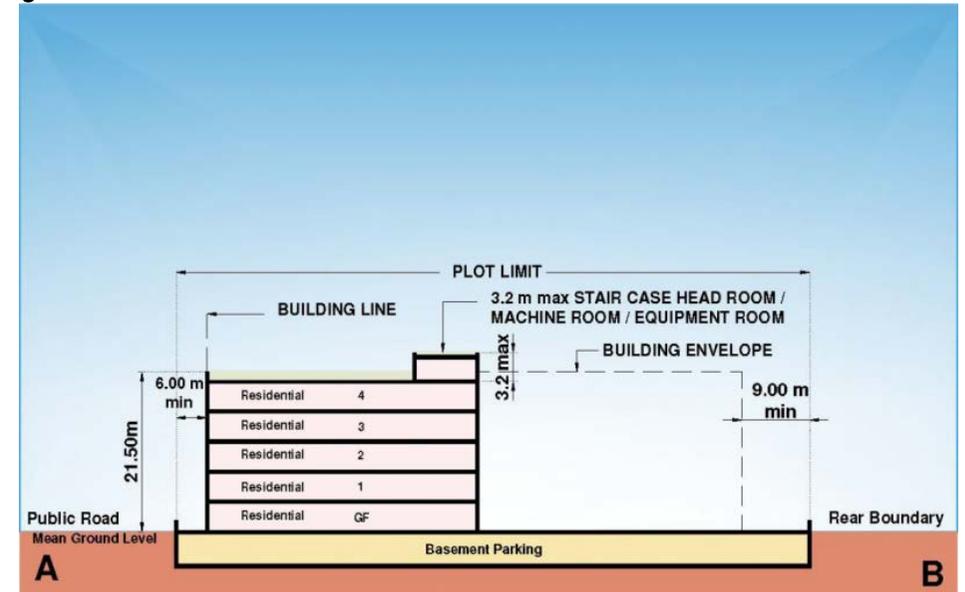
Figure 6: The Residential District Zoning Plan



### 4.3.1 Sub-Zone “Ha”

- 4.3.1.1 Permitted Use: Residential apartments
- 4.3.1.2 Minimum Setbacks: (See Plate 1)
- From public road: 6.00 meters
  - From adjoining plots: 4.50 meters
  - From rear boundaries: 9.00 meters
- 4.3.1.3 Floor Area Ratio (FAR):1.80
- 4.3.1.4 Maximum Number of Floors including the Ground Floor: 5
- 4.3.1.5 Maximum Height of the Finished Floor Level of the Ground Floor from the mean ground level of the front elevation: 1.20 meters
- 4.3.1.6 Maximum Building Height: 21.50 meters.
- Staircases and any other structures on the top floor / last floor should not exceed the height of 3.2 meters from the Finished Floor level to the top of Coping.

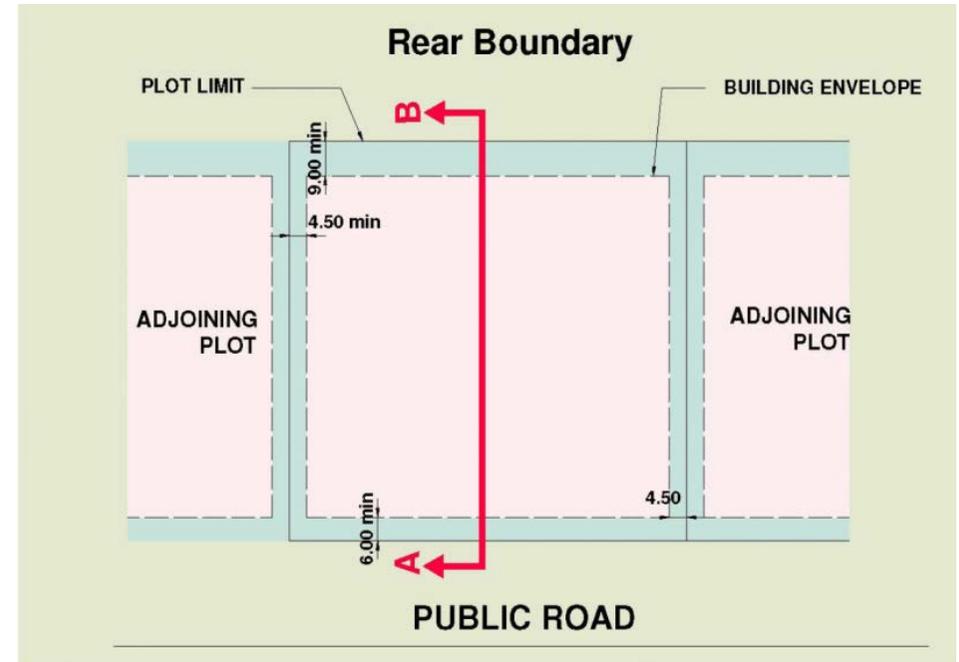
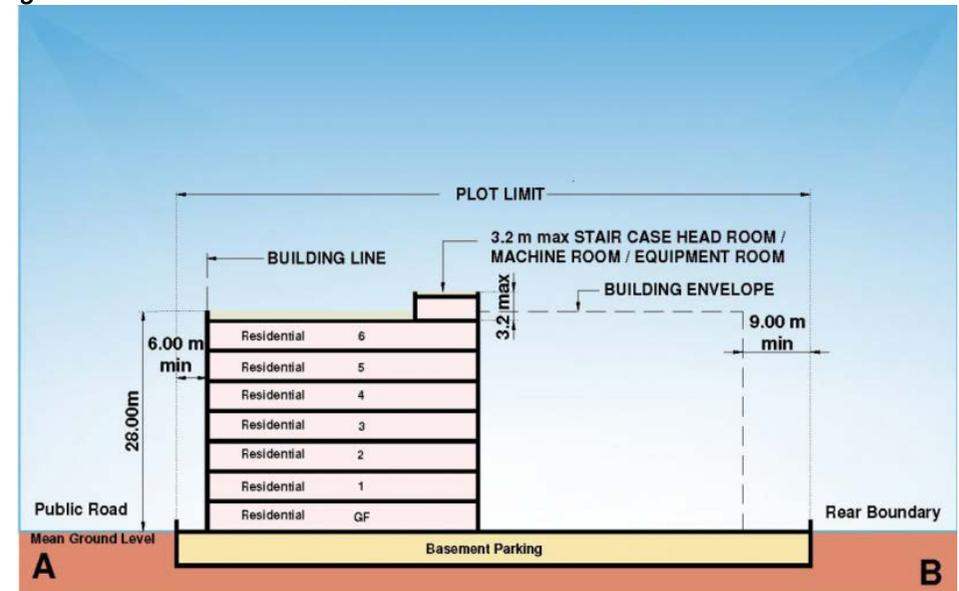
Figure: Plate 1 Sub-zone “Ha”



### 4.3.2 Sub-Zone “Hb”

- 4.3.2.1 Permitted Use: Residential Apartments
- 4.3.2.2 Minimum Setbacks: (See Plate 2)
- From public roads: 6.00 meters
  - From adjoining plots: 4.50 meters
  - From rear boundaries: 9.00 meters
- 4.3.2.3 Floor Area Ratio (FAR): 2.45
- 4.3.2.4 Maximum Number of Floors including the Ground Floor: 7
- 4.3.2.5 Maximum Height of the Finished Floor Level of the Ground Floor from the mean ground level of the front elevation: 1.20 meters.
- 4.3.2.6 Maximum Building Height: 28.00 meters  
Staircases and any other structures on the top floor\last floor should not exceed the height of 3.2 meters from the Finished Floor level to the top of Coping.

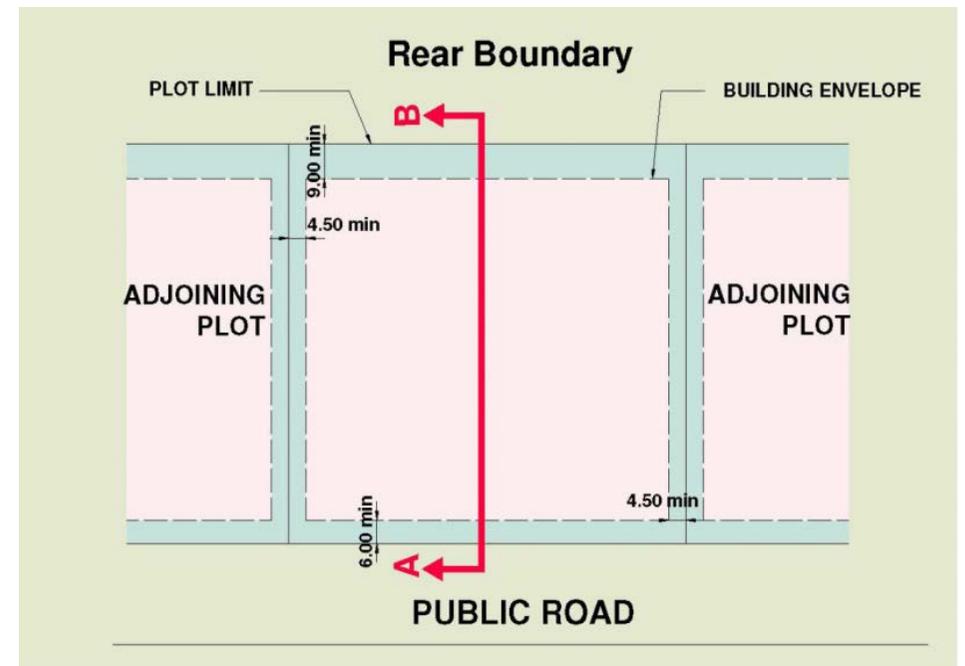
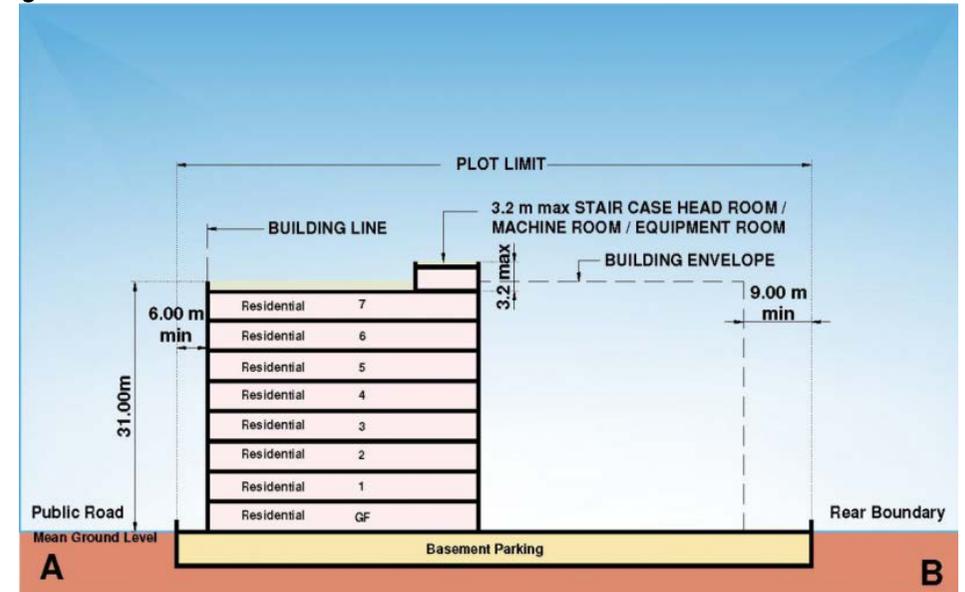
Figure: Plate 2 Sub-zone “Hb”



### 4.3.3 Sub-Zone “Hc”

- 4.3.3.1 Permitted Use: Residential Apartments
- 4.3.3.2 Minimum Setbacks: (See Plate 3)
- From public roads: 6.00 meters
  - From adjoining plots: 4.50 meters
  - From rear boundaries: 9.00 meters
- 4.3.3.3 Floor Area Ratio (FAR): 2.80
- 4.3.3.4 Maximum Number of Floors including the Ground Floor: 8
- 4.3.3.5 Maximum Height of the Finished Floor Level of the Ground Floor from the mean ground level of the front elevation: 1.20 meters
- 4.3.3.6 Maximum Building Height: 31.00 meters
- Staircases and any other structures on the top floor\last floor should not exceed the height of 3.2 meters from the Finished Floor level to the top of Coping.

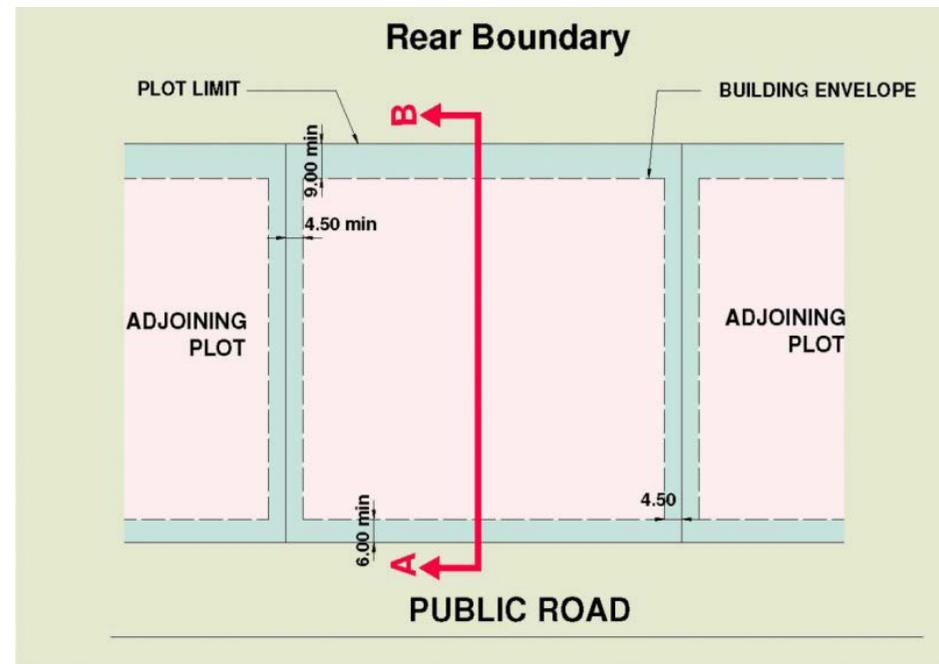
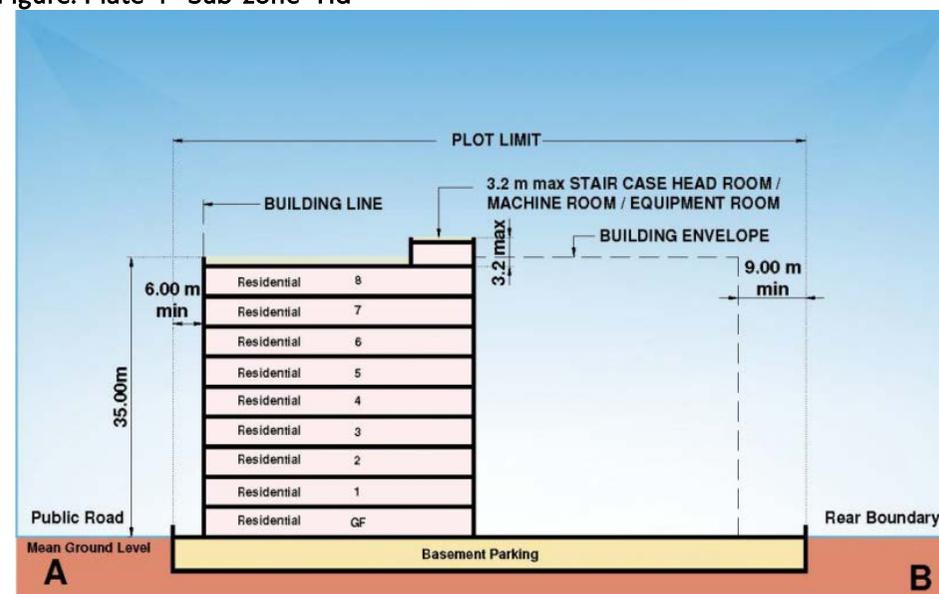
Figure: Plate 3 Sub-zone “Hc”



#### 4.3.4 Sub-Zone “Hd”

- 4.3.4.1 Permitted Use: Residential Apartments
- 4.3.4.2 Minimum Setbacks: (See Plate 4)
- From public roads: 6.00 meters
  - From adjoining plots: 4.50 meters
  - From rear boundaries: 9.00 meters
- 4.3.4.3 Floor Area Ratio (FAR): 3.15
- 4.3.4.4 Maximum Number of Floors including the Ground Floor: 9
- 4.3.4.5 Maximum Height of the Finished Floor Level of the Ground Floor from the mean ground level of the front elevation: 1.20 meters
- 4.3.4.6 Maximum Building Height: 35.00 meters
- Staircases and any other structures on the top floor\last floor should not exceed the height of 3.2 meters from the Finished Floor level to the top of Coping.

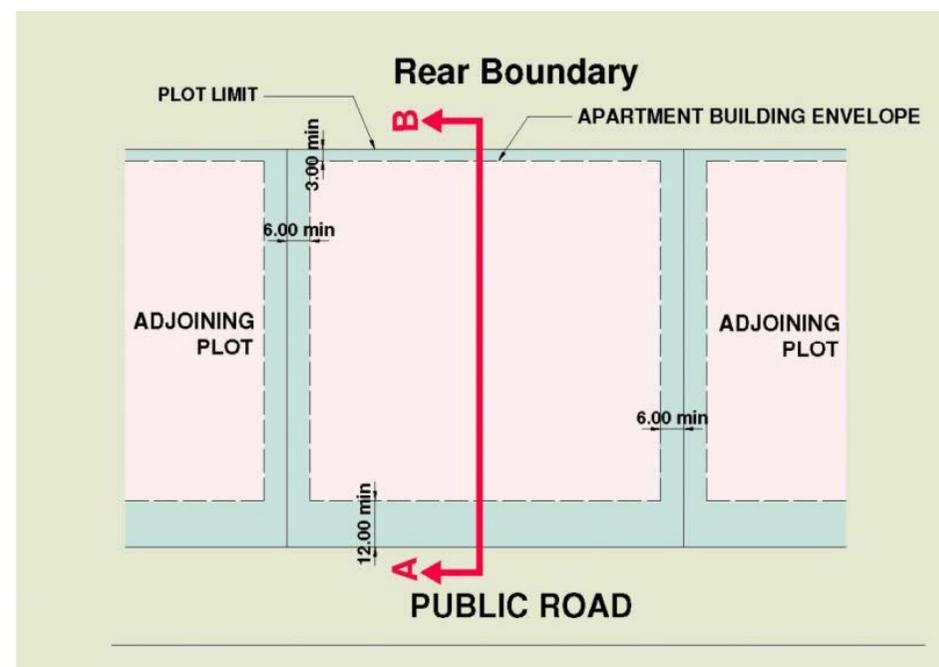
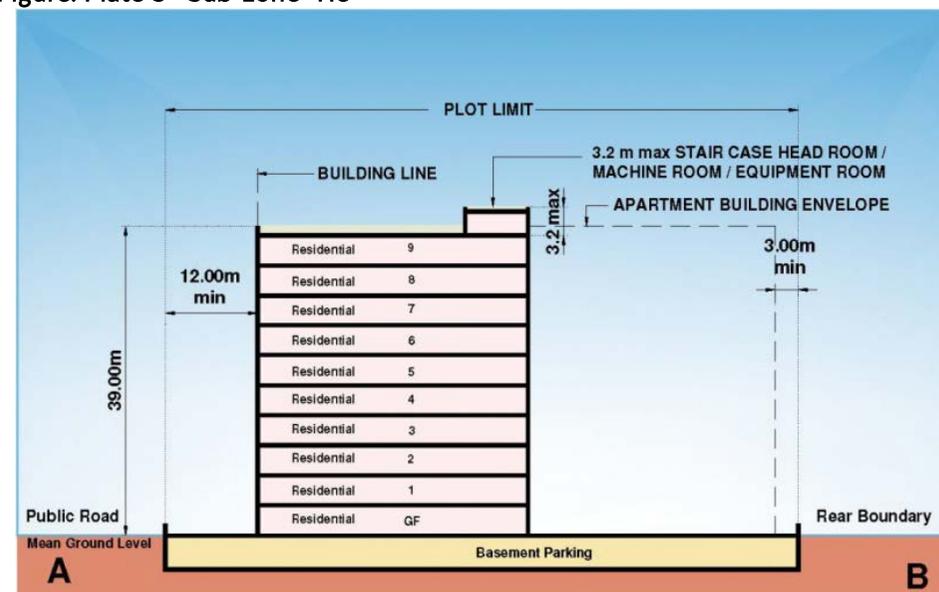
Figure: Plate 4 Sub-zone “Hd”



### 4.3.5 Sub-Zone “He”

- 4.3.5.1 Permitted Use: Residential Apartments.
- 4.3.5.2 Minimum Setbacks: (See Plate 5)
- From public roads: 12.00 meters
  - From adjoining plots: 6.00 meters
  - From rear boundaries and service road: 3.00 meters
- 4.3.5.3 Floor Area Ratio (FAR): 3.5
- 4.3.5.4 Maximum Number of Floors including the Ground Floor: 10
- 4.3.5.5 Maximum Height of the Finish Floor Level of the Ground Floor=1.20 meter
- 4.3.5.6 Maximum Building Height: 39.00 meters
- Staircases and any other structures on the top floor\last floor should not exceed the height of 3.2 meters from the Finished Floor level to the top of Coping.

Figure: Plate 5 Sub-zone “He”



## 4.4 Zone “M” – Mixed use Residential / Commercial Zone

### General

This zone, as shown in figure 6, covers two stretches of the main spine road of the Residential District. Plots are strictly reserved for the erection of buildings planned to be used as commercial at podium level and residential apartments on the upper floors. The plots located in this zone are not subject to any further subdivision; however, two adjacent plots may be joined together to form a larger plot subject to approval by the Authority.

### Permitted Uses

- a) Podium: Retail and commercial services, restaurants, showrooms, banks and Parking. The maximum depth of the commercial strip in the podium along the main roads is limited to a maximum of 30.00 meters from the front setback line (See Plate 6 & 7), the remaining rear part of the podium is recommended to be designed as a parking structure.
- b) Upper Floors: Residential Apartments, serviced apartments
- c) Any other use will require a special approval by the Authority.
- d) Hotels are permitted as standalone facilities.

### Requirements for on plot parking

On plot parking requirements must observe the minimum standards stated in Dubai Municipality building regulations and standards applicable to uses permitted in this zone which are:

- A minimum of one car parking space required for each apartment with a total area of 145 m<sup>2</sup> (1600 ft<sup>2</sup>) or less.
- A minimum of two car parking spaces required for each apartment with a total area greater than 145 m<sup>2</sup> (1600ft<sup>2</sup>).
- A minimum of one car parking space required for each studio apartment.
- One car parking place required for each 45 m<sup>2</sup> of Gross commercial/ showroom area.

The Authority reserves its right to increase the above parking requirements as and when it deems necessary.

#### 4.4.1 Sub-Zone “Ma”

4.4.1.1 Maximum Floor Area Ratio (FAR): 3.75

4.4.1.2 Minimum Setbacks (See plate 6):

- From main roads: no setback required for the podium, 12.00 meters setback required for all other floors situated above podium from the plot boundary.
- From adjoining plots: 3.00 meters for the podium, 6.00 meters for all other floors situated above the podium.
- From rear boundaries and service roads: 3.00 meters for the podium, 9.00 meters all other floors situated above the podium.
- Minimum separating distance between 2 buildings on the same plot: 12.00 meters.

4.4.1.3 Podium

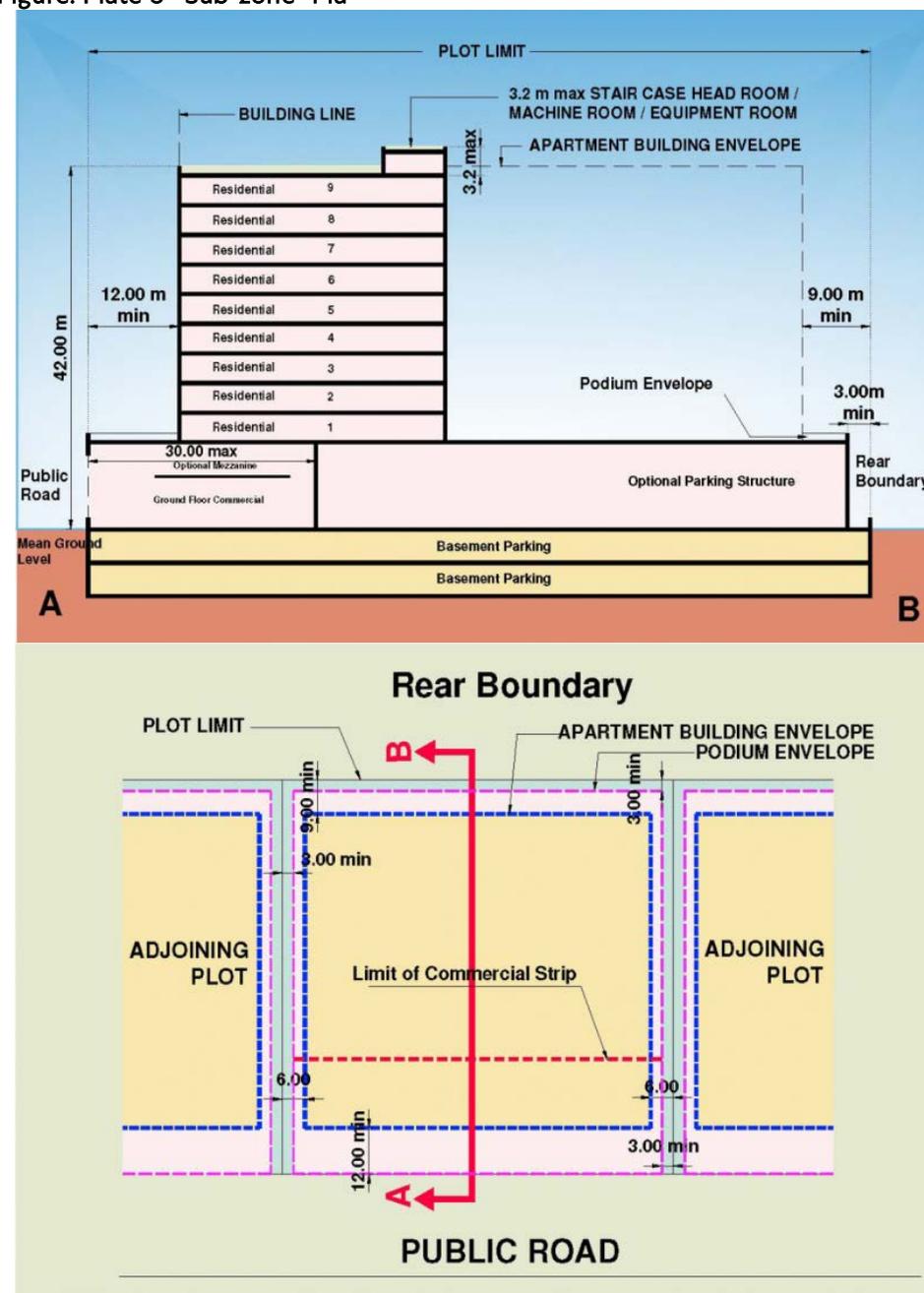
- Maximum height of the podium including parapet: 7.50 meters.
- Maximum clear height of the ground floor: 6.00 meters

It is allowed to have a mezzanine floor as part of the ground floor provided that its total area is less or equal to 50% of the gross leasable area of the ground floor.

4.4.1.4 Maximum building height: 42.00 meters.

4.4.1.5 Minimum height of the roof parapet: 1.10 meters.

Figure: Plate 6 Sub-zone “Ma”



#### 4.4.2 Sub-Zone “Mb”

4.4.2.1 Maximum Floor Area Ratio (FAR): 3.75

4.4.2.2 Minimum Setbacks (See plate 7):

- From main roads: no setback required for the podium, 12.00 meters setback required for all other floors situated above podium from the plot boundary.
- From adjoining plots: 3.00 meters for the podium, 6.00 meters for all other floors situated above the podium.
- From rear boundaries and service roads: 3.00 meters for the podium, 9.00 meters all other floors situated above the podium.
- Minimum separating distance between 2 buildings on the same plot: 12.00 meters.

4.4.2.3 Podium

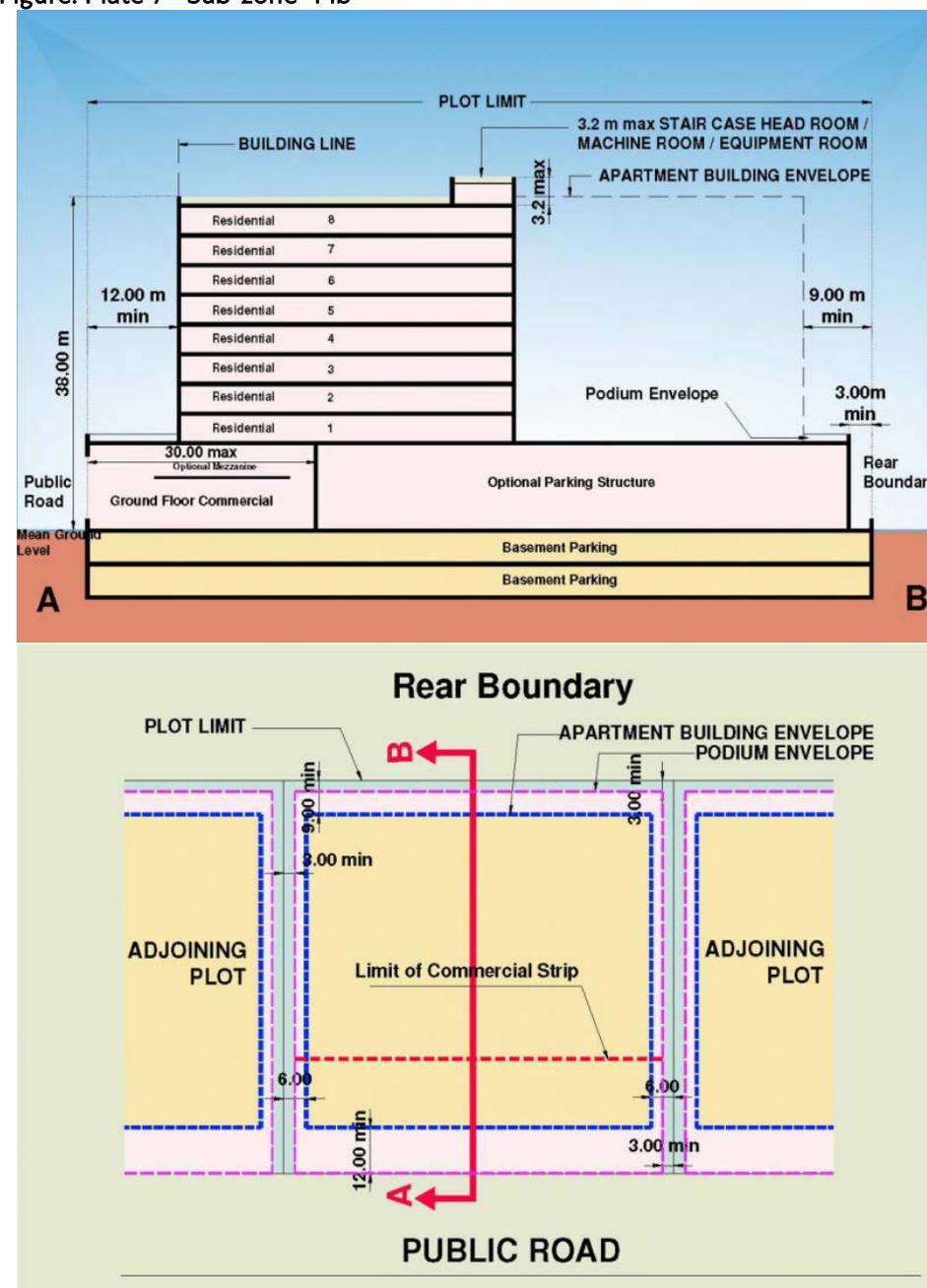
- Maximum height of the podium including parapet: 7.50 meters.
- Maximum clear height of the ground floor: 6.00 meters

It is allowed to have a mezzanine floor as part of the ground floor provided that its total area is less or equal to 50% of the gross leasable area of the ground floor.

4.4.2.4 Maximum building height: 38.00 meters.

4.4.2.5 Minimum height of the roof parapet: 1.10 meters.

Figure: Plate 7 Sub-zone “Mb”

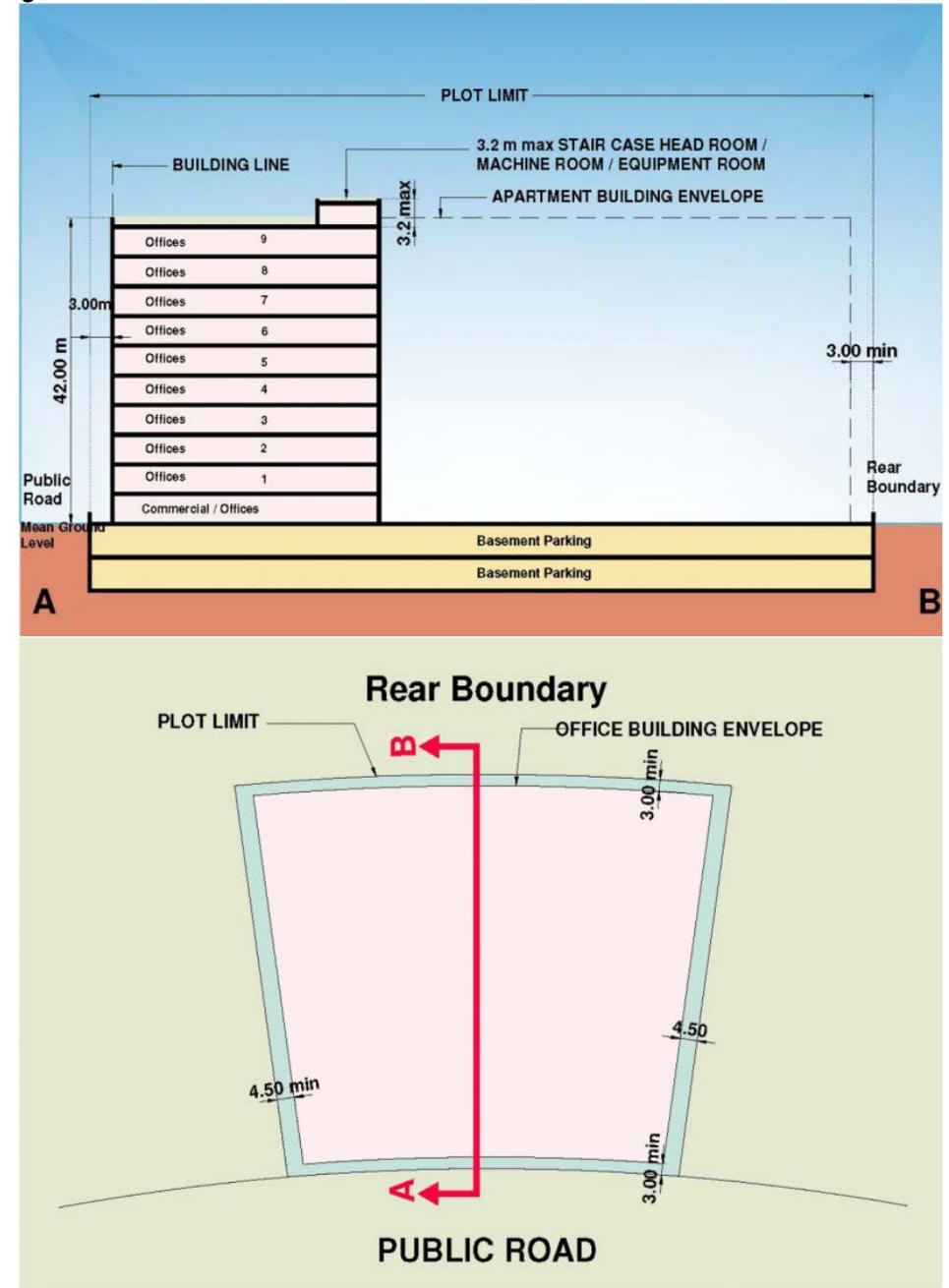




## 4.6 Zone “O” – Offices Zone

- 4.6.1 General: This zone, as shown in figure 6, is located west of an elliptical open space situated on the main spine of the Residential District. The plots located in this zone are not subject to any further subdivision; however, two adjacent plots may be assembled together to form a larger plot subject to approval by the Authority.
- 4.6.2 Permitted Uses:
- Offices, banks, showrooms, recreational, restaurants and parking.
- 4.6.3 Minimum Setbacks (see Plate 9):
- From main roads: 3.00 meters
  - From adjoining plots: 4.50 meters.
  - From rear boundaries and service roads: 3.00 meters
- 4.6.4 Maximum Floor Area Ratio (FAR): 3.5
- 4.6.5 Maximum number of floors: 10.
- 4.6.6 Maximum building heights: 42.00 meters.
- 4.6.7 Minimum height of the roof parapet: 1.10 meters.
- 4.6.8 Requirements for on plot parking: On plot parking requirements must observe the minimum standards stated in Dubai Municipality building regulations and standards applicable to uses permitted in this zone which are:
- Retail: One car parking place for each 45 m<sup>2</sup> of gross commercial area.
  - Offices: One car parking place for each 45 m<sup>2</sup> of gross leasable office area.
- The Authority reserves its right to increase the above parking requirements as and when it deems necessary.

Figure: Plate 9 Zone “O”



## 4.7 Zone “S” – Services

- 4.7.1 General: The zone “S” is intended for the construction of buildings servicing the resident population such as community facilities, educational institutions, hospital and health care centers, post office, police station, civil defense, library, mosques, community halls and technical buildings such as central utility complexes, electrical substations, telecommunication centers, water tanks and pumping stations.

The codes and parameters regulating the construction of these structures and buildings must strictly follow the Building construction codes and DM building regulations and specifications, currently under application in Dubai.

- 4.7.2 Permitted Uses: The use of each plot is assigned on the land use plan (See Figure 6).



## 5.0 SITE AND SERVICES

### 5.1 Site access

- 5.1.1 Each serviced site must have access to all buildings and facilities situated on it. If required, internal roads may be provided and finished with interlocking blocks, with a minimum width of 4.50 m for the use of vehicles and designed to an adequate standard. Parking ramps should have a minimum clear width of 3.5 m.
- 5.1.2 The finished level of any paved road, parking or footpath should not be less than 150 mm above the finished level of the approach road to the site and shall have an adequate fall towards the approach road.

### 5.2 Utility Services

#### 5.2.1 Utility requirements:

The Developer shall provide within the plot boundaries the following:

- a) Water supply, sewerage and irrigation services to habitable parts of any building in compliance with the standards set out by the relevant Service Authorities.
- b) Electrical power distribution installations in compliance with the Regulations set out by the Service Authority (DEWA).
- c) Fire protection facilities shall be in accordance with the recommendations, requirements and specifications of the National Fire Protection Association, NFPA and approved by the Service Authority (Dubai Civil Defense).
- d) Storm water drainage and disposal, in accordance with the recommendations and regulations of the relevant Service Authority and Dubai Municipality. Provision of any utility and necessary reservation on any plot will require liaising between the customer and the responsible authorities.

Utility Services shall be designed and installed in accordance with the relevant Service Authority standards and regulations which includes, but not limited to the following:

- o DEWA standards and specifications
- o Municipality Regulations and Recommendations
- o Dubai Civil Defense requirements and approval

The developer has the right with the agreement of the relevant Authorities to do some works outside the plot boundaries in order to connect to the infrastructure networks.

#### 5.2.2 Water Supply

- a) Water supply installations shall comply with the relevant Service Authority (DEWA) standards and with the Authority requirements, the British Standards and/or the Uniform Plumbing Code (UPC) USA.
- b) Water storage tanks shall be provided for every serviced site to accommodate for both the fire protection and the daily domestic water demand requirement. The minimum capacity of any storage tank should not be less than one day supply for domestic water use and 90 minutes of coverage for fire protection use.
- c) The Developer shall submit a request for a service connection to the Service Authority (DEWA) documents upon completion of construction.
- d) All installations shall be subject to testing by the Service Authority (DEWA), in accordance with the relevant Regulations.
- e) Developers shall pay a one-time water connection charge and all other charges in application to the Service Authority (DEWA) Regulations.

#### 5.2.3 Wastewater

- a) Wastewater installations shall comply with the relevant Service Authority and DM regulations, the Authority requirements and British Standards.
- b) All chambers for the disposal of foul sewerage from any building shall be adequately vented and impervious to liquids internally or externally.
- c) Sewers must be of durable material and construction and watertight under all conditions. The internal diameter of any soil drain shall not be less than 150 mm.
- d) Service connection between the main inspection chamber of a serviced site and the public infrastructure shall be paid for by the Developer.
- e) All installations shall be subject to testing and approval of the Authority.
- f) Developers shall pay a one-time connection charge and all other charges thereof in accordance with Authority charges.

#### 5.2.4 Irrigation

- a) Irrigation for outdoor landscaped areas installations shall comply with the relevant Service Authority and DM regulations.
- b) All installations shall be subject to testing and approval of the Service Authority and the Authority.
- c) Irrigation of any outdoor landscaped areas shall be by the use of TSE water available from the relevant Service Authority.

- d) The Developer shall submit a request for a service connection to the relevant Service Authority upon completion of construction, accompanied by a detailed drawing indicating the exact location of the storage reservoir(s) (daily water demand) and connection location with diameter.
- e) Developers shall pay a one-time connection charge and all other charges thereof in accordance with Authority charges.

### 5.2.5 District Cooling

- a) District cooling network supplied by the Authority is provided to each plot terminating at a valve chamber located within the plot.
- b) The Developer shall be responsible for the provision of an Energy Transfer Station (ETS) to be located within his development. The Developer is also responsible for the connection to the district cooling network valves in order to provide Air Conditioning to his development.
- c) All Installations shall comply with the relevant Service Authority Specifications, Standards and Regulations.
- d) The Developer shall submit a request for a service connection to the Service Authority accompanied with detailed drawings indicating location of the building ETS along with related Piping and Instrumentation Diagrams (P&ID) and cooling load requirements.
- e) The Developer shall provide at the main connection to the building ETS station a Btu/Energy meter in compliance with the Service Authority requirements.
- f) The Developer shall, as a minimum requirement, make available for reading, monitoring and control via a DDC (BMS) Controls connection to the Service Authority site wide control network of the following:
  - o Btu/Energy meter reading
  - o ring and control of ETS station heat exchanger (District Cooling side only)
- g) The Developer shall pay a onetime connection charge in addition to all others usage charges thereof in accordance with the Service Authority charges.

### 5.3 Storm Water Drainage

- 5.3.1 Storm water installations shall comply with the relevant Service Authority and DM regulations, the Authority requirements and the British Standards.
- 5.3.2 Roof drainage network shall be designed to a frequency return period of five years.

- 5.3.3 Roof finish shall have a gradient of at least 1:80 capable of directing storm water to suitable outlets or down pipes, which shall discharge freely at ground level.
- 5.3.4 Channels, gutters, outlets or down pipes shall be of durable material with suitable watertight joints, in accordance to Authority standards.
- 5.3.5 Down pipes shall be at least 80 mm diameter, securely attached to the building.
- 5.3.6 Public parking shall be provided with channels and gutters inlets designed to a minimum rainfall intensity of 64 mm per hour and a minimum time of concentration of 10 minutes.

## 6.0 BUILDING DESIGN STRUCTURAL REQUIREMENTS

- 6.1 The building shall be so constructed that the combined dead, imposed and wind loads are safely transmitted to the ground without deformation and deflection of any part of the building, and without such ground movement impairing the stability of any part of another building. Building stability shall not be impaired by subsoil movement due to swelling or shrinking.

### 6.2 APPLICABLE CODES

The following with listed parameters shall be permitted for the purpose of structural design. Consultant should ensure that selected design standards are the latest edition and fully compatible with Dubai South design regulation & guidelines;

#### 6.2.1 DEAD AND LIVE LOADS

1. **BS 6399:** Part 1 “Code of practice for dead and imposed loads”.
2. **BS 6399:** Part 3 “Code of practice for imposed roof loads”.
3. **ASCE 7:** “Minimum Design Loads For Buildings and other structures , Chapter 3 ‘Dead loads’ and Chapter 4 ‘ Live Loads ‘
4. Adopted Dead and Live Loads Shall Satisfy Recommendations of the Dubai Municipality, Dubai South and other relevant statutory Authorities.

#### 6.2.2 SEISMIC LOADS

1. UBC 1997, Volume 2, ‘Structural Engineering Design Provisions’, Division IV ‘Earthquake Design
2. Zone shall be adopted to all structures as per circular 191 from Dubai municipality

#### 6.2.3 Wind Load

1. ASCE 7: ‘Minimum Design Loads for Buildings and Other Structures’ - Chapter 6. Design shall be based on basic wind velocity of 45 m/sec
2. For all structures where wind loads are applied as per codes, other directions than the two orthogonal ones to be

investigated for ultimate and serviceability limit states. The same shall be carefully studied for irregular buildings.

#### 6.2.4 Design Codes

1. BS 8110: ‘Structural Use of Concrete’
2. ACI 318: ‘Building Code Requirements for Structural Concrete’
3. ACI Manual of Concrete Practice – the latest edition.
4. AISC 360
5. UBC 1997, Volume 2, ‘Structural Engineering Design Provisions’
6. BS 8004: ‘Foundations’
7. BS 5950: ‘Structural Use of Steelwork in Buildings’
8. BS 8007: ‘Design of concrete structures for retaining aqueous liquids’
9. BS 5628: ‘Code of Practice for Use of Masonry’
10. IBC ‘International Building Code’, excluding seismic design provisions.

### 6.3

Minimum requirements for structural steelwork:

- a) Minimum thickness of material for main structural members shall be 6 mm unless the member is a hot rolled section complying with BS4 and BS 4848, or similar approved standards.
- b) Painting shall be epoxy based paint with a minimum life to first maintenance of 20 years.

### 6.4

Minimum requirements for concrete work:

- a) Minimum cement content shall be 370 kg / m<sup>3</sup>.
- b) Maximum water / cement ratio shall be 0.45.
- c) Minimum 28 days characteristic cube strength shall be 30 N / mm<sup>2</sup>.
- d) Maximum chloride content (as NaCl) in any mix shall not exceed 0.3 % by weight of cement for reinforced concrete 0.12 % by weight of cement for mass concrete and 0.06 % by weight for prestressed concrete.

- 6.5** The following are particular minimum requirements for concrete in contact with soil:
- a) Minimum 28 days characteristic cube strength shall be 40 N / mm<sup>3</sup>.
  - b) All reinforced concrete members shall be protected with quality damp- proofing and water-proofing systems.
  - c) Clear concrete cover to reinforcement shall be not less than 75 mm for footings and 50 mm for columns, beams, slabs and walls.
  - d) Anti-termite treatment shall be provided underneath slabs on grade and ground beams to prevent termite infestation. Proposed anti-termite treatment shall be approved by the Authority.
- 6.6** The design and construction of pipelines, storage tanks, boilers, cranes, lifting equipment and pressure vessels shall be checked and certified by an independent third party inspection agency approved by the Authority.

## 7.0 FIRE PROTECTION REGULATIONS

- 7.1 Provision of Fire Protection and Life Safety Facilities shall comply with the requirements of the latest version of UAE Fire and Life Safety Code of Practice and International standards like National Fire Protection Association, NFPA and shall be approved by the Service Authority Dubai Civil Defence based on fire risk assessment and (UAE) Government Safety Regulations.
- 7.2 The building Life Safety design shall be in accordance to latest version of UAE Fire and Life Safety Code of Practice. Every building shall be provided with adequate means of egress, and other safeguards which shall be specified in kind, number, location and capacity, taking into consideration type of occupancy, number of persons exposed type of building materials and other relevant factors that may affect the safety of occupants.
- 7.3 A minimum of two means of escape shall be provided in every building, and shall be arranged in such a way that shall minimize the eventuality of both being rendered impassable during the same emergency conditions. HVAC system shall be designed to ensure no smoke enters the escape route inclusive of the stairwell to facilitate ease in evacuation. All Air Handling Units shall be shutdown to prevent supply of fresh air to the fire hazard
- 7.4 Every exit stair and other vertical opening between floors of a building shall be fire partitioned, enclosed and protected as necessary to prevent the spread of fire, fumes and smoke through the vertical openings from floor to floor, giving enough time for the occupants to reach the means of escape. All Security and Access Control doors shall be interfaced with fire alarm system to open in case of fire alarm.
- 7.5 Every building shall be provided with fire detection alarm system to warn the occupants in the event of fire which shall be designed and installed in accordance to UAE Fire and Life Safety Code of Practice and to be approved by Dubai Civil Defence. The alarm system shall be adequately connected to the 24 x 7 Direct Alarm Monitoring System of Dubai Civil Defence and to the Dubai South City Integrated Intelligent Building Solution System through Dubai South WAN. The developer shall provide necessary gateway equipment and connectivity to the Dubai South WAN available with in the Building telecom room.
- 7.6 Every building shall have a central LPG Storage tank with a piping network connecting to every residential apartment and commercial outlets like restaurants/canteens, etc. shall be provided. Complete Design and Installation to comply with UAE Fire and Life Safety Code of Practice and to be approved by Civil Defence. The gas detection system shall also be installed.
- 7.7 Portable fire extinguishers of appropriate type and numbers must be provided and conveniently located in every building in accordance with UAE Fire and Life Safety Code of Practice.
- 7.8 For storage occupancy-fire protection and means of egress shall be provided as per their hazard contents classifications in compliance with UAE Fire and Life Safety Code of Practice.
- 7.9 Every building shall be properly and fully fire protected by an approved fire protection system complying with UAE Fire and Life Safety Code of Practice taking into consideration the type of occupancy and usage and to be approved by Dubai Civil Defence. Main fire protection system components such as fire pumps, controller, sprinklers and accessories as applicable shall be U.L. listed for the intended use and Factory Mutual approved. The Pump controllers shall be adequately connected to the 24 x 7 Direct Alarm Monitoring System of Dubai Civil Defence.
- 7.10 The elevators shall be interfaced with the fire alarm system to come to the home landing level and halt after opening the doors, allowing the passengers to escape. In case of fire alarm on the home landing level the elevator to go to the alternate level and come to a halt after allowing the passengers to escape. The elevator control panels shall be connected to the 24 x 7 Direct Alarm Monitoring System of Dubai Civil Defence.

## 8.0 SECURITY SYSTEM

- 8.1 Every building in Commercial sector shall comply to the regulations of Department of Protective Systems of Dubai Police for CCTV/Security requirements
- 8.2 Every building in the residential sector shall be provided with CCTV cameras to monitor the following areas.
- 1) Car park entry and exit
  - 2) Car park lift lobby to identify the people entering
  - 3) All external entrances to the building to identify the people entering the building.
- 8.3 Every building in the Commercial sector shall have CCTV recording features as specified by Department of Protective Systems.
- 8.4 Every building in the Residential District shall have CCTV recording for a minimum of 30 days.
- 8.5 Adequate lighting shall be provided at field of camera so that people/picture is identifiable at any time of the day.
- 8.6 Developers of commercial or residential buildings shall provide their own CCTV management system.

## 9.0 MECHANICAL INSTALLATIONS

### 9.1 General

9.1.1 All mechanical systems including plumbing, cold and hot water, drainage, rainwater, fire protection, refrigeration, kitchen planning, refuse disposal, ventilating and air conditioning, controls, compressed air, fuel and LPG systems, and materials shall be in accordance with the Authority Standards and in full compliance with, but not limited to, the following standards specifications or any equivalent standard approved by the Authority.

<b>ASHRAE</b>	American Society for Heating Ventilation and Air Conditioning Engineer
<b>NFPA</b>	National Fire Protection Association ANSI American National Standards Institute
<b>BS</b>	British Standard
<b>UBC</b>	Uniform Building Code
<b>UPC</b>	Uniform Plumbing Code
<b>SMACNA</b>	Sheet Metal and Air Conditioning Contractors National Association ARI Air-Conditioning and Refrigeration Institute
<b>AMCA</b>	Air Moving and Conditioning Association
<b>UL</b>	Underwriters' Laboratories Inc.
<b>FM</b>	Factory Mutual
<b>AGA</b>	American Gas Association
<b>API</b>	American Petroleum Institute LEED – Green Building related code of practice

9.1.2 All mechanical systems are to have an identification and color coding system in compliance with ANSI or any equivalent standard approved by the Authority.

### 9.2 Plumbing

Water supply, plumbing and sanitary drainage installations shall be in accordance with the requirements of the Authority Standards and the relevant Service Authority (Water) Regulations in compliance with the Uniform Plumbing Code (UPC) and/or the British Standards.

## 9.3 Ventilation and Air Conditioning

9.3.1 The design and installation of all air conditioning and ventilation systems shall be in accordance with latest guidelines of ASHRAE and DM Standards.

9.3.2 The design of walls and roof shall take into account Ventilation and Air conditioning requirements. The purpose is to limit the accumulation of moisture and pollutants which originate in the building and which would otherwise become a health hazard. An adequate supply of fresh air is necessary to ensure the health and comfort of the occupants of buildings and to limit condensation.

9.3.3 The objective is to provide means of:

- Proper ventilation, either natural or mechanical, to ensure acceptable Indoor Air Quality (IAQ) and dilution of pollutants.
- Proper air conditioning to ensure comfortable indoor temperature.
- Proper extraction of moisture and control of contaminants (e.g., from kitchens, laundries, toilets, industrial spaces, etc).

9.3.4 Habitable rooms shall comply if there are provisions for:

- One or more operable Ventilation Openings to the exterior with a total area of at least 1/20 of the floor area of room with some part of the opening at least 1.75 m above floor level
- such opening(s) shall have a total ventilation area not less than 0.46 m<sup>2</sup> with opening secure and draughts avoided.
- mechanical ventilation capable of providing 2 air changes/hour with a minimum of 7 L/s of fresh unpolluted outside air for each occupant during the time the space is occupied.

9.3.5 Ventilation of kitchens shall comply if there are provisions for:

- mechanical kitchen hood extract system designed and installed in compliance with ASHRAE guidelines.
- Background ventilation-either natural by means of operable opening(s) to the exterior of not less than 0.46 m<sup>2</sup> or mechanical ventilation operating continuously to provide for the make-up air extracted by the hood and to give nominally a minimum of one air change per hour.

9.3.6 Toilet rooms may be ventilated by either natural ventilation with fully operable exterior windows with an area not less than 0.279 m<sup>2</sup> each and with part at least 1.75 m above floor or by mechanical extraction capable of providing 12 air changes/hour. Such mechanical extraction shall be communicated to the outside with point of discharge at least 3 m away from any fresh air opening.

9.3.7 Ventilating a habitable room through an adjoining space:

Two habitable rooms may be considered a single room for ventilating purposes if there is a permanent opening between which is equal to at least 1/20 of the combined floor area.

A habitable room may be ventilated through an adjoining space if:

- a) the adjoining space is a conservatory or a similar space and;
- b) there is an operable opening between the room and the space, with an area not less than 1/20 of the combined floor areas and;
- c) there is a ventilation opening(s) in the room and the space together, or in the space alone, equal to at least 1/20 of the combined floor areas and with a part of the ventilation opening area at least 1.75 m above the floor level; and for background ventilation there are openings to the space and between the space and room each having not less than 0.46m<sup>2</sup> area.

9.3.8 Alternative approaches

The movement of air may be activated by such means as the operation of the door of the compartment, the operation of the lighting or by independent manual control. However, there should be an overrun of at least 15 minutes after the use of the compartment.

A recommended alternative approach to meeting the performance requirements is contained in BS 5720:1979 Code of Practice for mechanical ventilation and air conditioning in buildings and BS 5250:1989 Code of Practice: the control of condensation in buildings (Clauses 9.8 and 9.9).

9.3.9 The ventilation of industrial buildings shall be in accordance with ASHRAE HVAC Application Handbook – latest Edition and ASHRAE Standard 62-2001.

9.3.10 No air conditioning or ventilation equipment shall be visible from outside.

9.3.11 Developer shall comply with Dubai Municipality's regulations for Green Buildings and provide adequate energy management system through Building Management System and Lighting Control System.

## 9.4 District Cooling Services

9.4.1 Objective: To Provide world class, energy efficient, economical and environmental friendly DCS to Dubai South customers.

9.4.2 Overview of Various types of Customers: Mainly Master Developers and Building Owners. Master Developers (MD) are two types: 1) Exclusivity and 2) Reseller Building Owner (BO) are two types: 1) BO with Master Development and 2) Individual Customer (Building Tenant)

9.4.3 Basic MD exclusivity idea: Dubai South is the Master Developer as a whole in exclusivity right to provide DCS to site development along with title to land DCS Plant and associated equipment.

9.4.4 MD Reseller: The MD reseller contracts with Dubai South to provide DCS to entire site and agrees to purchase in advance all the required cooling load capacity. Dubai South at its own expense design, constructs, commission, operates and maintains the DCS Plant and Equipment required supplying DCS to the entire site up to its maximum cooling capacity for the term of the agreement with Dubai South.

9.4.5 MD / BO obligations:

- 1) Assistance and information to be provided by the BO, Approvals, License and permits, Easements and Right of the ways, ETS Room (provided at no expense with adequate space for ETS installation) & ETS connection.
- 2) Accuracy and up to date information, immediate update of any changes, final building plan, size and location of ETS Room as (size as advised by Dubai South)
- 3) Changes to load and delivery date critical and to be provided as soon as reasonably practical.
- 4) Information in locating underground services going to Building

	5) ETS requirements and details of ETS installations to be followed as per Dubai South standards.	9.4.12	DCS Charges: MD and BO to abide the DCS charges set by Dubai South regulatory body such as demand, connection, consumption, metering equipment charges and surcharge with applicable refundable deposit.
9.4.6	DCS Conditions: The purpose and objective is to remove ambiguity and establish rules of interpretation in case of dis-agreement. Warranty to temperature at point of delivery not to exceed maximum supply temperature and maintain temperature between chilled water supply and building return water.	9.4.13	Limitations of liabilities and indemnities: Dubai South to manage risk, pertaining to liability clause (proven damage to building solely caused by fraud and negligence), indemnity clause, failure to deliver DCS, insurances, term of agreement and contracts, renewal of agreements (2yrs) and expiration(retain or sell).
9.4.7	District Cooling Service: Standard term and conditions applicable to all customers.	9.4.14	Suspension and Termination: To be implemented for Force Majeure, such as events outside either party's reasonable control ie: floods, natural disaster, terrorism etc.
9.4.8	Description of Service: Important provisions, BO incorporated into agreement, Legal Standards, Maintain Delta Temperature.	9.4.15	Reason for Termination: Events like insolvency close of businesses, winding up, court order and lender enforcement of asset security.
9.4.9	Availability of DCS: a) DCS up to site demand ETS load only b) If increase in demand, which should be addressed in writing mentioning specific dates for which additional cost payable by BO for the change in demand load. (Applicable additional cost and approval of demand change will be under Dubai South discretion. c) There will be incremental phasing in building or development demand load d) Reserves the right to use Temporary District Cooling Plants and equipment if relevant.	9.4.16	Default Termination: Material breach by customer and failure to remedy within 60 days' notice.
9.4.10	What if Dubai South is ready to deliver DCS but customer is not ready?  1) Commencement of demand charges 2) Exclusively will not permit any third party DCS provider within the site during the term or any other alternative form of air-conditioning.3) MD to assist in all respect to provide personnel and building load details information and data assistance and coordination with their representative or consultant .	9.4.17	Effects of Termination: Dubai South right, stop providing DCS to site, cease all work and retain ownership of plant and equipment, sell land etc.
		9.4.18	What if MD / BO terminate contracts earlier? 1) Such as, during design, procurement etc, for which 2 years demand charge for the contracted load demand with any other cost to be incurred on MD / BO. 2) After design, construction, etc.
		9.4.19	Confidentiality: Both parties need to protect confidential information which is exchanged between them in course of performing obligations under the agreement, i.e.: designs, technical data, trademark, financial data, legal documents etc.
9.4.11	Dubai South Obligation:  1) To construct, operate and maintain DCS plant and equipment at own cost 2) To exercise "reasonable skills" care and due diligence in providing DCS	9.4.20	Improper Payment by MD or BO, will lead Dubai South right to stop providing DCS under conditions of contract agreement, with a notice period.
		9.4.21	Miscellaneous Provisions: Dispute Resolution – choosing an efficient and neutral forum to resolve disputes within Dubai South authority or by Dubai Chamber of Commerce and Industry.

- 9.4.22 Dubai South Obligations:  
**1)** To construct, commission, own, operate and maintain DC Plant, CHW piping network and primary side ETS installation up to agreed building load demand.  
**2)** DCS as per agreement between Dubai South and the customer (MD / BO)  
**3)** Additional redundancy, standard care and all reasonable efforts for continuous supply of District Cooling Services.

9.4.23 DCS Contract: The contract shall be up to 25 years, extendable there off on both DC provider regulation that could be revised for other reasons such increased in utility, operation and maintenance cost or any other charges etc. The contract can be extendable for another 25 yrs time period mutually agreeing on DC regulations.

9.4.24 The Purchaser / DCS subscriber acknowledges and understands that the Seller / Dubai South may identify and approve of a particular district cooling plant, company or operator to provide cooling services exclusively to the Master Community and the Purchaser agrees to acquire chilled water for the purposes of air-conditioning for the Building(s) only from such Dubai South approved district cooling plant, company or operator serving the Master Community and shall in a timely manner enter into an exclusive supply agreement with the said district cooling plant, company or operator. The Purchaser shall be responsible to pay for chilled water consumption and connection charges and other applicable tariffs from date of chilled water connection readiness, (irrespective of customer consumption) calculated at the district cooling plant service provider applicable tariff.

## 9.5 Mess and Kitchen Construction

- 9.5.1 A mess and kitchen if required shall be constructed of fire resisting materials.
- 9.5.2 Floors and walls shall be impervious to moisture and capable of being cleaned by washing down.
- 9.5.3 Walls to be tiled to a height of min 2m above floor level with ceramic tiles.
- 9.5.4 Drains to incorporate grease and food particle traps and interceptors.

9.5.5 Working surfaces for preparation of food are to be of stainless steel or other approved impervious material to facilitate cleaning and maintenance of hygienic conditions.

9.5.6 Mechanical extraction with exhaust hoods and fans to all areas with cooking taking place i.e. stoves, gas ranges and ovens tan doors etc.

9.5.7 Kitchens shall be fitted with the recommended fire protection system in accordance with the latest NFPA 96 requirements. Kitchen hoods shall be provided with an approved and certified automatic fire protection system fitted to the hood.

9.5.8 Any gas pipes to cooking equipment etc., inside the building shall be with double containment and shall be in accordance with the latest NFPA requirements and shall be laid in an approved manner with U.L. listed and approved materials and accessories i.e. copper tubing or steel piping with tapered threads or welded permanent joints, minimum length of flexible hoses to connect to equipment, gas shut off valves, gas leak detection, etc.

9.5.9 Automatic gas leak detection and shut-off systems shall be provided to automatically shut-off the main gas supply to all burning equipment in the event a gas leak or a fire is detected and shall be in compliance with NFPA 96 requirement.

9.5.10 Layout and construction details of any temporary canteen, required during the period of construction, shall be approved by the Authority.

## 9.6 Energy Conservation

9.6.1 Energy efficient designs taking into consideration energy conversation and use of higher efficiency equipment is highly recommended by the Authority. – The Developers must follow DM Green Building Regulations and Specifications.

9.6.2 Special consideration and incentives may be applicable subject to prior arrangement with the Authority and /or the relevant Service Authority.

## 10.0 ELECTRICAL INSTALLATION

### 10.1 General

- 10.1.1 All Electrical Installations shall follow and comply with the Service Authority (DEWA-Electrical) Rules and Regulations for electrical installations, IEE Wiring Regulations, and International Electro technical Commission (IEC) Codes (latest Editions).
- 10.1.2 The Developer shall provide to the Service Authority (DEWA-Electrical), the connected load and maximum demand load (in kVA) required for his construction and operation. The electrical load allocation per plot is 140 VA per square meter of the built up area. A copy of the Service Authority (DEWA-Electrical) N.O.C. shall be forwarded to the Authority for their information. The Developer shall also submit to the Authority the following:
- Electrical Distribution Single Line Diagram.
  - Schematic Diagram showing load intake and metering arrangements.
  - Load Schedules.
  - Electrical rooms and incoming cable routing layouts.
  - General arrangement and dimensional layout of electrical switch room with KWH metering facilities.
  - Cable routes.
  - Wiring layouts.
- 10.1.3 The Developer shall also provide a detailed list of equipment to be supplied with electric power, indicating type of equipment/load, voltage, No. of phases, capacity in kW or kVA and applicable overall diversity factor.
- 10.1.4 The Developer shall take the necessary steps to protect and keep safe any service corridor passing nearby the plot. In case of damage, the Developer shall report immediately to the Authority in concern.
- 10.1.5 Developers shall make provisions for mains power out lets in the ETS room and in the telecom room in each building to enable connectivity of ETS room equipment to Dubai South District Cooling Central plants. The consultants shall contact the Service Authority (Dubai South) for actual power requirements.

### 10.2 Application to the Service Authorities (DEWA)

- 10.2.1 Upon signing a lease for the allocated plot, the Developer shall apply to the Service Authority (DEWA-Electrical) for his power connection and installation of his own meter.
- 10.2.2 The Consultant must apply, prior to commencing any construction works for the following:
- No Objection Certificate (N.O.C) from the Service Authorities (DM, DEWA, etc).
- 10.2.3 The Contractor shall submit to the Service Authority (DEWA-Electrical) "Inspection Certificates" in accordance with the Service Authority (DEWA-Electrical) prescribed forms. All installations and equipment installed therein shall be subject to the Service Authority (DEWA-Electrical) inspection, testing and final approval before connecting the electric supply. All relevant documents shall be submitted to the Authority after the Service Authority (DEWA-Electrical) final approval.

### 10.3 Power Supply Connection

- 10.3.1 The point of supply to the allocated plot shall be decided by the Service Authority (DEWA-Electrical), and shall be made available at one location within the plot/project, unless otherwise approved by the Service Authority (DEWA- Electrical).
- 10.3.2 Power supply from the Service Authority (DEWA-Electrical) network shall be subject to terms, fees and tariffs issued by the Service Authority (DEWA- Electrical).
- 10.3.3 Power supply shall be provided at 400/230V, 50Hz, 3-phase 4-wire with separate neutral and protective conductor, where the total connected load does not exceed 400 kW.
- 10.3.4 In general, if the total connected load exceeds 400 kW, provision shall be made within the plot/building for the Service Authority (DEWA-Electrical) substation based on the Service Authority (DEWA-Electrical) approved details for the proposed substation. In some circumstances a substation may be required if the total load is less than 400kW.

- 10.3.5 The Developer main distribution board and associated metering shall be installed in locations to which access is available at all times. Prior approval shall be obtained from the Service Authority (DEWA-Electrical).
- 10.3.6 Space clearance around the electrical equipment shall be provided for safe operation, inspection, testing and maintenance, according to the Service Authority (DEWA-Electrical) Regulations.
- 10.3.7 Electrical rooms and substations shall be properly ventilated/air conditioned, as applicable. In case, electronic equipment shall be installed within the electrical rooms or substations, these shall be air conditioned to a max temperature of 26 deg. C.
- 10.3.8 The Developer shall be responsible for terminating the incoming supply cable at the Service Authority (DEWA-Electrical) metering cabinet, in accordance to the Service Authority (DEWA-Electrical) Regulations.
- 10.3.9 All tariff metering shall be provided by the Service Authority (DEWA-Electrical) and restricted to one for each consumer, unless otherwise approved by the Service Authority (DEWA-Electrical).
- 10.3.10 If continuity of power is essential for the safe operation of the equipment, it shall be the responsibility of the Developer to provide stand-by power supply in the event of mains power supply failure. The stand-by generators shall not be synchronized with the Service Authority (DEWA-Electrical) network at any time. Proper electrical and mechanical interlocks between breakers shall be provided. Generator installation shall be permitted prior to the Service Authority (DEWA-Electrical) approval.
- 10.3.11 Generator noise level shall not exceed 75 dBA at 1m outside the generator enclosure. Generator characteristics and specifications shall comply with ISO Standards and comply with local Authorities for environmental restrictions.
- 10.3.12 Service Authority (DEWA-Electrical) Substation requirements shall be according to the Service Authority (DEWA-Electrical) - General Conditions for providing 11kV Supply to Consumer's Plots and subject to Service Authority (DEWA-Electrical) approval.

- 10.3.13 All electrical installations shall be provided with separate earthing. The consumer's earthing system shall be connected to the Service Authority (DEWA- Electrical)'s earthing system subject to the Service Authority (DEWA-Electrical) approval.

#### 10.4 Installation Requirements

- 10.4.1 All the Electrical installations shall follow and comply with the Service Authority (DEWA-Electrical) Rules and Regulations for electrical installations, IEE Wiring Regulations, and International Electro technical Commission (IEC) Codes.
- 10.4.2 Temporary power supply for plot construction shall be the responsibility of the Developer and subjected to the Authority approval.
- 10.4.3 The Developer shall maintain a power factor not less than 0.9 for all installation. The Developer shall consider the use of energy efficient lamps, equipment, appliances and motors.
- 10.4.4 The Developer shall install an approved fire detection and alarms system in all his constructions. Fire Alarm system shall be installed in the premises in compliance to NFPA Code or relevant British Standards and according to the local Authorities jurisdiction.
- 10.4.5 The Developer shall install 10cm UPVC ducts (number of ducts shall depend on the facility requirements) to connect the plot with the outside service corridor for the telecommunication, control and fire alarm detection wiring.

#### 10.5 Completion Certificate

- 10.5.1 The Developer shall ensure the following for the Service Authorities inspection:
- The main electrical incoming supply arrangement is completed.
  - The electrical installation inside the plot is completed.
  - Fire detection and alarm system installation is completed.
- 10.5.2 On completion of satisfactory inspection by the Service Authorities and the Authority, a Building Completion Certificate shall be issued. This certificate is a pre-requisite for the connection of electrical installations to the Service Authority (Electrical) power supply grid.

## 11.0 TELECOM INSTALLATION

### 11.1 Main Guideline for Structured Cabling System (SCS)

- 11.1.1 All the Structure Cabling Installations shall follow the Service Authority (Telecom Provider) Standards.
- 11.1.2 The detailed design along with the materials to be used shall be submitted to the service authority for approval.
- 11.1.3 The consultant must apply prior to commencing any construction works for the No Objection Certificate (N.O.C) from the service authority.
- 11.1.4 The connection to the outside service corridor should be as per the service authority requirements and subject to its approval.
- 11.1.5 Adequate size telecom room should be allocated as per the service authority requirements, with 24 hours access to the service authority.
- 11.1.6 Warranty period shall start after issuing of the completion/ Acceptance certificate.
- 11.1.7 Developers shall make provisions for cable connectivity between the Energy Transfer Station (ETS) Rooms and Telecom room in each building to enable connectivity of ETS room equipment to Dubai South District Cooling Central plants.

## 12.0 LIGHTING INSTALLATION

- 12.1 All lighting installations shall comply with the requirements of CIBSE (Chartered Institution of Building Services Engineers). The Developer shall consider the use of energy efficient lamps and fixtures.
- 12.2 Safety and emergency light fittings shall be installed in electrical switch rooms, operational area, entrances and escape routes, as per NFPA requirements or relevant British Standards and local codes.
- 12.3 The outdoor lighting luminance levels shall be in accordance with CIE (International Commission on Lighting). The lighting levels below are an indication of the minimum required lighting levels for different areas:
- Roads Primary/Secondary 2.0cd/m<sup>2</sup>/1.0cd/m<sup>2</sup>
  - Outdoor areas 25 Lux
  - Stores/stairs 150 Lux
  - Lobbies 200 Lux
  - Offices 500 Lux
  - Industrial areas (requiring accuracy) 300 Lux
  - Industrial areas (requiring extreme accuracy) 500 Lux
- 12.4 The outdoor lighting shall be designed to minimize the light pollution in the area. Outdoor lighting design shall be submitted to the Authority for approval. Specific requirements for the outdoor lighting shall be followed, as per the Authority requirements. Use of energy efficient lighting is encouraged by authority.



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