2025

Coastline Urban Design Manual

GREATER DAMMAM METROPOLITAN AREA

أمانة المنطقة الشرقية
Eastern Province Municipality

هيئة تطوير المنطقة الشرقية
Sharqia Development Authority

Version 02

Preamble;

This document is a Manual, which includes standards and guidelines for urban planning and design for the Coastline of Greater Dammam Metropolitan Area (DMA), prepared by the Sharqia Development Authority for the purposes of enhancing the quality of planning and design of urban environments, and improving the urban landscape in the Coastline, supplementing the regulations and other provisions included in the 10th Report "Controls and Requirements for Urban Development Currently Applied in the Greater Dammam Metropolitan Area (DMA)" issued by Eastern Province Municipality, MOMAH.

The guidelines and other materials in this document are of an advisory nature, without prejudice to the laws, regulations, and instructions governing such guidelines.

هيئة تطوير المنطقة الشرقية
Sharqia Development Authority

Coastline Urban Design Manual

Greater Dammam Metropolitan Area

Version 02 2025

SALFO ENGINEERING & MANAGEMENT

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CODE STUDIO

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Table of Contents

7 Supplementary Regulations and Guidelines

8 Definitions

9 Appendices

Executive Summary

The Kingdom of Saudi Arabia launched Vision 2030, an initiative aimed at modernizing the country's economy and society and reducing its dependency on oil.

In its endeavor to realize such a strategy, the Kingdom's leadership has created a platform of three pillars, namely (a) a vibrant society, (b) a thriving economy, and (c) an ambitious nation, while creating attractive living conditions for the population, enabling businesses to reach their full potential and addressing the energy and climate challenges of today.

The Eastern Region in general, and **Greater Dammam Metropolitan Area** (DMA) in particular, is distinguished for its unique geographic, historic and strategic qualities. Its geographical location on the Gulf and its linkage options with the rest of the world through sea, air and land ports, together with its historic significance as the oldest and largest oil source in the world, make it one of the most important strategic centers in the Kingdom, a perfect platform for enabling the achievement of the above objectives of Vision 2030.

Greater Dammam Metropolitan Area, embracing eight municipalities and consisting of the urban agglomerations of Khobar, Dammam and Dhahran has, in addition to its strategic advantages above, one asset that plays a major role in the quality of life of its inhabitants and offers a main driver for the enhancement of the urban environment: **the Coastline overlooking the Arabian Gulf for approximately more than 380 kilometers**, with a large share occupied by urban uses, most of which have existed for several decades.

Internationally, **coastal redevelopment projects** are often conducted to raise the elevation of the urban blocks abutting the coastlines to combat sea level rise, improve the quality and sustainability of the built environment, enhance access and mobility axes, streets, pedestrian sidewalks and crossings, as well as beautify parking lots, fences and barriers, open spaces and empty lots along the Coastline.

Due to the unique challenge offered by DMA's coastal location, Sharqia Development Authority (SDA) has envisioned an upgrading and modernization of the region's frontage to the sea through creating a sustainable new, 21st century, built-up environment, and has prepared this **Manual** for the design and building controls over the Coastline. The Manual will guarantee the improvement of the urban design of the Coastline and its adjoining areas, leading to a perceptive improvement of the quality of living, working and visiting.

The Manual starts with the definition of the **"Coastline"** to which the design and building controls will apply. The area spans from Ras Tanura in the north to Dhahran Half Moon Bay in the south, consisting mostly of private and public land, but also including large-scale government developments, such as the de-salination plant, port facilities, refineries, naval bases and ARAMCO land.

Within the Coastline, any Development (defined as construction works or activities, use of buildings and land, plot configuration or reconfiguration or any other similar operation on land, leading to a change to the physical form of the land) is subject to guidelines organized into **four modules:** "Built-form", "Streets and Mobility", "Parks and Opens Spaces" and "Water Edge". Each module is furthermore broken down into **"types"** as appropriate for each module.

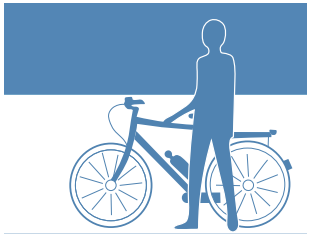
The Manual includes **regulations** relevant to the Local Plan for the Greater Dammam Metropolitan Area and the Governorates of Qatif and Ras Tanura, as outlined in the 10th Report, the current regulatory tools for the planning of the Coastline, and goes on to include specidific **standards and guidelines** as applicable to each type of each module

The Manual is intended to be a supporting tool for **all partners in the development process,** including the relevant government and semi-government agencies and entities to use in the planning control process as well as real estate developers, landowners, consulting offices, designers, and contractors in the land development process.

It is the conviction that the Manual will guarantee an environment along the Coastline that is **functional, vital, sensible, fit, accessible, efficient, just and beautiful.**




Modules	Built Form		Streets and Mobility		Parks and Open Spaces		Water Edge	
Types	1	Urban Mixed Use	1	Pedestrian-Only Streets	1	Natural Places	1	Natural Edge
	2	Urban Residential	2	Local Street	2	Public Parks	2	Beach Edge
	3	Low-Density Residential	3	Collector Street	3	Plazas & Squares	3	Structural Edge
	4	Resort	4	Arterial Street				
	5	Community Facility	5	Unpaved Streets				
	6	Public						



1 Introduction

1.1 Scope of the Manual

This Manual supplements the 10th Report for Development and Development Control in the Coastline of Greater Dammam Metropolitan Area (DMA).

The provisions of this Manual do not contravene any other regulations, rules or directives issued by Sharqia Region Development Authority (SDA), City Development Authorities or other Planning Authorities having **jurisdiction on Development and spatial planning** matters in any area other than the Coastal Strip of Greater Dammam Metropolitan Area.

With the approval of the Manual by SDA, any **application** for either plot development (for individual plots) or for plot subdivision and master plan development must, **first,** observe all use and other regulations that are applicable to the project site (the site of the application) under the district categories of Article 4 of the 10th Report, and **second,** comply as much as possible with all standards and guidelines included in this Manual.

1.2 Intent & Purpose of the Manual

The Manual was created to respond to the Vision 2030 plan and national initiatives to enhance urban environments in the Kingdom of Saudi Arabia in general, and in the Eastern Region in particular. To enhance urban development along the Coastline to meet its deserved and aspirational standards.

The application of this Manual is a unique opportunity to **strengthen the urban image of DMA** and enhance the identity and heritage of the region through the creation of a sustainable and modern 21st-century coastal metropolitan area.

This document aims to be a paradigm of integrated planning and design, addressing key issues that shape **"The Image of the City"**, such as urban form, architectural style, sustainable design, enhancement of heritage identity, and creating people-friendly and active public spaces. The guidelines will protect the natural and environmental value of the coastal area and serve as a tool for the enhancement of DMA waterfront image. As part of the SDA's strategy in implementing the Sustainable Development Goals.

SDA seeks to use the Manual as the main reference for **all advisory requirements, standards and controls** of the design and building works, application procedures, review and approval of building and infrastructure projects within sight of the Coastline, presented and classified in a clear and simplified manner, and supported by all means of illustration plans, photos, drawings, projections, detailed sections, and perspectives in order to contribute to achieving the objectives of controlling development.

This Manual will serve as a supporting tool **for all partners in the development process**, including relevant governmental and semi-governmental authorities, to be used in the control and monitoring of development projects. It will also be utilized by real estate developers and landowners as a primary tool for formulating and developing the strategies and initial concepts of their development projects, as well as by consulting offices and designers in preparing land design plans.

1.3 Guiding Principles

The following guiding principles are established to guide the users of the Manual. They are essential for ensuring a cohesive and visionary urban environment that supports the overarching goals of SDA and the Vision 2030 for a Coastline that is functional, vital, sensible, accessible, efficient, just and beautiful. These guiding principles will be applied when a decision about balancing the various guidelines in this Manual occurs.

Placemaking

A successful urban fabric is made of robust public places that prioritise the pedestrian experience and are safe and comfortable for all users and contribute to the overall character and identity of the area.

Diversity of Uses & Activities

Providing for a variety of uses and activities in the built environment is key to creating liveable and vibrant places. A mixture of uses supports more effective economic and social activities for both day and night conditions.

Safety

Public spaces should be safe and comfortable for all users at all times of the day or night. This can be achieved through thoughtful, inclusive design by using lighting, landscaping, signage, and other design elements.

Sustainable & Ecological Design

Design that embraces and integrates itself with natural systems, ecological processes, sustainable infrastructure design and energy performance in keeping with the Kingdom's Vision 2030 goals and initiatives.

Appearance & Maintenance

Visual appearance, functional conditions and cleanliness have a direct impact on the quality of spaces. Perceived strong visual design and strict maintenance policies can help achieve this.

Connect with Nature

Harmony between the built environment and the natural environment is essential to attain a desirable quality of life. It is key to create spaces where people can connect with nature in all types of urban settings.

Connectivity Networks

A network of mobility options is critical for a successful urban landscape. Opportunities to support multi-modal transportation should be embraced, and pedestrian and bicycle facilities should be prioritized.

Inclusive Design

Public spaces should be designed for easy and comfortable use by everyone, regardless of age, ability, or background. This guiding principle sets out requirements to prevent discrimination against certain people on the basis of physical disabilities.

1.4 Structure of the Manual

The Manual is organized into the following sections:

1

Section 1
Introduction

This introductory material should be reviewed and understood so that each user of the Manual will meet the intent of the Manual.

2

Section 2
Greater Dammam Metropolitan Area Coastline

This section identifies the exact boundaries of Greater Dammam Metropolitan Area Coastline, giving a brief description of the spatial characteristics, the coastal uses and activities and the urban attractors that were the drivers in the preparation of this Manual. It also portrays the governance system in the area and introduces the "Tenth Report" that is the principal planning document dictating all development issues and planning control in the area.

3-6

Sections 3-6
The Four Modules

The Four Modules, namely "Built-Form", "Streets and Mobility", "Parks and Open Spaces", and "Water Edge", make up the spatial components of the Coastline. For each module, this Manual establishes regulations and guidelines that apply to the module as a whole, as well as those that apply only to specific types of each module. A definition of each of the modules is given below:

Built-Form: Including any buildings or structures. Built-form in the Coastline must be high profile due to the location of the Coastline and must achieve standards that are different and greater than those met by buildings on more typical inland sites. This reflects the duty that Built-form has to not only respect, but also to contribute to and enhance the public realm for the enjoyment of locals and visitors alike.

Streets and Mobility: Including all public rights-of-way of Arterial, Collector, Local streets, and pedestrian walkways. The streets and pathways range in intensity and character, from Pedestrian-Only Streets that are off limits to vehicular traffic, to major urban boulevard with up to 6 travel lanes (Arterial Streets).

Parks and Open Spaces: Often found adjacent to waterfront, parks and open spaces are an integral part of a healthy community. They have the power to infuse life into the built environment, improve public and environmental health, strengthen community identity, and provide incalculable economic and social benefits.

Water Edge: Comprising the area between the water and the next closest module, (which can be a park, a street, or a building). Water Edge includes Greater Dammam Metropolitan Area's beaches, mangrove parks, and coastal corniches. The design guidelines and standards in this Manual referring to the Water Edge are intended to guide urban development and natural conservation efforts along the coast, to ensure the area is able to continue to grow and thrive without compromising its natural resources and treasured waterfront.

7

Section 7 Supplementary Regulations & Guidelines

This section includes a number of provisions that apply across the board over all modules and types. Starting from planning principles to be observed in plot subdivision and master planning projects, topics such as architectural details, shading devices, walls and fences, advertising signage, landscaping, parking, public art, lighting, security and protection of nature are given due respect with the establishment of tailor-made guidelines and standards.

8

Section 8 Definitions

Definitions of the main terms used throughout the Manual, revising, amending or supplementing the definitions given in the 10th Report for the purposes of this Manual. The definitions are given with reference to their context, not alphabetically.

9

Section 9 Appendices

This section includes the full and original of each of the captions, namely, Examples of places that should act for what to do and what not to do when developing projects (Appendix 1), 10th Report (Appendix 2).

1.5 How to Use the Manual

This Manual has been created for its use by:

- planning authorities for regions and cities (exercising development control),
- government agencies (suppliers of technical and social infrastructure),
- engineering and consultants' offices
- landowners,
- developers.

The development projects that are applicable for this Manual are:

- Plot Development (individual operation on land for single plots).
- Land subdivision (subdivision of large tracts of land into smaller plots for residential, commercial and other uses).
- Master Plan Development (a comprehensive large-scale development of land, with or without plot subdivision).
- Major Distinguished Project (minimum 100,000 sq.m, projects of a distinctive character); refer to Art. 10 of the 10th Report.
- Important Investment Projects (minimum 10,000 sq.m; 6 floors or more); refer to Art. 11 of the 10th Report.

Throughout the Manual:

- A **Regulation** is a requirement that must be met, a condition that is enforced either by the 10th Report, or by this Manual, in cases where it is not mentioned within the provisions 10th Report.
- A **Guideline** is a concept to be followed in the planning or design of a development to serve broader objectives. Guidelines express intent, and the degree to which a specific guideline is achieved may be assessed based on its contribution to the overall intent of all applicable guidelines. Each guideline is to be followed according to its phrasing, which reflects its level of obligation, as follows:

  Must / Must not;
  mandatory.
  Should / Should not;
  Strong recommendation with a preference toward implementation.
  Recommended / Encouraged;
  suggested for implementation, but to strongly.
  Permitted / Not Permitted;
  Indicates whether implementation is fully allowed or disallowed.

- **Standard** is a term used to define "yardstick" measurements or ranges for the determination of needs or for the design of specific elements, such as "30 meters tall" or "1 per hectare" or "1 school per 6,000 to 8,000 population".

Roadway to using the Manual for the Coastline of DMA:

Determine the Nature of Development

1	**Plot Development** (individual operation on land for single plots)
2	**Land Development** (subdivision of large tracts of land into smaller plots for residential, commercial and other uses)
3	**Master Plan Development** (a comprehensive large-scale development of land, with or without plot subdivision)

Does the Land (Project Site) Fall within the Demarcated Area of the Coastline?

1	**Yes** Proceed to the next step
2	**No** abort; the Manual is of no further interest

3 Identify the District (Zone) of the Project Site (as per 10th Report)

RR1	Recreational/Residential (2 floors)
RR2	Recreational/Residential (2 floors)
R1A	Residential (2 floors)
R1B	Residential (3 floors)
R2A	Residential (4 floors)
R3A	Residential (6 floors)
R8	Residential (8 floors)
R16	Residential (16 floors)
C3	Commercial (3 floors)
C1A	Commercial (4 floors)
C1B	Commercial (6 floors)
C2A	Commercial (8 floors)
C10	Commercial (10 floors)
LC	Local Service Center (4 floors)
WH	Warehousing (1 floor)
LI	Light Industrial Zone (1 floor)
UT	Utilities
GI	Government
RR	Recreational
A	Agricultural

4 Verify the "Module" of Development

Module 1	**Built-Form**
Module 2	**Streets and Mobility**
Module 3	**Parks and Open Space**
Module 4	**Water Edge**

5 Refine the "type" of Development

Type 1	Urban Mixed Use
Type 2	Urban Residential
Type 3	Low-Density Residential
Type 4	Resort
Type 5	Community Facility
Type 6	Public
Type 1	Pedestrian-Only Streets
Type 2	Local Streets
Type 3	Collector Streets
Type 4	Arterial Streets
Type 5	Unpaved Streets
Type 1	Natural Places and Landscapes
Type 2	Public Parks
Type 3	Plazas and Squares
Type 1	Natural Edge
Type 2	Beach Edge
Type 3	Structural Edge

6 Relevant Article

Article 3.3 Article 3.4 Article 3.5 Article 3.6 Article 3.7 Article 3.8	(and have regard to Article 3.2 and Section 7)
Article 4.3 Article 4.4 Article 4.5 Article 4.6 Article 4.7	(and have regard to Article 4.2 and Section 7)
Article 5.3 Article 5.4 Article 5.5	(and have regard to Article 5.2 and Section 7)
Article 6.3 Article 6.4 Article 6.5	(and have regard to Article 6.2 and Section 7)

2 Greater Dammam Metropolitan Area Coastline

2.1 Definition, and Location of The Coastline

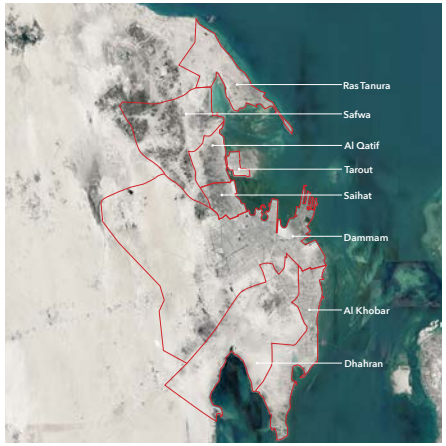
The Manual applies to the Coastline of the Greater Dammam Metropolitan Area, which spans along the coast from Ras Tanura in the north to Dhahran Half Moon Bay in the south, but excludes large-scale government developments, such as the desalination plant, port facilities, refineries, naval bases and ARAMCO land.

The Coastline stretches across several municipalities of the DMA: Ras Tanurah, Safwa, Tarout, Al Qatif, Saihat, Dammam, Al Khobar and Dhahran. The site map illustrates the municipalities covered by the Manual along the Coastline.

The Manual applies to the land located between the Water's Edge and the closest development, or future development site, defining what is considered to be existing or future coastal development.

This zone includes all main elements of built environment such as projects, buildings, utilities, streets and the public realm along the Coastline.

In the following pages series of maps that identify the Coastline (in red):



Municipalities covered by the Coastline Manual

Principles for Coastline Manual application

Moreover; Greater Dammam Metropolitan Area Coastline is differentiated in distinct areas which reflect attributes such as natural elements, urban form and urban character, historical aspects and identity, quality of the waterfront and other aspects of the environment that distinguish these areas from each other.

The following five different areas are identified:

a. **Ras Tanurah:** A peninsula surrounded by the waters on three sides, It mainly circumvents the ARAMCO compound and part of the mangroves' spread, endowed with a visitors pavilion.

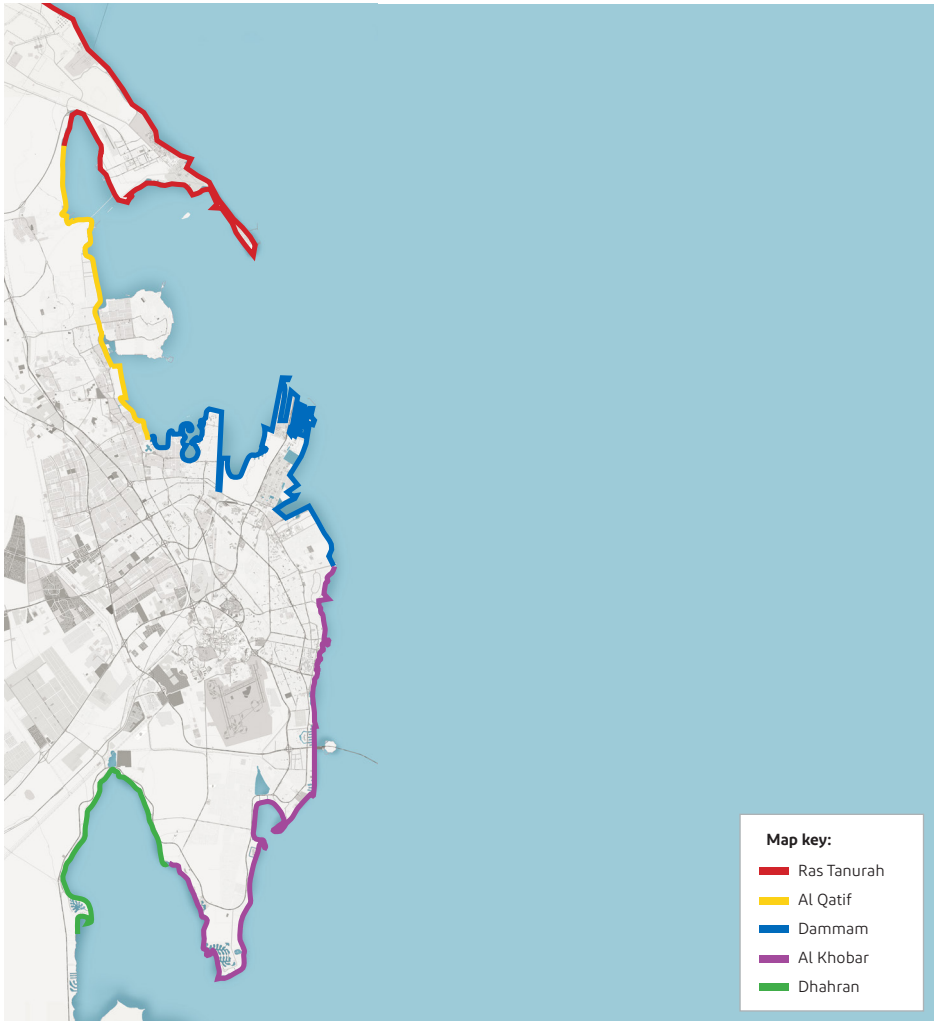
b. **Al Qatif:** A linear coastline, slightly inland and incorporating an island that is home to a castle, ancient settlement and farmlands that give this character area a historical dimension.

c. **Dammam:** represents the most urban part of DMA's coastline and includes part of northern area of Al Khobar. This coastline features numerous parks and urban activities.

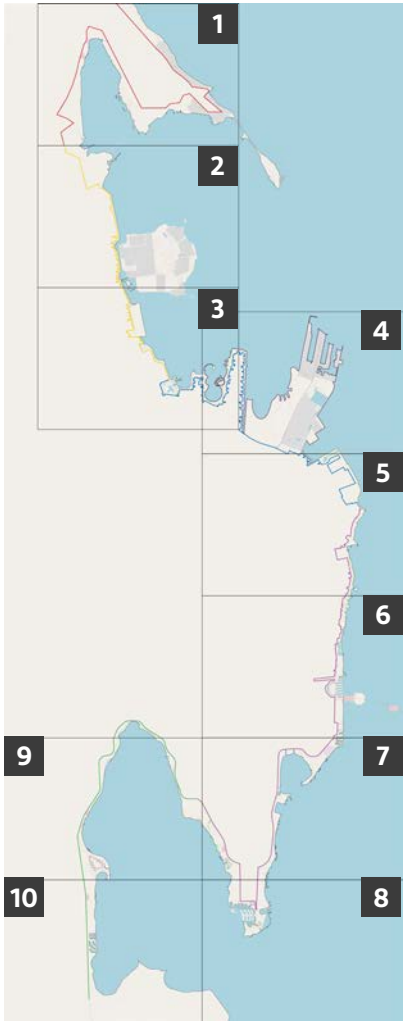
d. **Al Khobar:** Includes the coastline around the city with a variety of uses and activities. There is a succession of vacant, industrial and residential land with occasional public beaches. The waterfront is detached from the peri-urban development activity.

e. **Dhahran:** And more specifically Half Moon Bay, the southern-most portion of the Coastline, contains a number of public beaches split between various public amenities and private residential or hospitality developments.

Please see 2.2 Profile of Greater Dammam Metropolitan Area Coastline for a wider understanding for each area

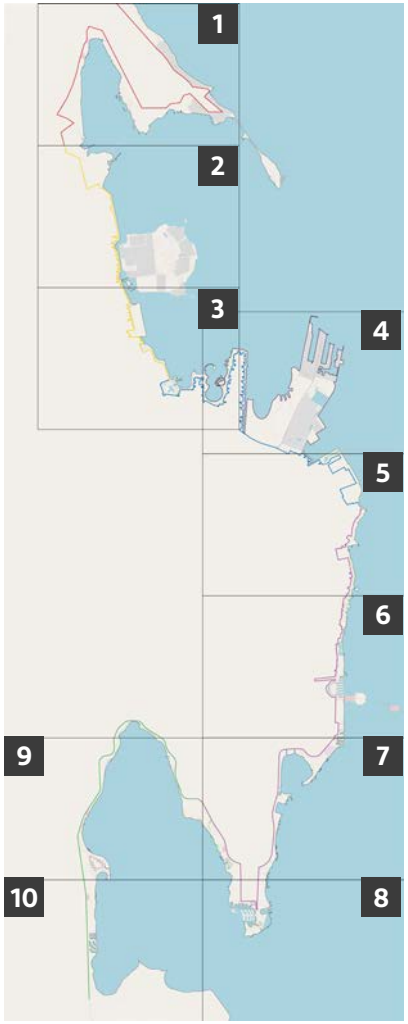


The Dammam Coastline areas.



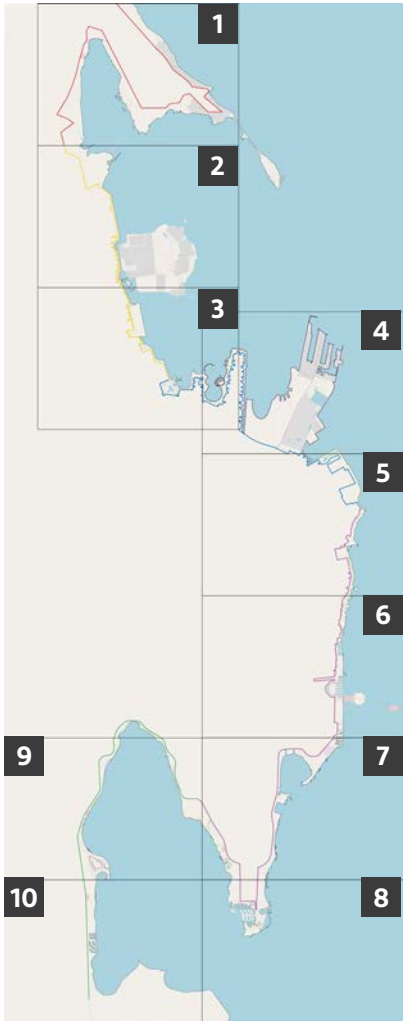
Coastline key map.

Detailed view of Inset Area 1 of Coastline map.



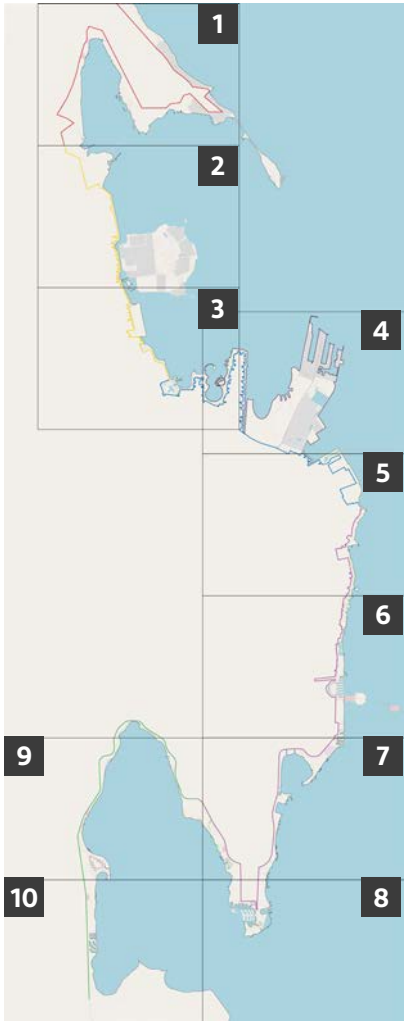
Coastline key map.

Detailed view of Inset Area 2 of Coastline map.



Coastline key map.

Detailed view of Inset Area 3 of Coastline map.



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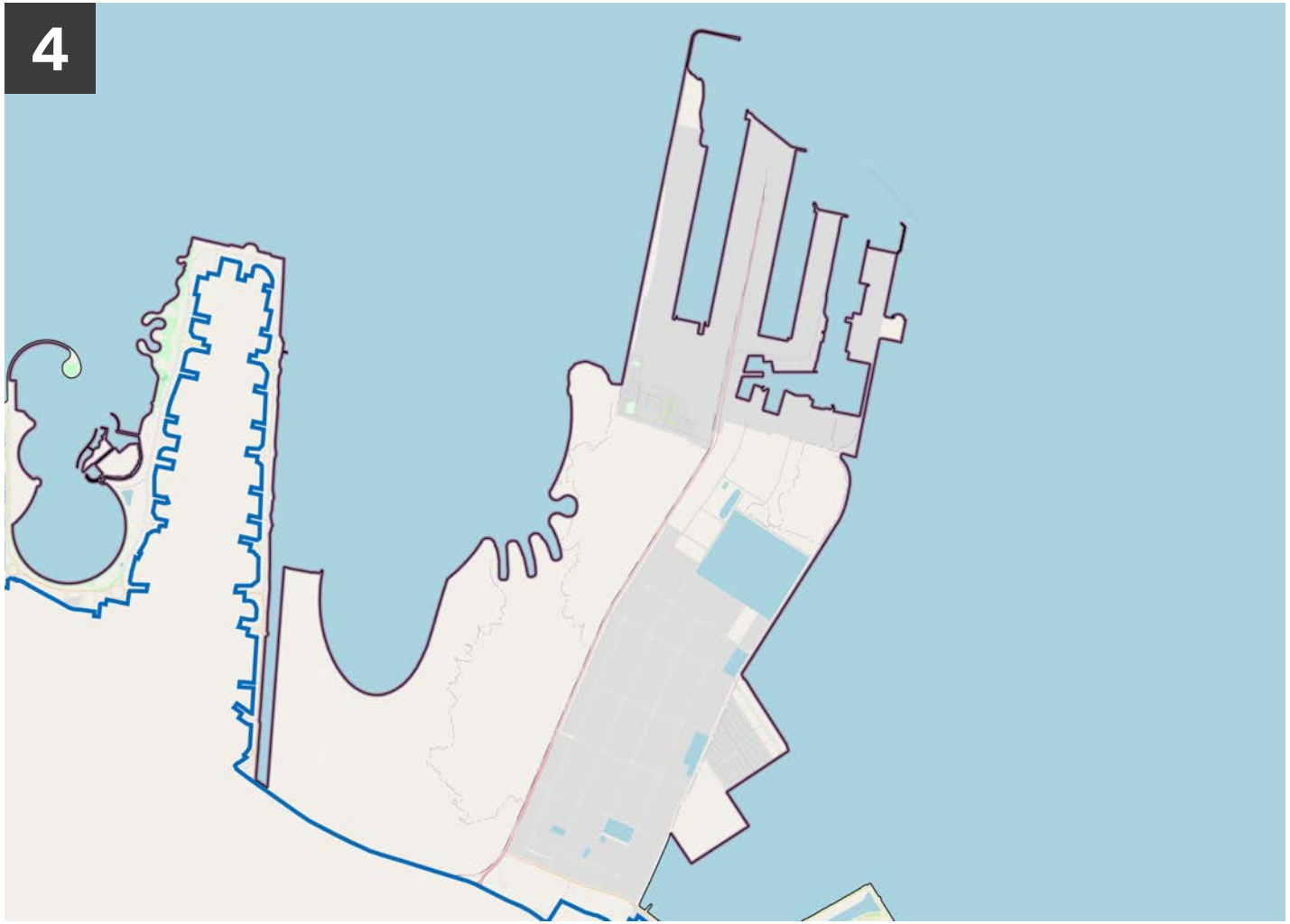
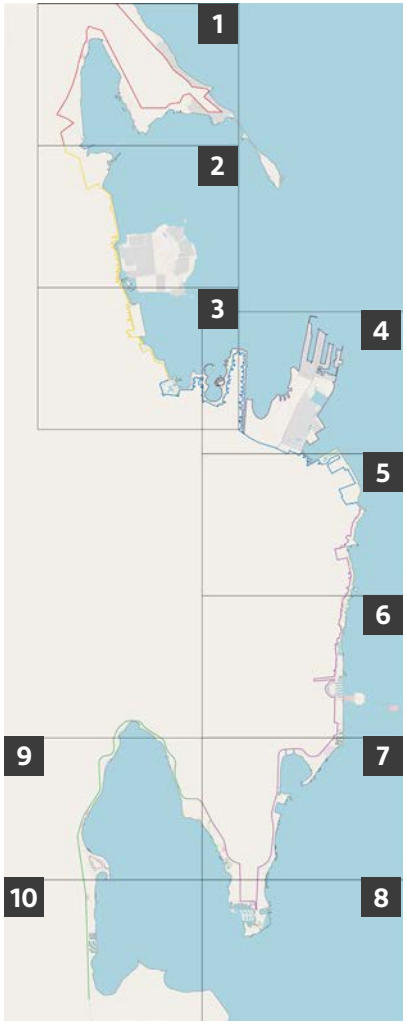
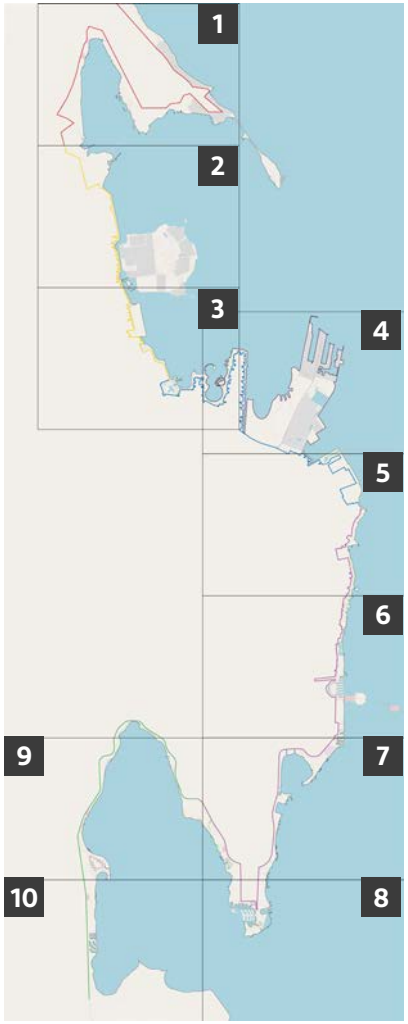


Detailed view of Inset Area 4 of Coastline map.

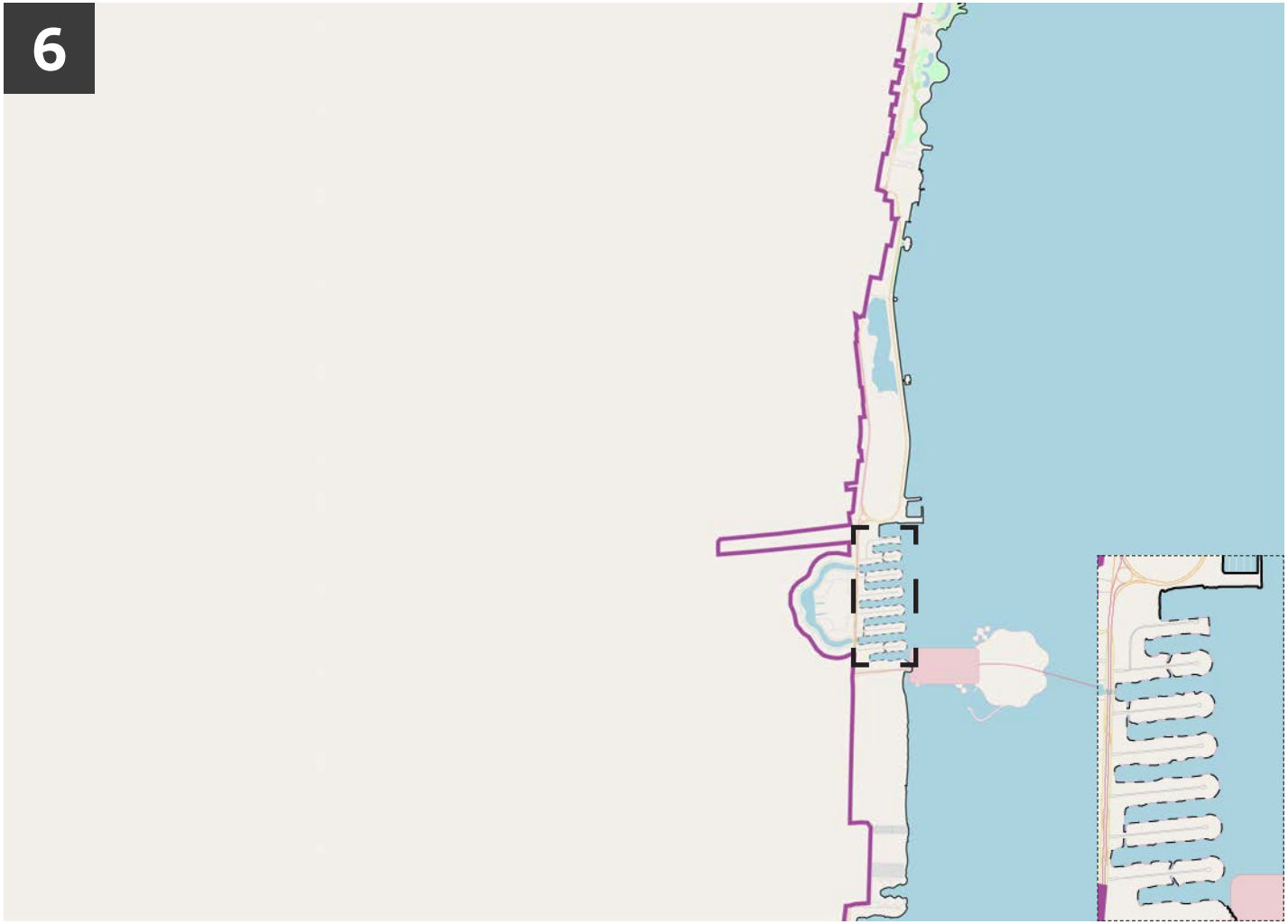


Coastline key map.

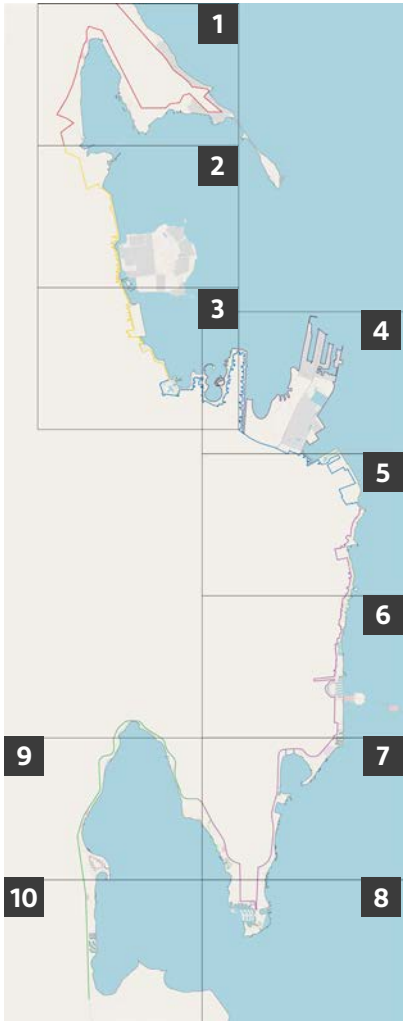
Detailed view of Inset Area 5 of Coastline map.



Coastline key map.



Detailed view of Inset Area 6 of Coastline map and Al Khor District



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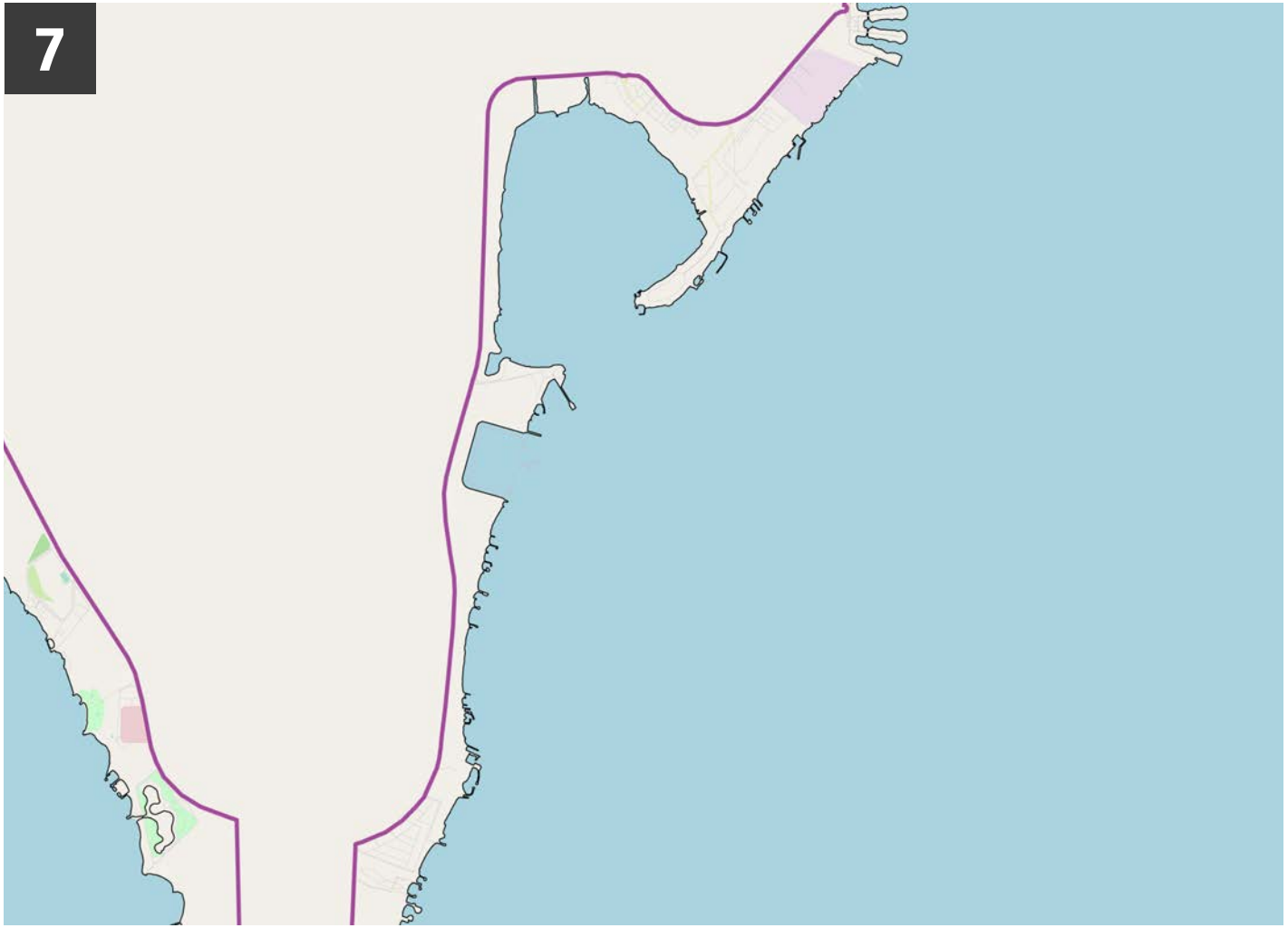
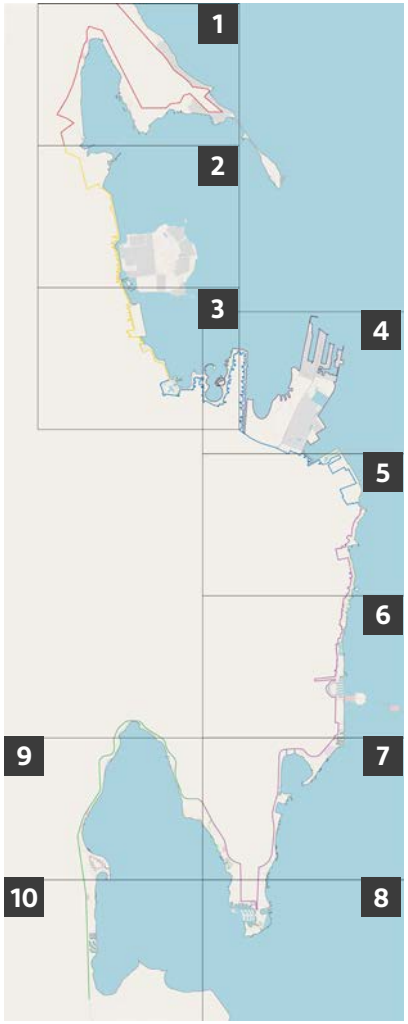
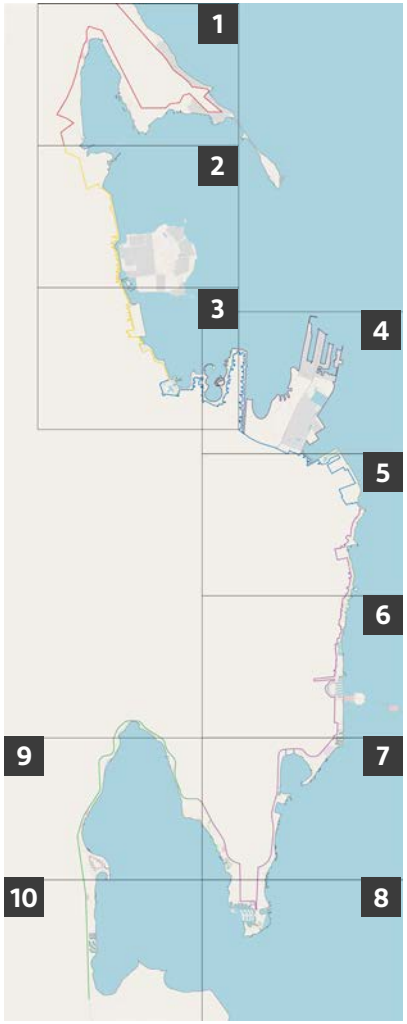


Detailed view of Inset Area 7 of Coastline map.

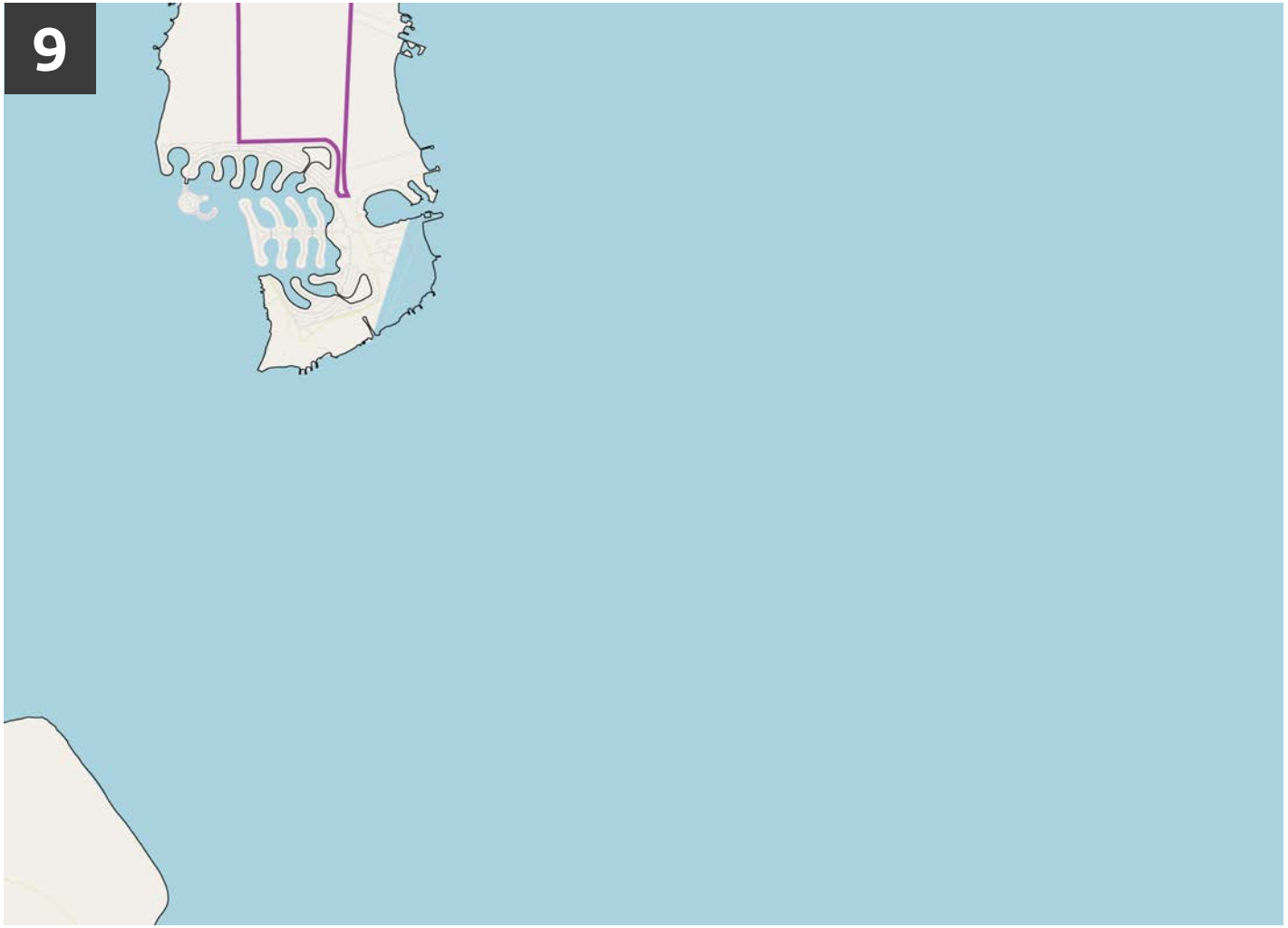


Coastline key map.

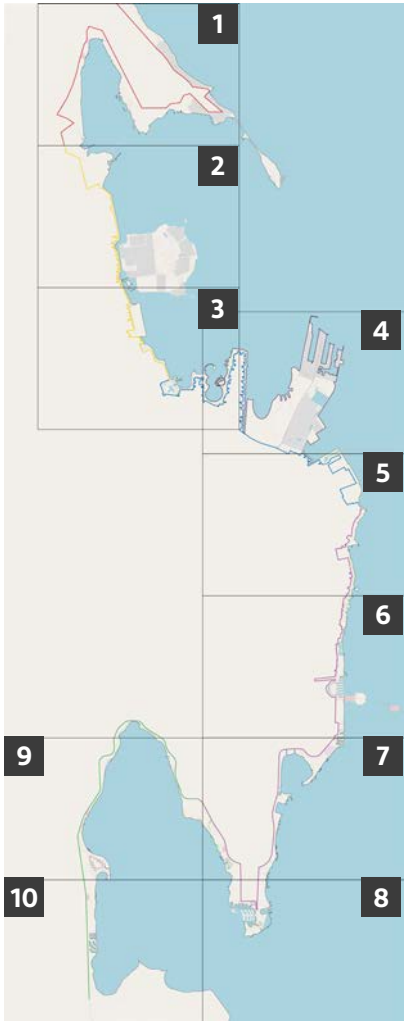
Detailed view of Inset Area 8 of Coastline map.



Coastline key map.



Detailed view of Inset Area 9 of Coastline map.



Coastline key map.

Detailed view of Inset Area 10 of Coastline map.

2.2 Profile of Greater Dammam Metropolitan Area Coastline

2.2.1 Ras Tanura

The peninsula is mainly under ARAMCO use and ownership and incorporates the oil refinery with its ramifications (pipeline corridors, logistical area and boat terminal) as well as the residential compounds for its employees. Consequently, access to most part of the coastline within this area is restricted and as such it is beyond the Coastline definition.

Ras Tanurah Corniche is located along the northern stretch of the area and is separated from the ARAMCO residential compound (just south). It is planned as a public park with playgrounds, boardwalk, restroom facilities, prayer facilities and associated parking. The waterfront is a combination of beaches and rock revetment.

In contrast, the mangroves to the western edge of the cove are a vast ecological area including a visitor's complex build by ARAMCO. This exhibits a pavilion with educational displays, an observatory deck, a mangrove nursery and a walking deck on stilt for a closer approach at natural flora.

Approximate coastline length

90 Km

* the length of a coastline is influenced by factors such as tides, measurement methods, and what elements are included or excluded. Therefore, reported lengths are approximate and can vary based on these conditions.

1. Mangrove Eco Park.

2. Mangrove Area.

3. Ras Tanura Refinery.

4. Najmah Camp.

5. Ras Tanura Corniche.

Ras Tanura.

2.2.2 Al Qatif

Al Qatif is the historic area of DMA and currently a high priority for local authorities to enhance the heritage value of the historical assets and benefit from the commercial value they represent. A number of historical settlements are located within both the island and inland. The island is accessible in three points.

The area appears equally covered with buildings and lush landscape of agriculture significance that signals the presence of ground sweet water. Its fabric of meandering streets contrasts with the more gridded structure put in place more recently.

A Comprehensive Master Plan at the level of Al Qatif Governorate explores various densification scenarios and sets out master planning and landscape principles that are applied in various sites with due consideration to sound planning standards.

Approximate coastline length

50 Km

* the length of a coastline is influenced by factors such as tides, measurement methods, and what elements are included or excluded. Therefore, reported lengths are approximate and can vary based on these conditions.

1. Saihat Mangrove Forest.

2. Al Naefa.

3. Fish Market - Al Qatif.

4. Tarout Island - Water Front.

5. Corniche Al-Nasrah.

Al Qatif area.

2.2.3 Dammam

Dammam coastline includes the King Abdulaziz Port, one of the largest of its kind in the Arabian Gulf. The port and the newly reclaimed 1,700 hectares of land are excluded from the definition of the Coastline considering the port is of national important and subject to a higher level of planning and control hierarchy.

On the contrary, the remaining coastline outside the port area is to be addressed particularly as part of Dammam's urban fabric, demonstrating a consistent setting of parkland that ensures a public access to the waterfront. The parks are varied in size and in level of amenities. Their access is mainly vehicular with extended parking areas that further segregate the open spaces from the city.

Waterfront access is severed by poor crossing facilities on the main road and unamiable pedestrian connectivity between coastline and the urban fabric.

Approximate coastline length

95 Km

* the length of a coastline is influenced by factors such as tides, measurement methods, and what elements are included or excluded. Therefore, reported lengths are approximate and can vary based on these conditions.

1. Murjan Island.

2. Dolphion Village.

3. Heritage Village.

4. Dammam Cornish.

5. Imam Abdulaziz Bin Faisal University.

Dammam coastline.

2.2.4 Al Khobar

Al Khobar coastline extends from Sky Hights Roundabout to Tala Park at the tip of Half Moon peninsula passing by Bahrain causeway. The stretch starts with SEVEN development land, passing by Al Shubaili land, a 150 hectares vacant land with 2 km of waterfront. Further south, Al Khobar desalination plant stretches along the sea on 1.5 km. It then warps around Aziziyah bay to carry South on 14kms.

Most of this coastline appears inaccessible to the public, either because the access infrastructure is not available or because the land is privately owned.

Approximate coastline length

85 Km

* the length of a coastline is influenced by factors such as tides, measurement methods, and what elements are included or excluded. Therefore, reported lengths are approximate and can vary based on these conditions.

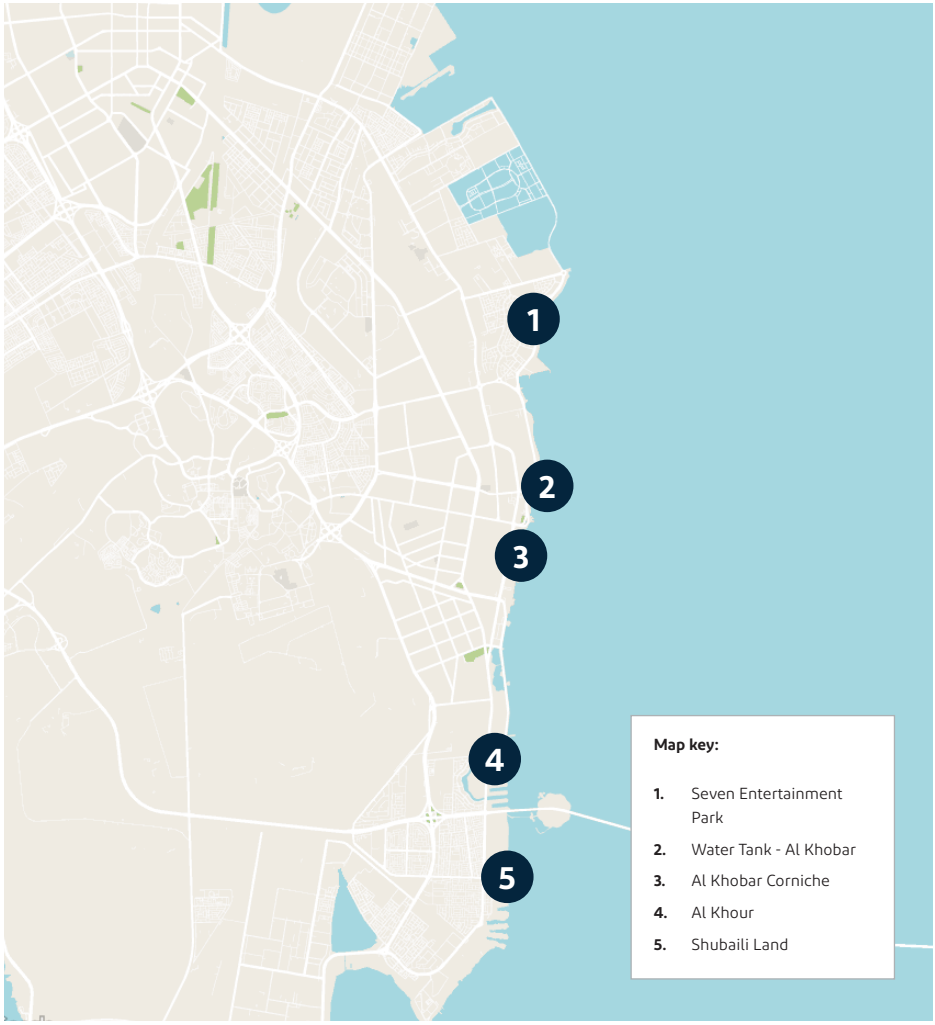
1. Seven Entertainment Park.

2. Water Tank - Al Khobar.

3. Al Khobar Corniche.

4. Al Khour.

5. Shubaili Land.



Al Khobar area.

2.2.5 Dhahran

The coastline wrapping around the Half Moon Bay, part of the Coastline, is 50 km long without considering the newly formed indentation from the various developments on the southernmost part of our project.

This area is a mixture of public beaches and privatized beaches by resorts and other development.

1. Amwaj Resort..

2. Dana Bay Water Park.

3. Palm Beach Resort.

4. Half Moon Beach - Desert Sports.

5. Aramco Half Moon Beach.

Dahran area.

Approximate coastline length

60 Km

* the length of a coastline is influenced by factors such as tides, measurement methods, and what elements are included or excluded. Therefore, reported lengths are approximate and can vary based on these conditions.

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2.3 Urban Attractors

The Coastline has significant urban attractors within its boundaries. Understanding their strategical location and importance helps in highlighting what the current waterfront offers to the city, in relation to quality, character, and spatial relationships between attractors.

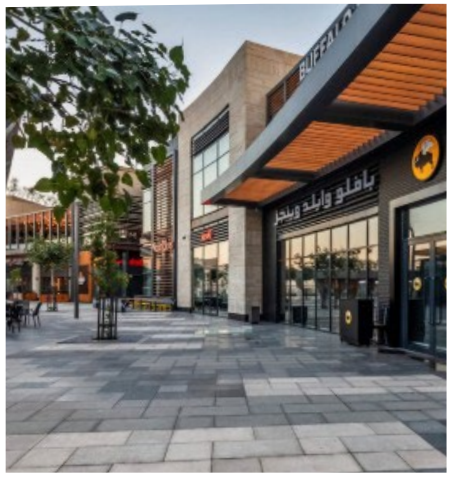
Some of the attractions include:

a. **Ras Tanura:** Ras Tanura Corniche, and Mangrove Eco Park. Mangrove Eco Park is a very unique and well-designed experience within the Coastline. The park offers an exclusive experience of the coastal nature whilst preserving it from human activity. The place is an example of a destination for a non-forgettable day, walking in the middle of the mangroves and the sea is indeed a relaxing and refreshing experience.

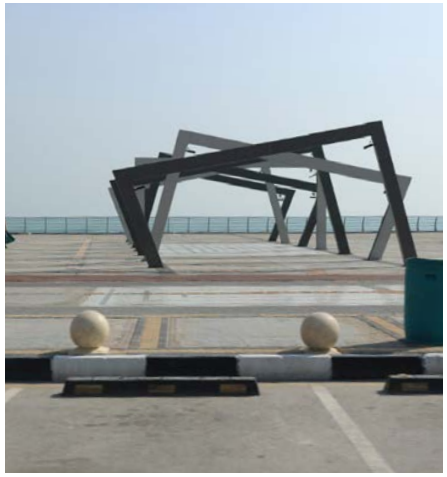
b. **Dammam:** King Abdullah Park, Dammam Corniche, and Murjan island. Murjan island is a man made island that offers an open public space park with picnic areas, ferry-boat rides, and a playground. The island is connected to the land by a bridge, and is widely known for its iconic tower.

c. **Khobar:** Khobar Water Tower, Khobar Corniche, and Ajdan Development. Ajdan Development is an urban attractor consisting of Ajdan Rise, a luxury seafront residential complex, and Ajdan Walk, that is the main attractor offering a variety of sought-after restaurants within what is considered to be the first "food village" in Eastern Region. Looking into Ajdan Walk development, the human scale and active pedestrian street provides a high quality place for rest and enjoyment. Many international food brands are located in this area and mainly along the Boulevard Street. An extension development to this area is under construction aiming to connect Ajdan Walk development with the waterfront.

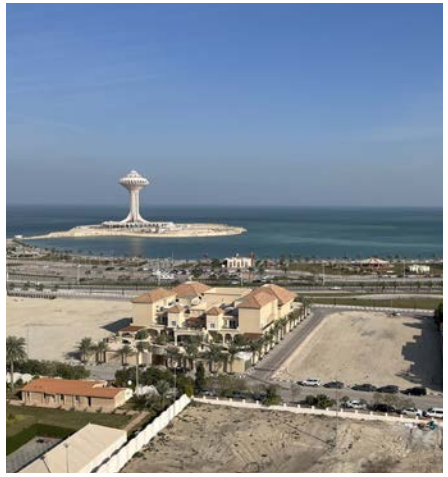
No significant attractions in the southern part of the Coastline, including Dhahran, were recorded. This illustrates the lack of development activity in this area with the exception of sporadic smaller scale private resorts.



1. Ajdan Development



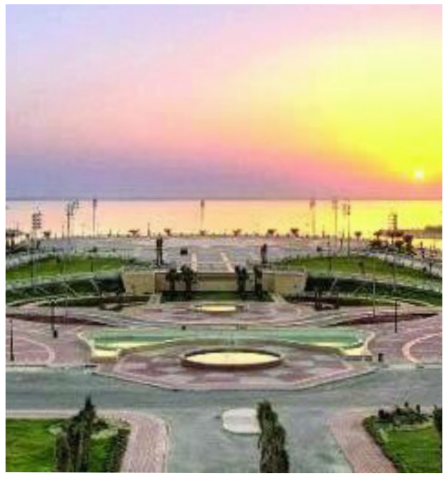
2. Khobar Corniche



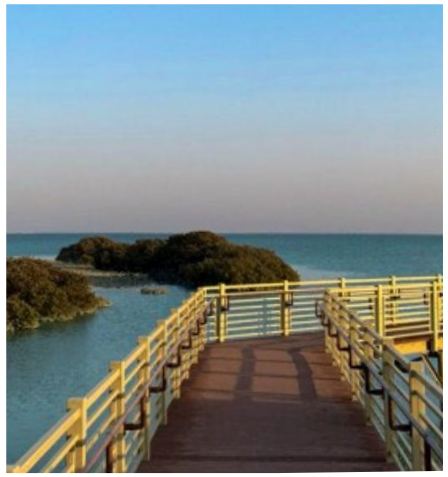
3. Khobar Water Tower

4. Murjan Island

5. Dammam Corniche



6. King Abdullah Park



7. Mangrove Eco Park

8. Ras Tanura Corniche

2.4 Waterfront Conditions

DMA Coastline's waterfront refers to environmental, physical, and ecological characteristics of the interface between land and sea. These conditions can vary depending on factors such as the location of the coastline, the depth of the water, the speed and direction of sea currents, the type of substrate (such as sand, rock, or mangroves), and the presence of marine life.

An overview of the most dominant coastline conditions within the Coastline are given below:

a. **Beach Condition:** The beach condition is a natural beach with minimal interference with its natural status, it is the second dominant condition along DMA Coastline, and it allows for direct interaction with the sea; the majority of this condition is on the south of the Coastline, where the majority of the area is vacant land not yet developed. In addition, there are few locations where urban services are part of the sea edge conditions.

b. **Revetment and Revetment Beach Condition:** The revetment is a structure, often made of concrete, stone, or other durable materials, that is built to protect the land against erosion from the sea waves. The revetment condition is the dominant condition of DMA coastline.

c. **Mangrove / Natural Edge Condition:** Natural edge condition refers to natural processes that have shaped the sea edge over time. Including mangroves, this also include trees that form dense forests which form important ecosystems, providing habitats for numerous species and protecting coastlines - this covers mostly the northern part of DMA Coastline.

d. **Quay Wall:** A Quay Wall is a structure that is built along the edge of a body of sea. Its primary purpose is to provide a docking and mooring facility for ships, boats, and other vessels. This is a predominant condition in the King Abdul-Aziz port.

Waterfront Access

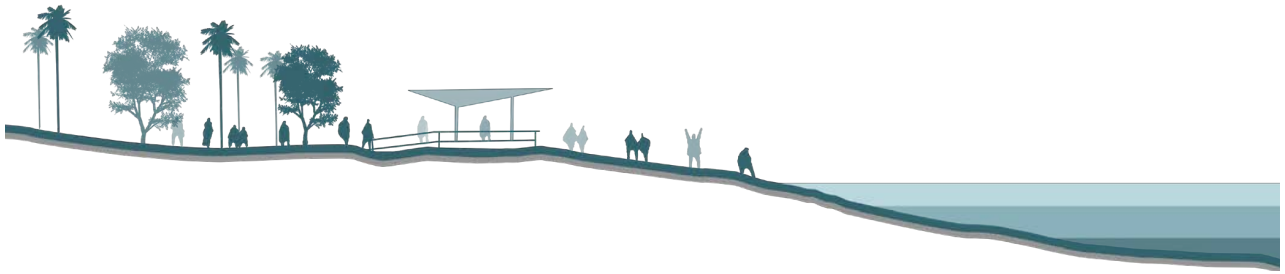
The map illustrates the location of public and private edges. In places where this distinction is not clear, it is described as underdeveloped areas. The predominant form of the waterfront is public, particularly in Ras Tanura, Al Qatif, Dammam, and Al Khobar, which include public parks. This is an indication of the efforts of the public authorities to maintain public access to the waterfront.

This is also the case in large sections along Half Moon Bay in the form of public beaches with access to amenities such as parking, restrooms, prayer halls, and structures for short stays.

The private part of the coastline relates mainly to port facilities, industrial areas (desalination plants being the most obvious), beach resorts, and residential properties that extend towards the coastline.

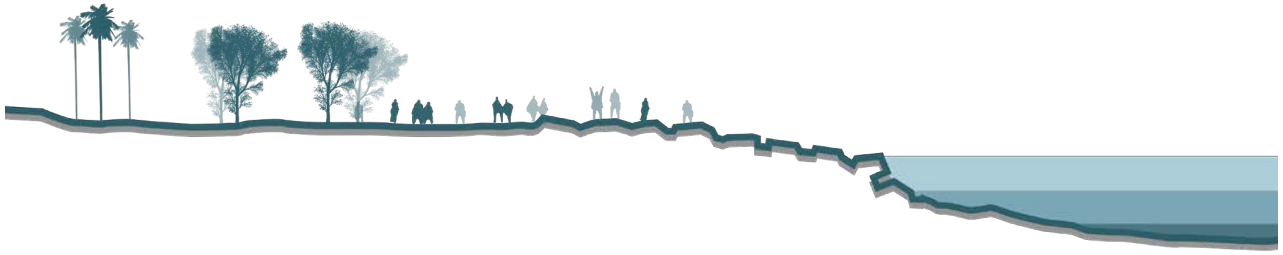
DMA Coastline's waterfront conditions.

Beach Condition.



Beach Condition.

Revetment Condition.

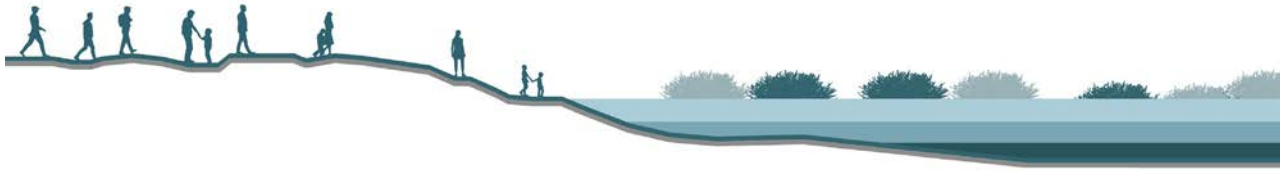


Revetment Condition.

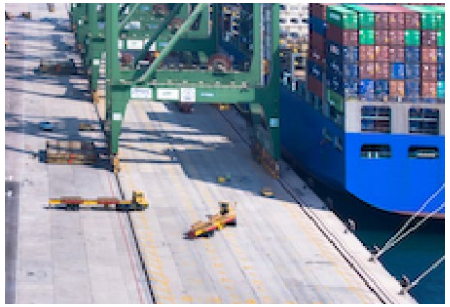
Revetment - Beach Condition.

Revetment - Beach Condition.

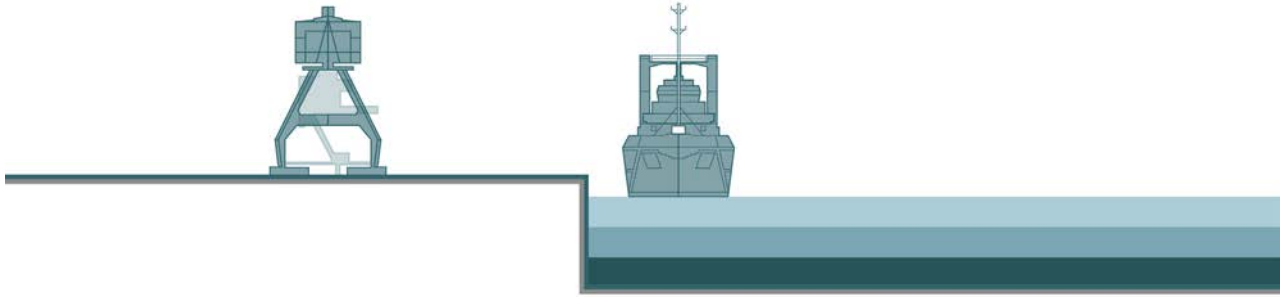
Mangrove/Natural Edge Condition.



Mangrove/Natural Edge Condition.



Quay Wall Condition.



Quay Wall Condition.

2.5 Governance of Greater Dammam Metropolitan Area Coastline

2.5.1 Sharqia Development Authority

The governance of Greater Dammam Metropolitan Area Coastline falls under the powers of **Sharqia Development Authority** (SDA). SDA was established pursuant to Resolution No. 475 of the Council of Ministers, dated 7.9.1439H, governing the role and responsibilities of Regional and City Development Authorities.

As such. SDA is responsible for, amongst other things, the social, urban, environmental, infrastructure and transportation planning and development of Sharqia Region and can take the lead on both **spatial planning and implementation** within its geographic jurisdiction. It can also seek assistance from other entities including the Amanat and sub-municipalities in order to ensure that its initiatives are properly implemented and enforced.

Within the above mandate, SDA is specifically empowered to approve **plot subdivision and master plan proposals**. In addition, SDA seeks to improve the public realm, waterfront accessibility, and visual appearance, as well as protect the unique landscape and character that makes the Coastline of DMA a unique place.

By virtue of the above powers, SDA has prepared Urban Design Guidelines and Regulations for Al Khor District (see map on p. 27) which, for any regulation or guideline also covered in this Manual, shall let prevail the regulations or guidelines of this Manual.

2.5.2 Eastern Region Amanah

Sharqia Development Authority and the Eastern Region Amanah have established the planning, design standards, and guidelines contained in this Manual, which must be adhered to prior to commencing any development works.

Regarding building permits, the Eastern Region Amanah follows the standards and requirements outlined in the manual as mandatory procedures when reviewing permit applications.

2.5.3 Institutional and Legal Framework for Coastal Lands

Council of Ministers Resolution **No. (433) dated 18/10/1436H along with its subsequent related modifications,** regulates the management and use of coastal lands and shorelines in the Kingdom. The resolution establishes a clear framework for defining the coastal buffer zone, setting controls for its use, specifying permissible activities, and outlining the authority of competent entities regarding leasing or renewal, ensuring:

- Preservation of the public coastal buffer zone.
- Regulation of service and tourism activities within defined ratios and areas.
- Oversight of fishery investment and tourism accommodation projects under environmental, security, and regulatory conditions.
- Determination of leasing ratios inside and outside urban boundaries.
- Coordination between municipalities, the Border Guard, and other relevant authorities prior to granting permits or approving projects.

Accordingly, this Resolution and its subsequent related modifications serve as a fundamental reference for safeguarding shorelines and regulating coastal investments, while balancing public access rights with economic and tourism development needs.

2.6 The 10th Report

The Tenth Report (General Guideline Plan and Local Plans for Cities of the Region) is the key reference document which this Manual supplements as far as Development and Development Control in the Coastline of Greater Dammam Metropolitan Area are concerned.

The 10th Report (2004) established a structural plan for Greater Dammam Metropolitan Area and the governorates of Qatif and Ras Tanura, and provided a complete set of **plot and building regulations and controls** for the construction of the built environment. It is intended to be used by the developers to plan and design their projects and by the authorities to control what was being envisaged for construction through a given set of criteria.

The 10th Report refers to a **Local Plan** in a map form (see opposite) and to development control regulations in a text form. Altogether, the 10th Report makes provision for **36 zones or "districts"**, which, in their definition, combine use and height regulations, and in their description are supplemented with plot area, building area, setback, parking and sign (billboard) regulations.

Moreover, the 10th Report makes provision for the following which are of interest in reading and following the regulations and guidelines of this Manual:

a. Definition of Conditional Uses and the range of conditions (Article 5.1).

b. Definition of "Central Areas", "Commercial Axes" and "Commercial Streets in Urban Block", with special plot and bulk regulations (Articles 6, 7 and 8).

c. Special use, plot and bulk regulations for "Unplanned Lands Overlooking Corniche Road" (Article 9).

d. "Major Distinguished Projects" for land in excess of 100,000 square meters, or "Important Investment Projects" for land in excess of 10,000 square meters, which may have their own development control regulations (Articles 10 and 11).

e. Detailed regulations for heights, setbacks, annexes (ground and upper) (Articles 15, 16, 17, 18).

f. Off-street parking (Article 20).

g. Miscellaneous other provisions.

One general observation that can be made is that the 10th Report is **not tied to an updated plan for the waterfront** (like a comprehensive master plan), which limits what this Manual can achieve. In general, development control regulations work best when their intent is to implement a plan; without this, they may be unable to achieve their full potential. While they are powerful tools when used in support of plans, they are not as much powerful as to express or compellingly communicate ideas on their own.

In addition, the 10th Report takes an exclusively **plot-based approach**. This means that it provides regulations associated with individual plots (assigned to "districts"), but it is little concerned with issues relating to the improvement or enhancement of the public realm.

This approach can be justifiable for a typical city neighborhood where land is already divided into building plots, but it is challenging when it comes to a waterfront, where there is an imperative to create a **robust, well designed and consistent public realm**.

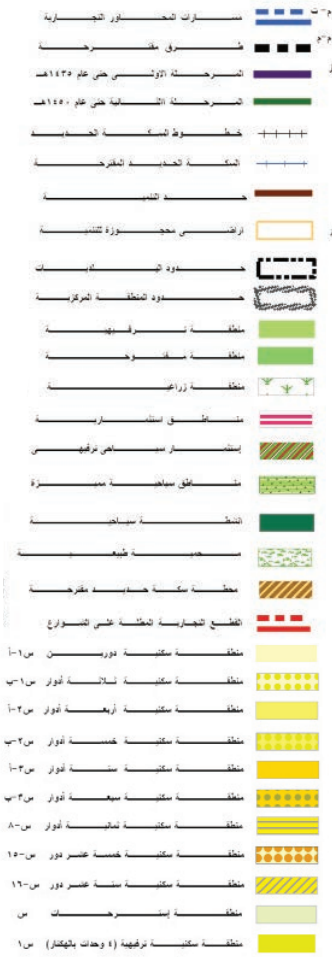
By contrast, this Manual aims at a **treatment of the public realm** of the waterfront and its landscape elements—beaches, revetments, corniches, parks, walkways and coastal roads, in an arguably equally important way as for plot and building design.

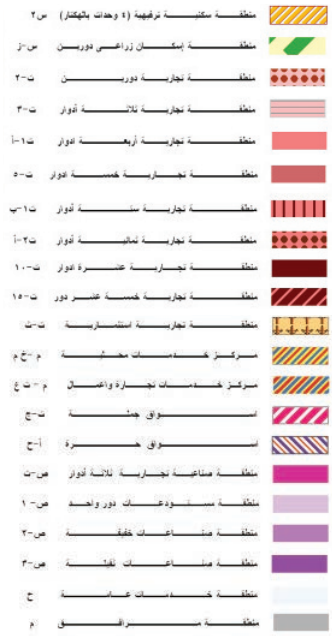
In fact, waterfront site composition requires a number of special considerations. While the 10th Report does address this to some extent (in its requirements for lands overlooking the corniche), there is a great deal more that could be said relating to the **variety of different waterfront conditions**. This could refer to special waterfront setbacks, appropriate parking locations, the creation of public space and movement corridors and latitudinal links back into the inland urban fabric.

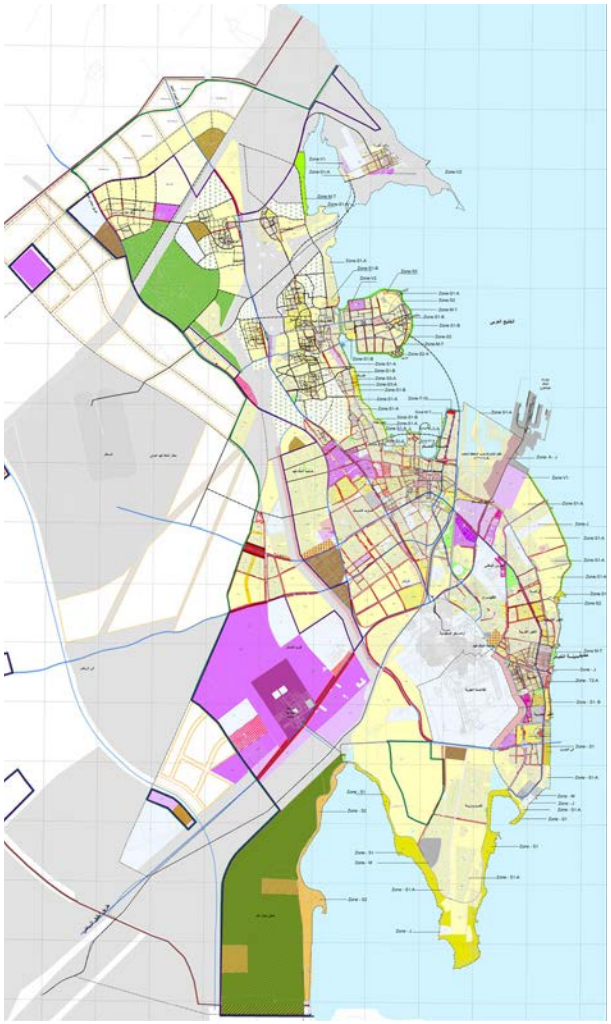
The 10th Report does not provide character of façade design—a very important aspect for the waterfront in particular. **Thinking of the waterfront as the facade of the city**, special consideration should be given to location and design of entrances, quality and quantity of openings, materials and colors, along with numerous other issues.

Signage is addressed in 10th Report only for billboards, but regulations of other commercial signs should also be considered.

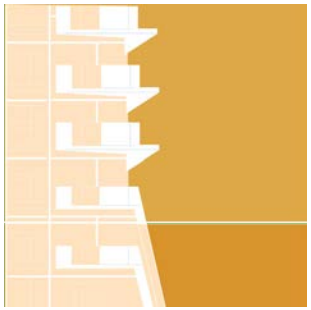
In addition to the above, **shading** is an important element that is not fully addressed in the 10th Report.







Land Use Plan



3 Built-Form

3.1 Types of Built-Form

The "Built-Form" module refers to physical development of buildings and structures. There are six types of buildings that are considered desirable development along DMA Coastline.

Each Built-Form type has specific regulations and guidelines that are established in this Section - they guarantee that all future buildings are designed in a way that meets the goals and principles of this Manual.

Type 1, Urban Mixed Use

- To be found in intensively developed portions of the Coastline, usually adjacent to inland urban nodes or along commercial streets.
- A wide mix of uses are permitted within this type of buildings, including residential, animated with retail and other active uses at the ground floor. Surface parking is highly limited.
- Buildings of this type are called to achieve a high standard of design and contribute substantially to the quality and activation of the facing public realm.
- Heights vary depending on the district categories, but typically are mid- or high-rise.

Type 2, Urban Residential

- Buildings that are exclusively (or almost exclusively) residential, with limited commercial and public uses permitted on the ground floor only.
- Urban Residential type of Built-Form is found in moderately to intensively developed portions of the Coastline.
- Heights vary depending on the district categories, but typically are mid- or high-rise.
- Buildings of this type are called again to achieve a high design standard and contribute substantially to the creation of semi-private urban spaces, and the quality of the adjacent public realm.

Example of an Urban Mixed Use buildings.

Example of an Urban Residential building.

Type 3, Low Density Residential

- Low-rise residential buildings, exclusively including villas and small apartment buildings.
- This type is typically found in outlying areas of the Coastline with a less intensive character.

Type 4, Resort

- Buildings used for public or private resorts, with any uses not associated with the resort not permitted.
- Includes developments at various scales, from mid-rise to high-rise buildings normally close to major urban nodes, to low-rise and mid-rise beach resorts normally located along the waterfront, outside dense urban nodes on more private and secluded properties.

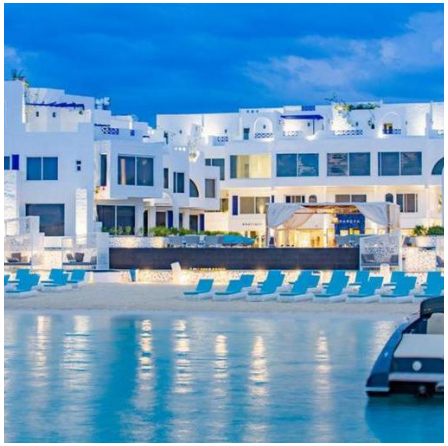
Type 5, Community Facility

- Buildings that provide a civic use, such as a mosque, a school or a health center.
- Community facilities must meet less massing and activation standards than other Built-Form types, but must meet a higher degree of architectural standards.
- Although they may vary substantially in scale, these buildings play an important role and should serve as landmarks within their surrounding context.

Type 6, Public

- Buildings or structures that are open to and serve the general public, such as restroom facilities, maintenance facilities, prayer areas, kiosks and more.
- They are located in parks, on the beach, along the corniche or in other public spaces.
- These buildings must be highly accessible and oriented to the public realm.

Example of Low Density Residential buidlings,



Example of Resort buildiings

Example of Community Facility building, National Museum

Example of a public food kiosk.

3.2 General Regulations and Guidelines (All Types)

3.2.1 Land Uses

The Land Use regulations and guidelines included in this Section apply to all Built-Form types.

(1) **For the purposes of this Section, the following additional definitions apply:**

a. **Principal Use** of a building, which must be clearly listed as a Permitted or Conditional Use under Article 4 of the 10th Report for each district category.

b. **Permitted Use**, uses listed as such under Article 4 of the 10th Report or designated in the current Manual, not requiring additional approval during the planning control.

c. **Conditional Use**, uses that may be appropriate or required for a particular purpose in a specific area, but are subject to certain conditions because of their location or other distinctive features, to be assessed and determined by the Planning Authority. Conditional Uses are regulated under Article 5 of the 10th Report.

d. **Accessory Use**, uses in conjunction with a Principal Use and may be allowed with a condition (see "Conditional Use").

e. **Temporary Use,** uses that may be permitted in any district, provided they do not adversely affect surrounding properties or disrupt the orderly development and continuance of permitted uses. Temporary uses are permitted only for the period of time specified, however, extensions of time may be granted.

(2) **Accessory Uses must observe the following regulations:**

a. Accessory uses or structures are permitted only in conjunction with Principal uses or structures.

b. No accessory use or structure may be erected or established on a plot prior to the erection or establishment of a Principal Use.

c. The Planning Authority has the right to assess and determine when a use or structure meets the definition of Accessory Use, taking into consideration the following:

i. the use or structure is subordinate to the principal use in terms of area, extent and purpose–;

ii. the use or structure contributes to the comfort, convenience or necessity of the occupants of the principal use;

iii. the use or structure is located on the same plot as the principal use, or on a contiguous plot under the same ownership;

iv. the use or structure does not involve operations not compatible with the character. of the principal use; and

v. the use of structure is not of a nature likely to attract visitors in larger number than would normally be expected for the principal use.

d. The following additional regulations apply to specific Accessory Uses:

i. **Drive-thru access ways and structures,** For serving food and beverage shops, including Automated Teller Machines (ATM) for banks, permitted only in Urban Mixed Use buildings.

ii. **Parking Structure(s)**, Parking structures (within a building or adjacent or bordering a building) shall not count as part of the building area. And in case of existence of the parking within the building, it is only applied for residential, and commercial areas authorized for a height of three floors or more. (as per Art. 21.3 of the 10th Report).

iii. **Standalone Parking Structure(s)** must be screened from view at the ground level from the active spaces of the plot (residential or commercial uses).

iv. **Sign(s) (Billboards/Banners)**, A stand-alone sign (i.e. not mounted on a building) may only be permitted as Conditional Use (as per Art. 5.4 of the 10th Report).

(3) **Temporary Uses must observe the following regulations:**

a. The maximum period of time a Temporary Use may be active is 2 years, except as otherwise stated in this Article for specific uses.

b. The site must be cleared of all debris during and at the end of the Temporary Use and cleared of all temporary structures within 30 days after expiration.

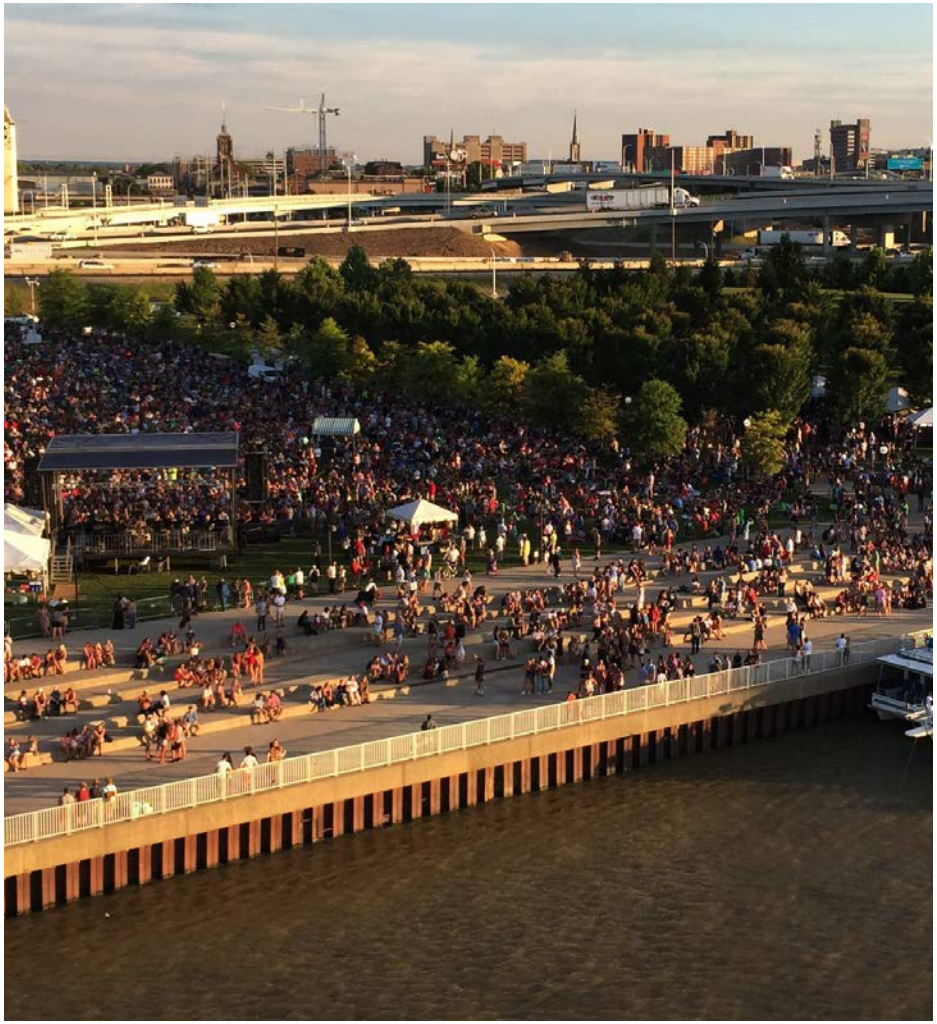
c. The following regulations apply to specific Temporary Uses:

i. **Public events, ceremonies and displays**. Maximum length of time for the use is 10 days.

ii. **Recreational camping.** Allowed in Recreational Area districts only (M-T). May include a single-story facility or building, for uses related to the camping use.

iii. **Recreational vehicle (RV) parking.** May not be located within 100 meters of the water's edge. May include a single-story facility or building, for uses related to the RV parking use. Electric hookups, water hookups, and adequate waste disposal systems and facilities should be provided.

iv. **Real estate sales office.** The office may not contain sleeping accommodations or cooking facilities. A model home may be used as a temporary sales office. Maximum length of time for the use is 1 year.



Example of Temporary Uses, such as public events or ceremonies.

3.2.1 Land Uses (Cont.)

Permitted uses. (as per the 10th Report)

Conditional uses (as per the 10th Report).

Prohibited uses

Permitted uses. (as per this Manual)

Conditional uses (as per this Manual) (on the basis of assessment of wider area needs).

(4) **Recommended permitted and conditional land uses for each district category as per Article 4 of the 10th Report are produced in the following table:**

10th Report District Categories (existing in the demarcated Coastline)

Building Uses	Recreational / Residential		Residential						Commercial					Local Service Center	warehouses	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
Zone & District category	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Residential																				
As per allowed for each type.									(1)	(1)	(1)	(1)	(1)	(1)						
Retail																				
Shops, boutiques, pharmacies,. Commercial centers, malls. Markets, supermarkets. Wholesale trade.					(2)	(2)	(2)	(2)												
Food & Beverage																				
Coffee shops. Bakery, confectionery. Fast food shop. Restaurants.					(2)	(2)	(2)	(2)												
Personal Services																				
Barbers, hairdressers. Dry cleaners, laundrettes. Gym or spa. Tailors.					(2)	(2)	(2)	(2)												
Small Scale Repairs																				
Repair of shoes and garments. Repair of appliances.					(2)	(2)	(2)	(2)												

Table Notes:

(1) Not allowed in the ground floor (10th Report). (2) Ground and 1st floor only. (as per this Manual)

Permitted uses.
(as per the 10th Report)

Conditional uses
(as per the 10th Report).

Prohibited uses

Permitted uses.
(as per this Manual)

Conditional uses (as per this Manual)
(on the basis of assessment of wider area needs).

	10th Report District Categories (existing in the demarcated Coastline)																		
Building Uses	Recreational / Residential		Residential						Commercial					Local Service Center	warehouses	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
Zone & District category	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Banks & Offices																				
Banks. Offices. Government.					(2)	(2)	(2)	(2)												
Entertainment																				
Amusement centers. Cinemas, theaters, concert halls. Indoor Sports. Showrooms.							(2)	(2)												
Industrial Uses																				
Industrial Buildings. Storage areas, warehouses. Wholesale distribution. Truck parking, refrigerators. Sales & service of heavy equipment.																				
Other Uses																				
Hotels, motels.																				
Health centers, clinics hosputals.																				
Schools, educational buildings.																				
Religious & civic buildings.																				
Museums, libraries.																				
Petrol filling stations.																				

3.2.1 Land Uses (Cont.)

(5) **Adjacent Plots** mean all plots that share a plot line with the plot under development ("Project Site") and all plots facing the Project Site and separated from the Project Site by a street.

a. As per Article 2.15 of the 10th Report, if a residential zone (district) borders an industrial zone (district), the plots along the street separating the two zones (districts) are permitted to have commercial use. These plots are also allowed a building height equal to the highest number of floors permitted in either of the two adjacent zones (districts).

b. Notwithstanding permitted uses for each zone (district) as per the 10th Report, the uses permitted for a Project Site must align with the existing uses on adjacent plots as per the table opposite.

c. It is recommended that open spaces of a Project Site be continued on existing open spaces of Adjacent plots.

d. It is recommended that pedestrian pathways on adjacent plots continue through the Project Site.

	Permitted uses for Project Site								
Existing Uses on adjacent plots (within 25m from Project Site)	**Residential**	**Retail**	**Food & Beverage**	**Personal Services**	**Smal scale reparies**	**Banks & Offices**	**Entertain-ment**	**Industrial Uses**	**Parks and Open Spaces**
Residential	■	■	(1)	(1)	(1)	■	(1)	■	■
Retail	■	■	■	■	■	■	■	■	■
Food & Beverage	(1)	■	■	■	■	■	■	■	■
Personal Services	(1)	■	■	■	■	■	■	■	■
Smal scale reparies	(1)	■	■	■	■	■	■	■	■
Banks & Offices	■	■	■	■	■	■	■	■	■
Entertainment	(1)	■	■	■	■	■	■	■	■
Industrial Uses	■	■	■	■	■	■	■	■	■
Other Uses	■	■	■	■	■	■	■	(2)	■

* Uess as per the table in page 52, 53.

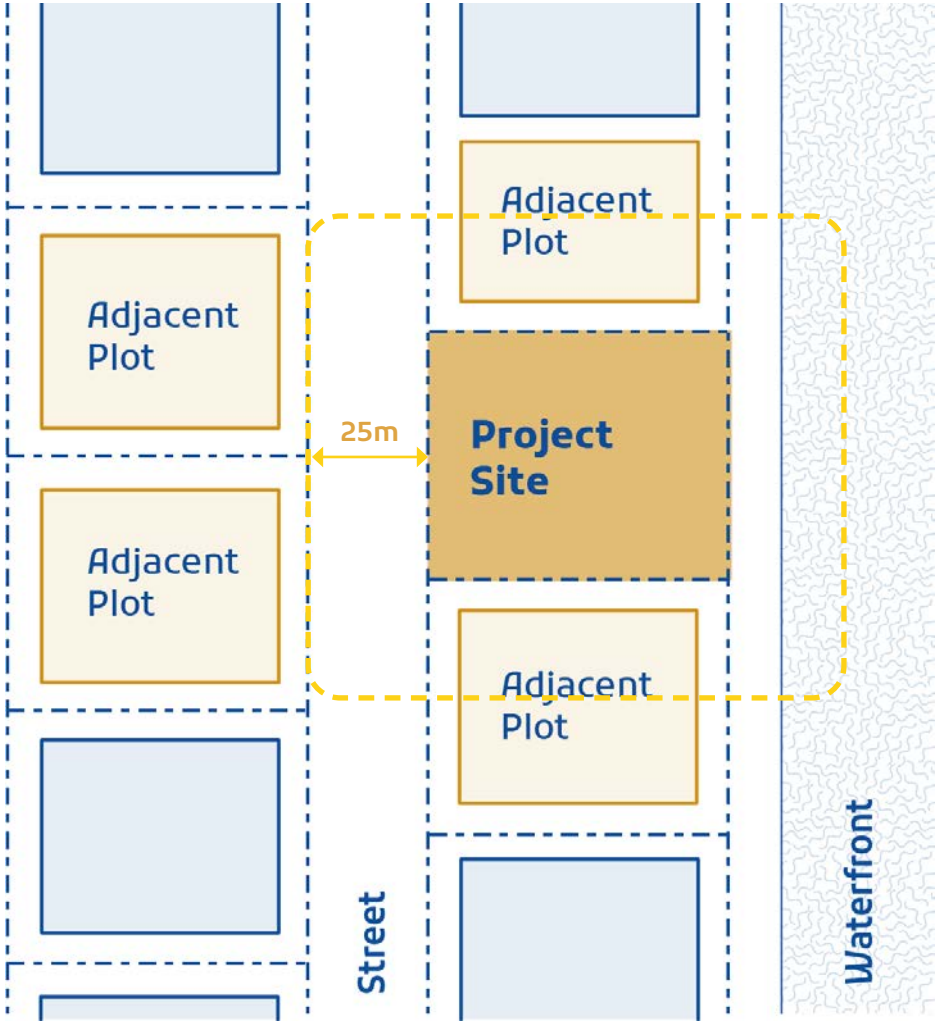
Notes:

■ Permitted

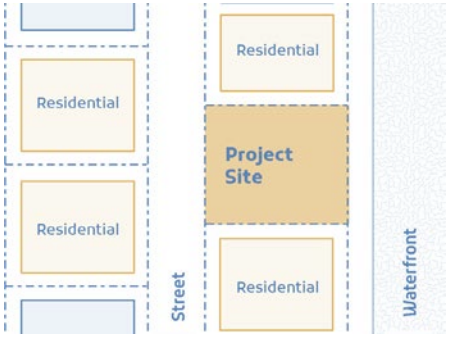
■ Not Permitted

(1) Subject to the suitability of the intended use in terms of demand, community impact, noise levels, traffic and parking, and operating hours.

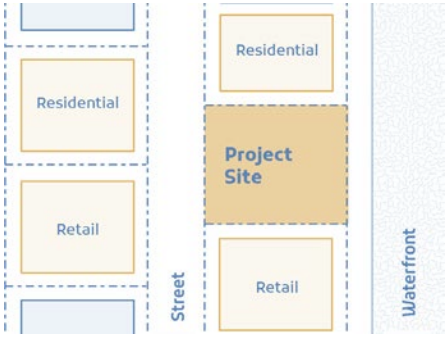
(2) Except for petrol stations



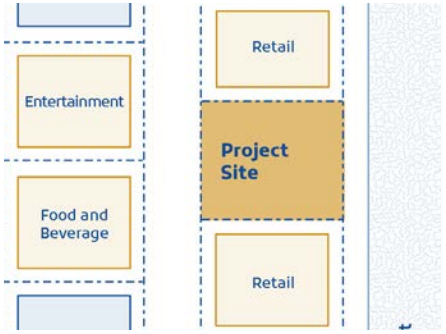
Adjacent uses.
[Guideline 3.2.1 (5)]



Based on the uses of adjacent plots to the Project Site, the unconditional permitted use for the Project Site is **Residential**. Any other use (except Industrial other than petrol station) is subject to the Planning Authority's approval based on the assessment of wider area needs.

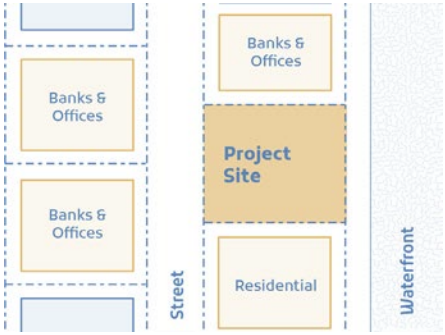


Based on the uses of adjacent plots to the Project Site, the unconditional permitted use for the Project Site is **Residential**. Any other use (except Industrial other than petrol station) is subject to the Planning Authority's approval based on the assessment of wider area needs.



Based on the uses of adjacent plots to the Project Site, the unconditional permitted use for the Project Site are **all uses**, including Residential.

Subject to the Planning Authority's approval based on the Project Site's wider context plans.



Based on the uses of adjacent plots to the Project Site, the unconditional permitted use for the Project Site is **Residential**. Any other use (except Industrial other than petrol station) is subject to the Planning Authority's approval based on the Project Site's wider context plans.

3.2.2 Plot Area

(1) Regulations concerning the plot area and the plot frontage for each district category as per Article 4 of the 10th Report are reproduced in the following Table.

(2) In all cases, any existing plot that, prior to the institution of 10th Report, had an area less than the minimum plot sizes of the table, is eligible for development if more than 100 sq.m. If less than 100 sq.m, the development shall be considered to be "conditional" and shall be subject to approval by the Planning Authority. [Article 23.2 of 10th Report]

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
Land Use (Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Minimum plot area (sq.m) (as per 10th Report)	(1)	(1)	500	600	900	1,000	2,000	4,000	600	900	1,800	2,000	2,000	2,500	1,000	2,000	(2)	(2)	(2)	50,000
Minimum plot frontage (m) (as per 10th Report)	(1)	(1)	20	20	25	25	40	40	20	30	36	40	40	40	25	40	(2)	(2)	(2)	

Table Notes:

(1) As per approved master plan. Subdivision is not allowed.

(2) To be determined by the Planning Authority.

3.2.3 Building Area

(1) The area of the plot to be covered by the building (Building Area) is calculated on the basis of the percentage of the plot permitted to be covered (Plot Coverage) multiplied with the Plot area (Article 3.2.2). The regulations concerning the Plot Coverage for each district category as per Article 4 of the 10th Report are reproduced in the Table below.

(2) According to Article 2.2 of the 10th Report, the Building Area shall not exceed the figure produced from the table below.

(3) In addition to the above regulations, the following guidelines are recommended for all Built-Form types:

a. Provision of non-covered open space within a plot is highly encouraged. Conversion of non-covered plot space into an open space, of a usable size and design instead of left-over space, is highly recommended.

b. As a corollary, non-covered plot space should preferably take the form of courtyards, plazas and activity areas.

c. Non-covered plot space along plot frontages should preferably be treated as an extension to the public realm and form an attractive street front.

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
Land Use (Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Maximum Built Area % (as per 10th Report)	20%	40%	60%	60%	60%	60%	60%	50%	60%	60%	60%	60%	60%	100%	60%	60%	(5)	(5)	(5)	10%
Additonal regulations (as per 10th Report)	(1)	(2)	100% for R1A*	100% for R1B*	100% for R2A*				100% for C3*	100% for C1A*	100% for C1B*	100% for C2A*	100% for C10*		(3)	(4)				(6)

Table Notes:

(1) Maximum 4 units per hectare. Subdivision is not allowed.

(2) Maximum 6 units per hectare. Subdivision is not allowed.

(3) The regular setbacks must be observed. Minimum warehouse area, 250 sq.m. Subdivision is not allowed.

(4) Minimum area for one industrial unit, 1,000 sq.m. Subdivision is not allowed.

(5) To be determined by the Planning Authority.

(6) Only residential use is allowed with no more than 1000 sq.m.

3.2.4 Setbacks

(1) Notwithstanding Art. 16 of the 10th Report on general setback regulations, regulations concerning the setback for each district category as per Article 4 of the 10th Report are reproduced in the following Table.

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
Land Use (Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Minimum front setback (m) (as per 10th Report)	(6)	(6)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(3)	(3)	(4)	(4)	(4)	(5)
Minimum side setback (m) (as per 10th Report)	4	4	2	2	2	2	2	2	2	2	2	2	2	2	3	3	(4)	(4)	(4)	(5)
Minimum rear setback (m) (as per 10th Report)	(1)	(1)	2	2	2	2	2	2	2	2	2	2	2	2	3	3	(4)	(4)	(4)	(5)

Table Notes:

(1) Min rear setback ¼ of the plot's depth (max 100 m).

(2) Min front setback 1/5 of the street's width (max 6 m).

(3) Minimum 6 m or the height of the building, whichever is greater.

(4) To be determined by the Planning Authority.

(5) Minimum setback as the height of the building.

(6) In the case of establishing a commercial development, the setback from the street must not be less than (20 m).

3.2.5 Building Heights and Floor Area Ratio (FAR)

(1) Regulations concerning the building heights and the Floor Area Ratio (FAR) for each district category as per Art. 4 of the 10th Report are reproduced in the following Table.

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
Land Use (Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Maximum number of floors (Ground floor +)	G+1	G+1	G+1	G+2	G+3	G+5	G+7	G+15	G+2	G+3	G+5	G+7	G+9	G+3	G	G				G+1
Maximum height in meters	10.0	10.0	10.0	12.0	15.5	22.5	29.5	57.5	15.5	19.0	26.0	33.0	40.0	19.0	(1)	(1)	(1)	(1)	(3)	10.0
Commercial shops (m)	6.0	6.0																		
Plot Area (min) (sq.m) (Article 3.2.2)			500	600	900	1,000	2,000	4,000	600	900	1,800	2,000	2,000	2,500	1,000	2,000				
Plot Coverage (max) (%) (Article 3.2.3)			60%	60%	60%	60%	60%	50%	60%	60%	60%	60%	50%	60%	100%	60%				
Building Floor Area (max) (sq.m) (FAR x Plot area)			600	1,080	2,160	3,600	9,600	32,000	1,080	2,160	6,480	9,600	10,000	6,000	1,000	1,200				
Floor Area Ratio (max)			1.2	1.8	2.4	3.6	4.8	8.0	1.8	2.4	3.6	4.8	5.0	2.4	1.0	0.6				
										(2)					(4)	(4)		(5)		

Table Notes:

(1) To be determined by the Planning Authority.

(2) Maximum 6 floors.

(3) Maximum 8m if between the waterfront and Corniche Street. Additional requirements to be determined by the Planning Authority.

(4) May include mezzanine equal to 10% of the building area to be used for administration offices only.

(5) Maximum height shall not exceed 2 floors from the approved height.

(2) According to Art. 2.12 of the 10th Report, the FAR applies to the following cases:

a. Important Investment Projects (Art. 11 of the 10th Report);

b. Major Distinguished Projects (Art. 10 of the 10th Report);

c. Central Districts (Art. 6 of the 10th Report);

d. Plots overlooking main roads, commercial streets, and the Corniche Road, with a height of 4 floors, the Floor Area Ratio (FAR) may be applied. However, the total height should not exceed 6 floors, including the ground floor.

(3) According to Art. 23.3 of the 10th Report, in residential and commercial buildings with 3 floors or more, the floor area above the ground level allocated for car parking is not counted in the Building Floor Area or the number of floors.

(4) According to Art. 2.14 of the 10th Report, service floors in buildings with 6 floors or more are not counted in the Building Floor Area or the number of floors. Buildings with a height from 6 to 15 floors are allowed to provide one service floor; buildings with a height over 16 floors are allowed to provide two service floors.

(5) Notwithstanding Art. 2.16, 2.17, and 2.18 of the 10th Report, the heights permitted for new buildings on a Project Site must align with the existing heights of the adjacent plots as per the table below.

		Permitted Building Height for New Buildings on the Project Site			
Existing Building on adjacent plots (within 25m from Development Project Site)		**Low-rise** 1-3 floors	**Mid-rise** 4-8 floors	**Mid-rise** 9-12 floors	**High-rise** 13+ floors
Low-rise	1-3 floors	YES	YES	NO	NO
Mid-rise	4-8 floors	YES	YES	YES	NO
Mid-rise	9-12 floors	NO	YES	YES	YES
High-rise	13+ floors	NO	NO	YES	YES

3.2.6 Building Massing and Placement Orientation

(1) To promote privacy, at-grade access to sunlight and sky views, and to reduce reliance on energy-intensive cooling equipment and systems high-rise buildings (13+ floors), whether attached on adjacent plots or standalone on own plots, must maintain a minimum separation of 20 meters from each other. Additionally, it is recommended that orientation of the buildings in relation to solar and wind patterns is further considered when determining their placement.

Minimum 20m separation between adjacent high-rise.
[Guideline 3.2.6 (1)]

3.2.7 Built-Form Elements / Saudi Architecture

The following guidelines are recommended for all Built-Form types:

(1) All building typologies must adhere to the architectural elements and principles outlined in the Saudi Architectural Guidelines for the Eastern Coast and Qatif Architecture (refer to Section 9.3 of the original Saudi Architectural Guidelines).

(2) More specifically, Vernacular building style is to be preferred for all Built-Form types, comprising simple, rectilinear forms, also for ease of construction and increased density.

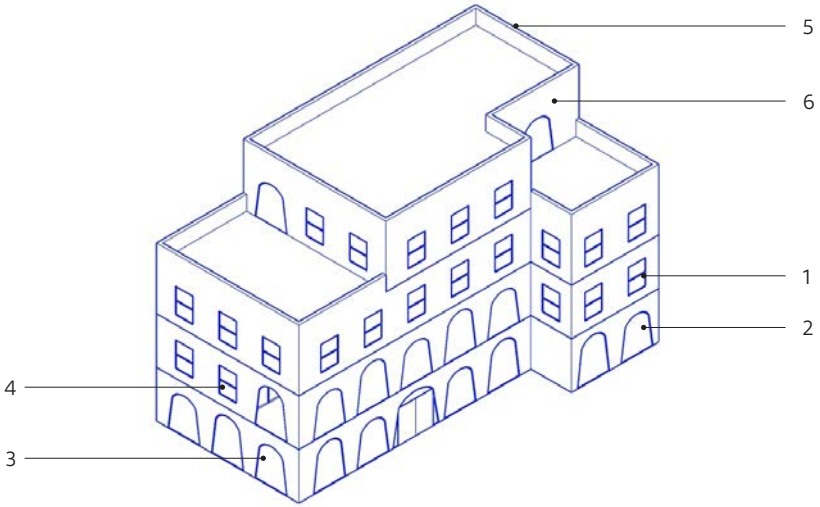
(3) Facades typically must have projecting elements, such as overhangs and merlons.

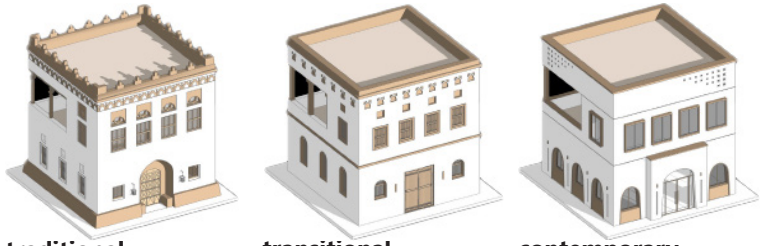
(4) Windows and architectural ornamentation should generally create vertical groups that are complementary to the Region's vernacular architecture, the Coastline and the waterfront of Greater Dammam Metropolitan Area.

(5) Roofs should generally be flat with no sloping.

العمـــارة السعودية
SAUDI ARCHITECTURE

Architectural Elements of the Building according to Al Qatif Oasis Architecture





traditional **transitional** **contemporary**

1 | Opening proportions can vary in proportion and size, ranging from horizontal continuous curtain walls to square or rectangular shapes.

2 | The composition of the façade can asymmetrically align openings on all levels.

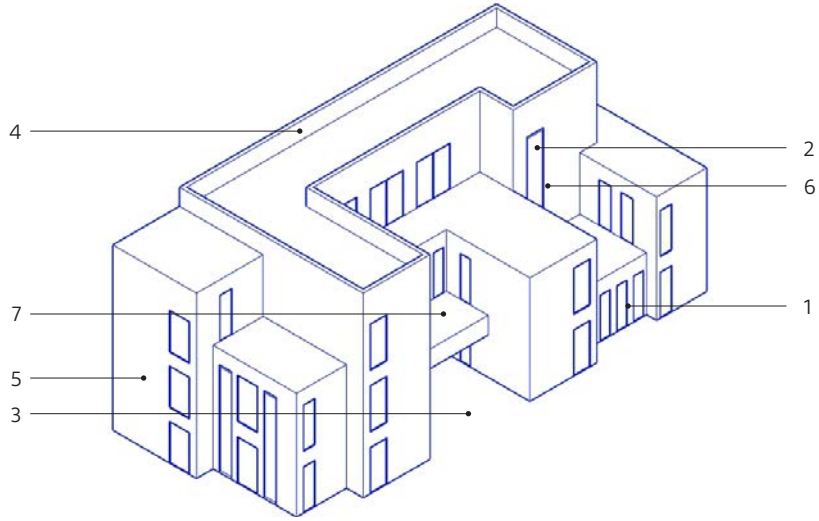
3 | Arcades are marked by curved arches of various widths sitting on columns that are aligned along the main façade..

4 | The building's middle levels should cast a shadow on the ground floor and some of the windows can be extruded from the main façade thus projecting a shadow on the wall.

5 | If present, parapets should be stepped or have minimal details integrating seamlessly with the rest of the façade

6 | Patterns: can be re-interpreted in the opening louvers whenever the height exceeds one story. The fenestrations in the main façade can integrate and depict geometrical motifs.

Architectural Elements of the Building according to East Coast Architecture



traditional transitional contemporary

1 | Use a wide range of vertical openings with diverse widths and heights and window-to-wall ratio should consist of 40 to 60% of openings on the primary façade.

2 | Façade asymmetrically aligns openings on all levels.

3 | The entrance has a longitudinal curtain wall with minimal joinery and recessed from the main façade to create a shaded threshold. This creates a visual hierarchy that identifies the main entrance. For the signage board, a flat frontal area with minimal decorations should be used.

4 | The roofscape adopts flat and angular parapets with glass handrails.

5 | Geometric pattern motifs feature upon the main façade's fenestrations.

6 | It applies a vertical order to the main façade through recessed vertical openings with window bands running along one or more building levels.

7 | The design incorporates projected balconies, such as mashrabiya, blending new and old.

3.2.8 Parking and Access

(1) Taking into account Art. 20 of the 10th Report, parking standards applicable for each use category of Article 3.2.1(4) of this Manual are as in the following Table:

Parking standards within the Coastline, according to the 10th report, the school requirements guide, and the requirements guide for health and social services buildings.

Principal use	Parking spaces
Residential	1 per residential unit
Retail	1 per 30 sq.m
Food & beverage	1 per 30 sq.m
Personal services	1 per 30 sq.m
Small scale repairs	1 per 30 sq.m
Banks & offices	1 per 75 sq.m
Government	1 per employee
Entertainment	1 per 75 sq.m
Hotels. motels	1 per room (1st 40 rooms), 1 per two rooms (for any additional room after the 40)
Hospitals	2.5 per Bed
Health centers	3 per clinic
Clinics, scan centers, medical lab, pharmacy	1 per 75 sq.m
Elementry & Intermediate schools	2 per class (boys), 1 per class (girls)
High schools, educational buildings	4 per class (boys), 2 per class (girls)
Religious & civic buildings; museums, libraries	1 per 75 sq.m
Warehouse	1 per 100 sq.m
Factory	1 per employee

3.2.8 Parking and Access (Cont.)

(2) Parking must be located within the Building Area (see 3.2.3(1) (except for underground and short-term parking spaces).

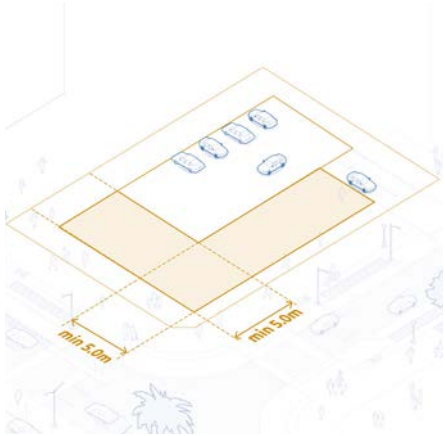
(3) Parking located at or above ground within the building must be wrapped with another use at least 5 meters deep open any side of the building facing a primary or side street, measured from the street-facing façade.

(4) Ground parking areas must not be located on the side of the building facing primary or side street.

(5) Parking when covered areas must be well-ventilated, well-shaded, brightly lit.

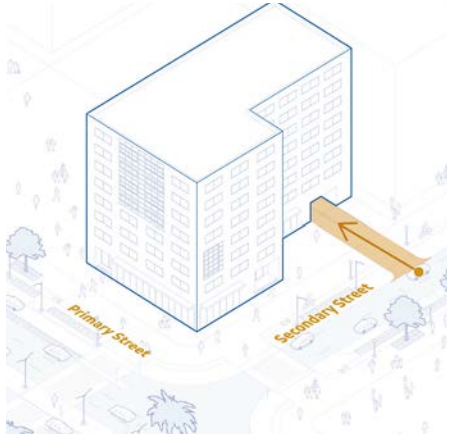
(6) Driveways or other vehicular entrances to parking areas must be designed with the minimum width of the travel lane not to disrupt the walkability of the sidewalks and decreaser pedestrian safety.

(7) Where buildings are located on corner plots, parking access is encouraged not to be taken from the primary street.



Internal parking wrapped with at least 5m of separate building use. [Guideline 3.2.8 (3)]

Ground parking to the rear or side of the building, screened from public view. [Guideline 3.2.8 (4)]



On corner plots, parking access is encouraged away from primary streets. [Guideline 3.2.8 (7)]

3.3 Built-Form Type 1 - Urban Mixed Use

Definition

The following buildings shall be deemed to fall under the Built-Form type "Urban Mixed Use":

a. **Mixed use buildings.** Buildings combining residential units with commercial, offices and public uses ("Mixed Commercial"). The residential units are attached to each other either horizontally or vertically or both, only in the floors above the ground floor.

b. **Buildings with exclusive use** (without residential units) any of commercial, offices and public uses. More particularly:

   i. Department stores, malls, commercial centers, supermarkets etc., with or without other smaller scale retail establishments.

   ii. Banks. General banking facilities, including drive-thru facilities.

   iii. Offices for private companies or government use.

   iv. Vehicle sales or service. A facility for the sale or servicing private vehicles, bicycles, scooters or other micromobility vehicles.

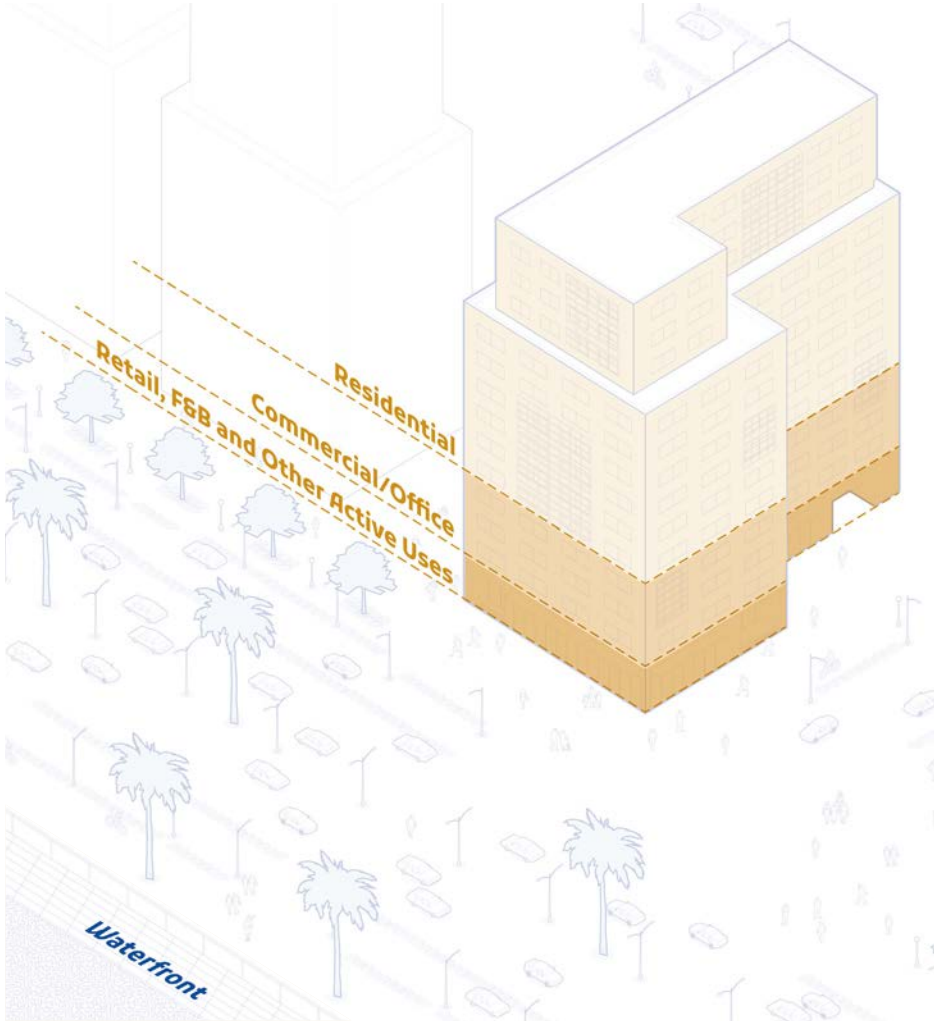
   v. Hotels, of a maximum size of 200 beds, in a building of minimum four floors.

   vi. Restaurants, coffee shops, cafeterias, fast food and similar facilities, including drive-thru facilities.

Examples of an Urban Mixed Use buildings

Examples of an Urban Mixed Use buildings.

Examples of an Urban Mixed Use buildings.



This type of building includes residential and commercial / office spaces, activated with retail at the ground level.

3.3.1 Applicability

(1) Subject to the applicability permitted in the 10th Report or the case of the assessment of a plot land use modification/exemption request. The Built-Form Type 1 (Urban Mixed Use) is permitted to apply to the Land Use (Zone & District category) of the 10th Report as per the table below.

(2) Urban Mixed Use buildings shall be encouraged in intensively developed portions of the Coastline, usually adjacent to inland urban nodes, regional service areas, district service centers, regional service centers, central districts or along commercial streets and business axes.

(3) Variety of uses shall be encouraged, with or without residential units.

(4) Urban Mixed Use buildings facing the waterfront shall be encouraged to have their ground floor retained for mixed commercial uses fine-grained in scale, such as small shops or restaurants, with any larger mixed commercial uses oriented to inland Arterial and Collector Streets.

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
Land Use (Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Type 1 - Urban Mixed Use	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	
Type 2 - Urban Residential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Type 3 - Low Density Residential	✓	✓	✓	✓	✓	✓	✓	✓											✓	✓*
Type 4 - Resort	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓*
Type 5 - Community Facility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Type 6 - Public			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

3.3.2 Plot Area

(1) All Type 1 (Urban Mixed Use) buildings must observe the regulations concerning the plot area and the plot frontage for each district category as per Article 3.2.2 of this Manual. No further recommendations are applicable.

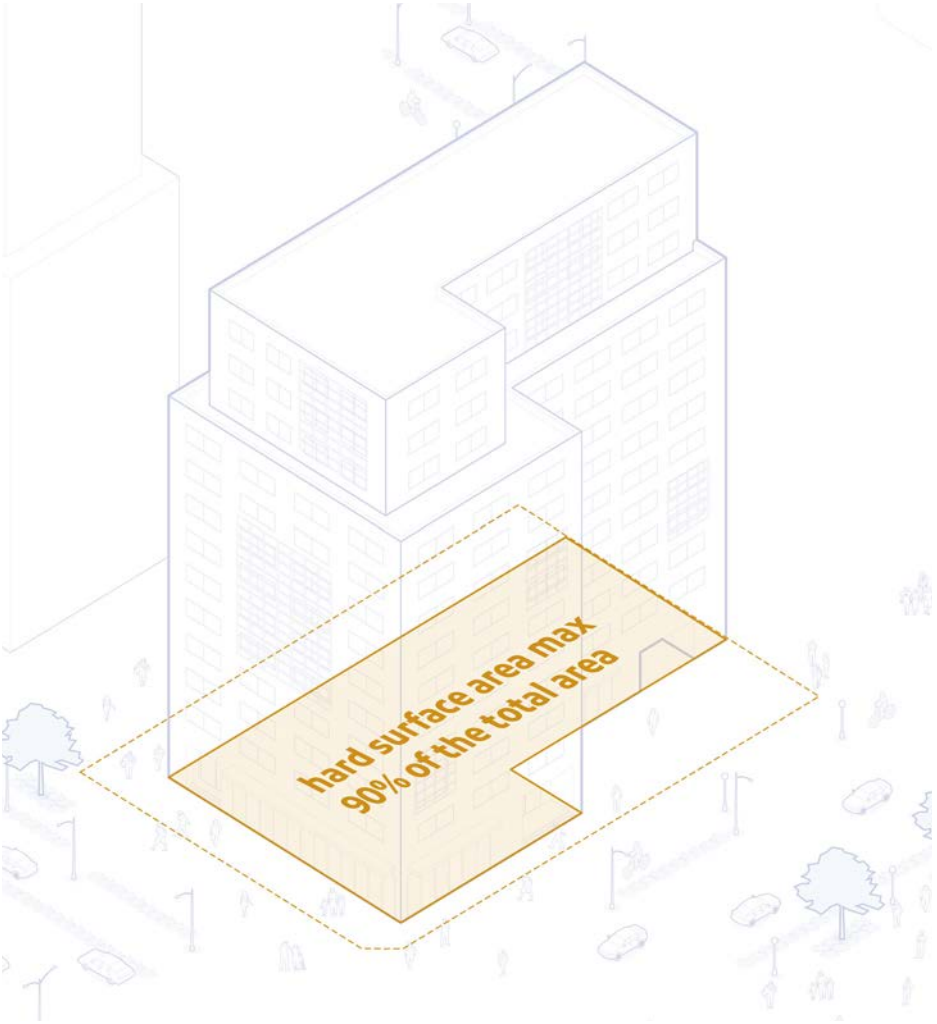
3.3.3 Building Area

(1) All Type 1 (Urban Mixed Use) buildings must observe the regulations concerning the building area for each district category as per Article 3.2.3 of this Manual.

(2) In addition to the above regulations, the following regulations and guidelines are recommended for Type 1 (Urban Mixed Use) buildings:

a. Urban Mixed-Use buildings and associated paved and impervious hard surfaces (such as driveways, pedestrian pathways and patios) must not exceed 90% of the plot area to allow outdoor amenity spaces on soil grounds.

b. Large plots should take advantage of the site at ground level to create well-designed open spaces that are semi-public or private. Buildings should incorporate such spaces in the form of courtyards, forecourts, patios or rear amenity areas.



Built-form not to exceed 90% of plot area.
[Guideline 3.3.3 (2) (a)]

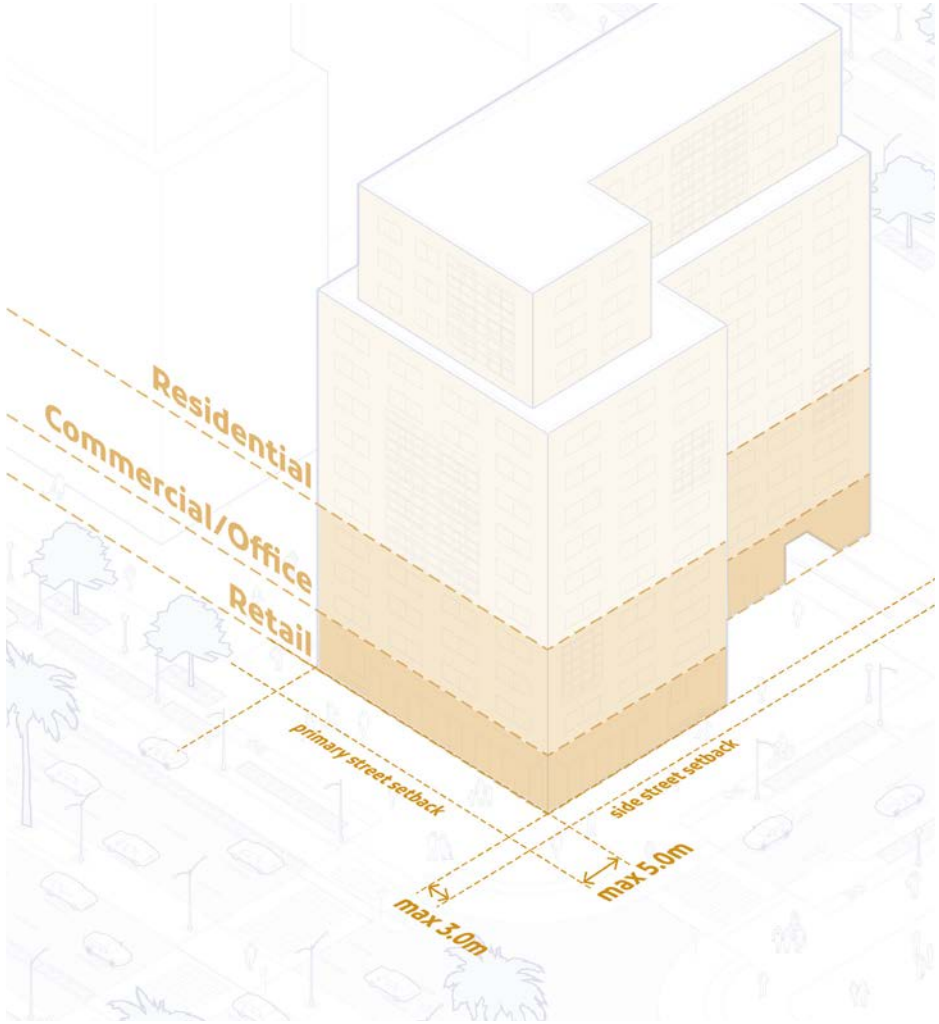
3.3.4 Setbacks

(1) All Type 1 (Urban Mixed Use) buildings must observe the regulations concerning the minimum setback for each district category as per Article 3.2.4 of this Manual.

(2) In addition to the above regulations, the following guidelines are recommended for Type 1 (Urban Mixed Use) buildings:

a. Primary street (front) setback, 5.0 m, to be used as public outdoor amenity space to contribute to the quality of the facing public realm.

b. Side street (side) setback, max 3.0 m, as a side setback more than that may fracture the desired sense of urban continuity.



Typical setbacks of an Urban Mixed Use building.
[Guideline 3.3.4 (1)]

3.3.5 Building Height & Floor Area Ratio (FAR)

(1) All Type 1 (Urban Mixed Use) buildings must observe the regulations and guidelines concerning the building height and FAR for each district category as per Article 3.2.5 of this Manual.

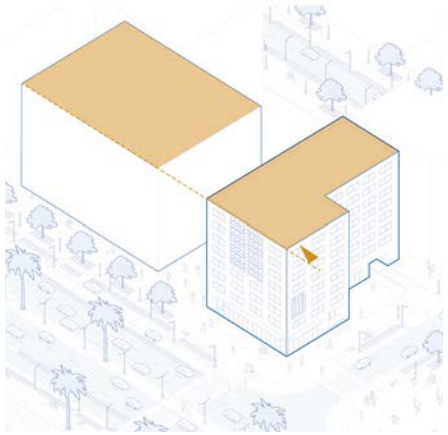
(2) In addition to the above regulations, the following guidelines are recommended for Type 1 (Urban Mixed Use) buildings:

a. In the case of Zoning Modifications Heights should be contextually appropriate, i.e. with the encouragement of the maximum number of floors in intensively developed portions of the Coastline, lower number of floors in a quieter area.

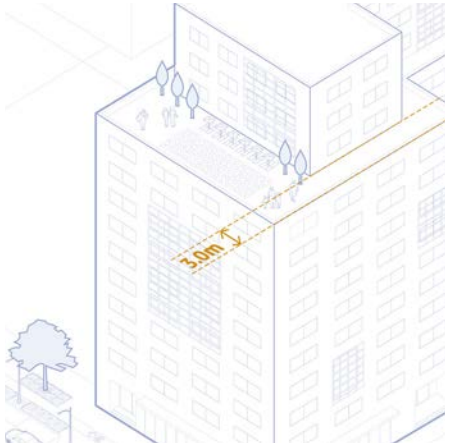
b. New buildings must observe Article 3.2.5(5) of this Manual for height transition regulations.

c. Floors above the 10th floor must be stepped back at least 3.0 meters from the base building façade. Stepback areas may be used as outdoor amenity space.

d. Tall, slab-form buildings are to be discouraged along the waterfront, as they may restrict views and create an overly imposing appearance. Narrow buildings are encouraged, as they result in a more active, walkable and engaging streetscape.



Heights should be contextually appropriate.
[Guideline 3.3.5 (2) (a)]



Upper level stepbacks with potential amenity use.
[Guideline 3.3.5 (2) (c)]

3.3.6 Building Massing, Placement and Orientation

In addition to the regulation of Article 3.2.6 in of this Manual, the following guidelines are recommended for Type 1 (Urban Mixed Use) buildings:

(1) To promote privacy, and at-grade access to sunlight and sky views, and to reduce reliance on energy-intensive cooling equipment and systems in accordance with best practices, it is recommended that high-rise buildings, whether attached or standalone, maintain a minimum separation of 20 meters from each other. Additionally, the orientation of the buildings in relation to solar and wind patterns to be considered when determining their placement.

(2) Building façades must not extend for more than 60 meters without a break in continuity, in order to avoid long, flat, and monotonous façades.

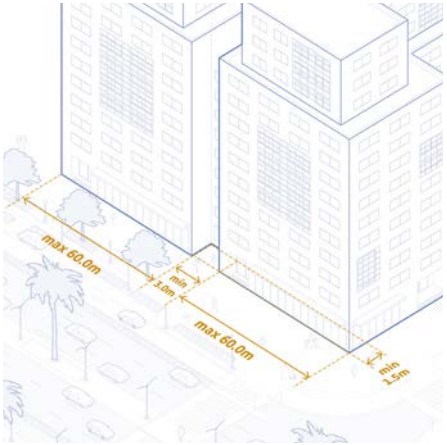
(3) The depth of this break must be at least 1.5 meters, with a width of 3 meters, and should extend for the full height of the façade.

(4) These regular recesses along the building façade should create a visual rhythm along the street, in coordination with the setback.

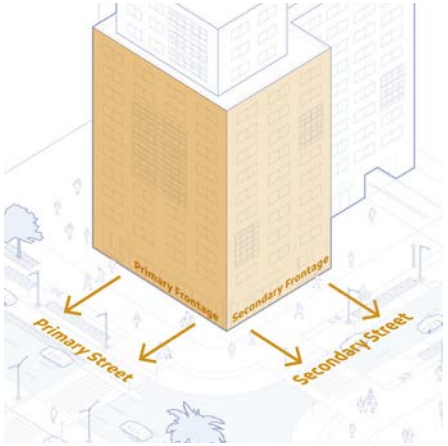
(5) All buildings must be oriented to the street they front, with their primary frontage parallel to that street and their primary entrance facing it. Primary entrances must be highly visible to show as the most important entrance.

(6) Buildings located on corner plots must relate to both streets, by providing windows, entrances, or other architectural elements that contribute to the quality of the adjacent public realm. At least one of the streets must be identified as a "Primary Street" and must meet the Primary Street regulations and guidelines. Any other streets (including back streets, as may be applicable) may be identified as "Side Streets" and must meet the required Side Street regulations.

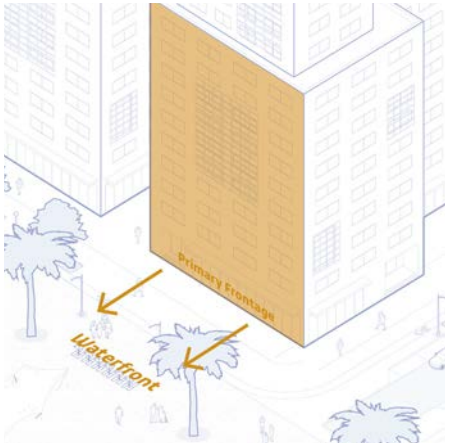
(7) Where a building abuts a public park or an open space, or directly abuts waterfront, that building frontage must meet the required Primary Street regulations and guidelines.



Regular recesses along building façades. [Guideline 3.3.6 (4)]



Corner plots must address Primary and Secondary streets accordingly. [Guideline 3.3.6 (6)]



Frontage to waterfront must be treated as a primary frontage. [Guideline 3.3.6 (7)]

3.3.7 Built-Form Elements

In addition to the Article 3.2.7 of this Manual, the following regulations and guidelines shall apply for Type 1 (Urban Mixed Use) buildings:

(1) Building facades facing the open spaces, and especially those facing the waterfront, must achieve a high standard of design and material construction.

(2) The maximum entrance spacing for all Type 1 (Urban Mixed Use) buildings is 20 meters, measured from the outside edge of an entrance to the closest edge of the next entrance, or to the edge of the building façade.

(3) Windows and doors are to be used to create high transparency. The minimum ground floor transparency requirements are the following:

a. Primary street, non-residential uses, 60%.
b. Primary street, residential uses, 30%.
c. Side street, all uses, 30%.

(4) Ground floor facades should be equipped with weather protection (awnings), openings and other architectural elements as appropriate to provide activity and interest for people.

(5) The minimum percentage of a building frontage to have at least 2.0 meters of shaded clearway is 70%. To encourage walking opportunities for people, shading the public realm through awnings, canopies or covered arcades should be encouraged, also in compliance with Article 7.6 of this Manual.

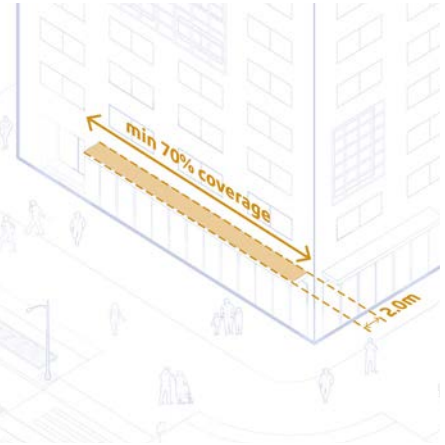
(6) Trash containers and mechanical equipment must be screened from view from the public realm with built-form, landscaping, or other screening elements.

(7) Shipping, receiving, and loading areas to be located on secondary streets. and to utilize landscaping to screen these servicing areas and integrate back doors seamlessly into the building's architectural design.

(8) Implement noise reduction measures such as soundproofing, sound-resistant windows, shutters, or other noise attenuation techniques, and select materials carefully to minimize noise. In mixed-use buildings, prioritize protecting residential areas and workplaces from noise and odors generated by shipping and waste disposal activities.

20m maximum entrance spacing, [Guideline 3.3.7 (2)]

Minimum Ground Floor Transparency. [Guideline 3.3.7 (3)]



Ground floor opportunities for weather protection and shading. [Guideline 3.3.7 (5)]

3.3.8 Parking and Access

(1) See Article 3.2.8 (1) for parking standards.

(2) Underground parking should be encouraged, as it maximizes the ground area for other purposes that may enhance the experience of the site, such as landscaping and plazas or other active spaces.

(3) Where ground parking is incorporated, it must be screened from the public realm using built forms, walls, fences or landscape elements.

(4) Loading or drop-off areas may not be located between the building and the primary street. They must be located to the rear or side of the building.

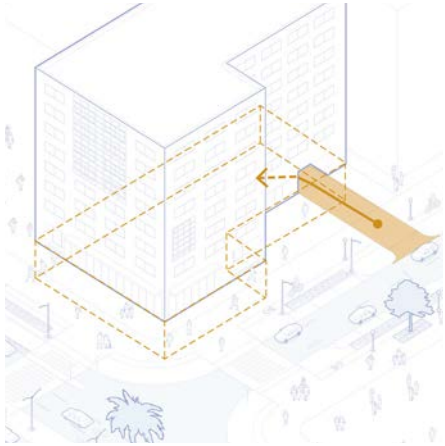
(5) Driveways or other vehicular entrances to parking areas must be minimized in width to improve walkability and increase pedestrian safety.

(6) Where buildings are located on corners, parking access is encouraged not to be taken from the primary street.

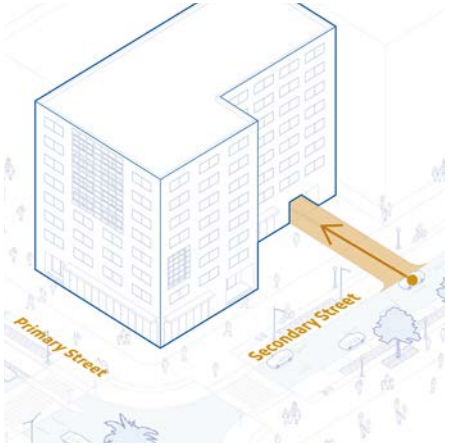
(7) The provision of general-purpose public parking should be considered within buildings, to accommodate visitors to the surrounding area.

(8) Parking areas and vehicular accessways must be designed to accommodate maintenance and emergency vehicles as needed.

(9) Secure micro-mobility parking should be provided free of charge and may be located between the building and the street.



Underground parking encouraged.
[Guideline 3.3.8 (2)]



On corner lots, parking access encouraged away from primary streets. [Guideline 3.3.8 (6)]

Provide secure micro-mobility parking between the building and the street. [Guideline 3.3.8 (9)]

3.4 Built-Form Type 2 - Urban Residential

Definition

The following buildings shall be deemed to fall under the Built-Form type "Urban Residential":

a. **Low-, mid- and high-rise buildings** (apartments) that are exclusively residential.

b. **Mid- and high-rise buildings** (apartments), almost exclusively residential, with limited commercial and public uses on the ground floor.

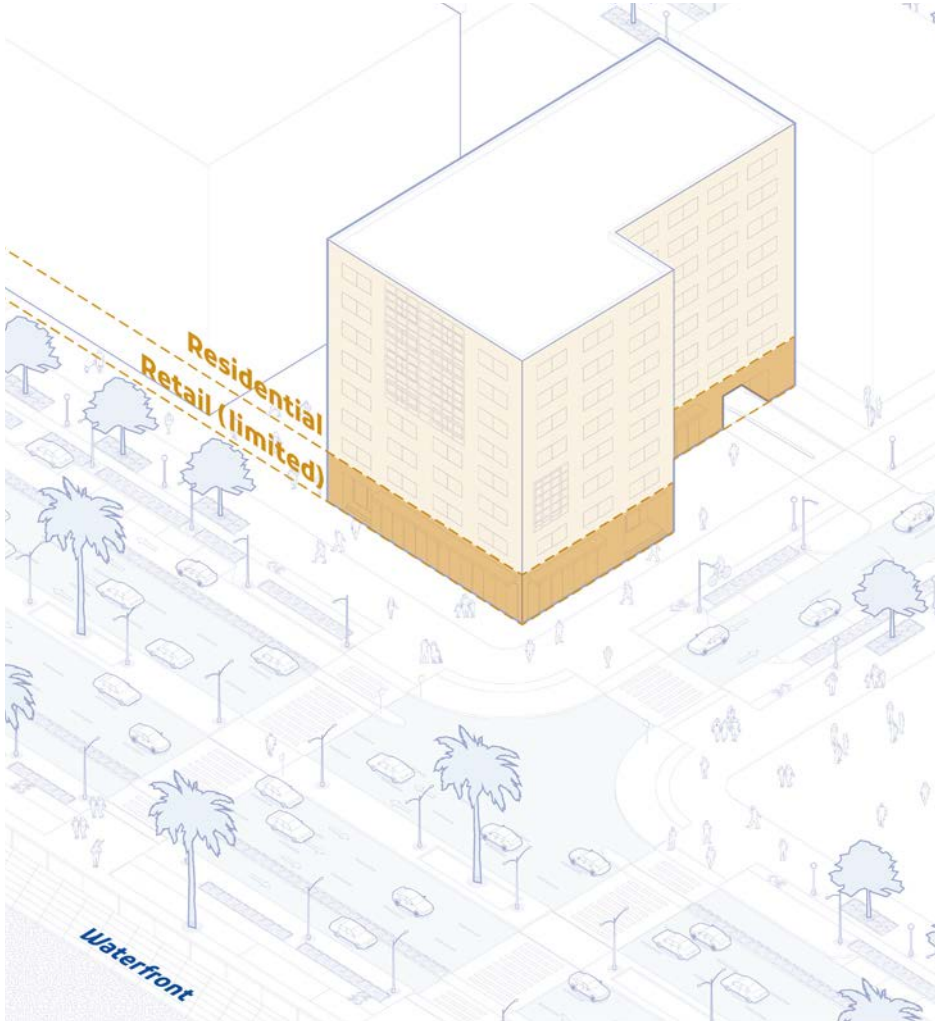
c. **Residential compounds**, gated complexes of residential units with specific entrance and exit.

d. **Hotels**, of a maximum size of 20 beds, in a building of maximum three floors.

Typical Example of an Urban Residential building.

Typical Example of an Urban Residential building.

Typical Example of an Urban Residential building.



Urban Residential built-form includes mid and high-rise buildings that are exclusively (or almost exclusively) residential, with limited commercial and public uses permitted on the ground floor only.

3.4.1 Applicability

(1) Subject to the applicability permitted in the 10th Report or the case of the assessment of a plot land use modification/exemption request. The Built-Form Type 2 (Urban Residential) is permitted to apply to the zones (district) categories of the 10th Report as per the table below.

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
(Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Type 1 - Urban Mixed Use	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	
Type 2 - Urban Residential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Type 3 - Low Density Residential	✓	✓	✓	✓	✓	✓	✓	✓											✓	✓*
Type 4 - Resort	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓*
Type 5 - Community Facility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Type 6 - Public			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

3.4.2 Plot Area

(1) All Type 2 (Urban Residential) buildings must observe the regulations concerning the plot area and the plot frontage for each district category as per Article 3.2.2 of this Manual. No further recommendations are applicable.

3.4.3 Building Area

(1) All Type 2 (Urban Residential) buildings must observe the regulations concerning the building area for each district category as per Article 3.2.3 of this Manual.

(2) In addition to the above regulations, the following regulations shall apply for Type 2 (Urban Residential) buildings:

a. Urban Residential buildings and associated paved and impervious surfaces (such as driveways, pedestrian pathways and patios) must not exceed to exceed 80% of the plot area to allow outdoor amenity spaces on soil grounds.

b. Wide and deep sites, as defined in article 7.1 must take advantage of the site at ground level to create well-designed open spaces that are semi-public or private. Buildings should incorporate such spaces in the form of courtyards, forecourts, patios or rear amenity areas.

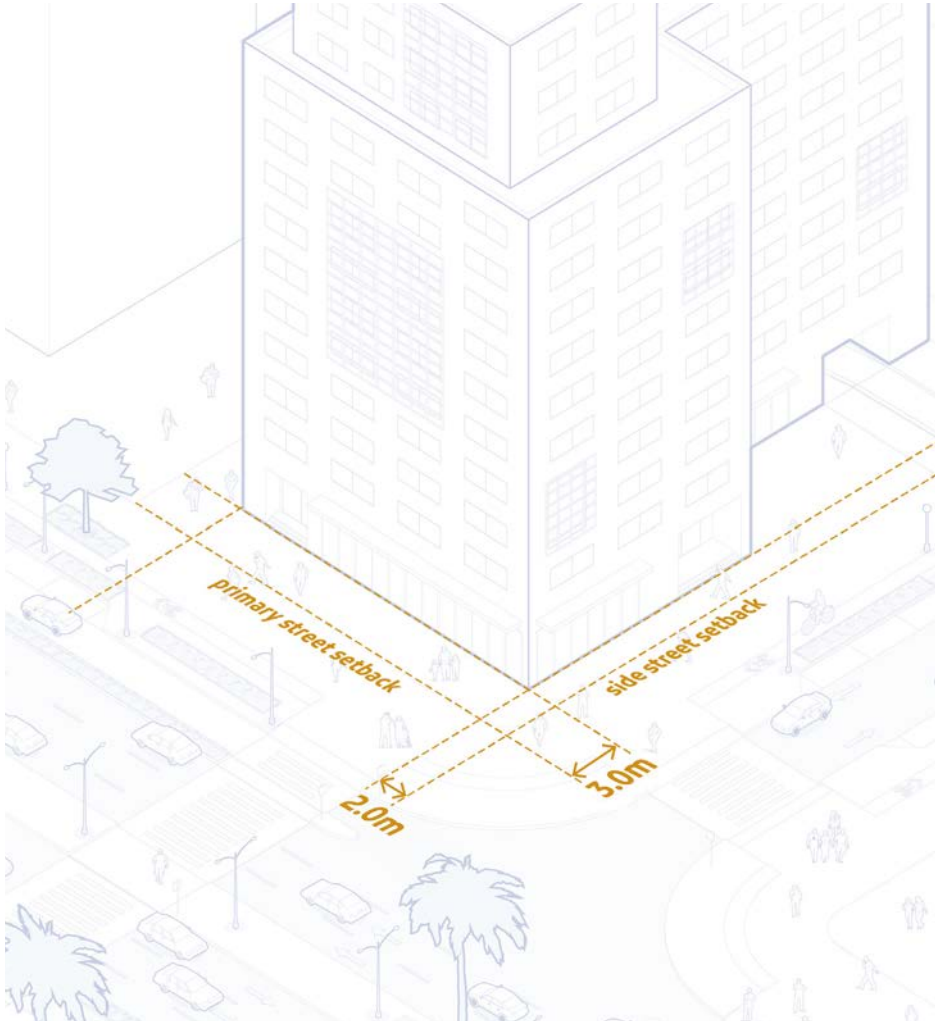
3.4.4 Setbacks

(1) All Type 2 (Urban Residential) buildings must observe the regulations concerning the minimum setback for each district category as per Article 3.2.4 of this Manual.

(2) In addition to the above regulations, the following regulations concerning the setback shall apply for Type 2 (Urban Residential) buildings:

a. Primary street (front) setback, 3.0 m, to be used as public outdoor amenity space to contribute to the quality of the facing public realm.;

b. Side street (side) setback, max 2.0 m, as a side setback more than that may fracture the desired sense of urban continuity.



Typical Setbacks of an Urban Residential Building.
[Guideline 3.4.2]

3.4.5 Building Heights and Floor Area Ratio (FAR)

(1) All Type 2 (Urban Residential) buildings must observe the regulations and guidelines concerning the building height and FAR for each district category as per Article 3.2.5 of this Manual.

(2) In addition to the above regulations, the following guidelines are recommended for Type 2 (Urban Residential) buildings:

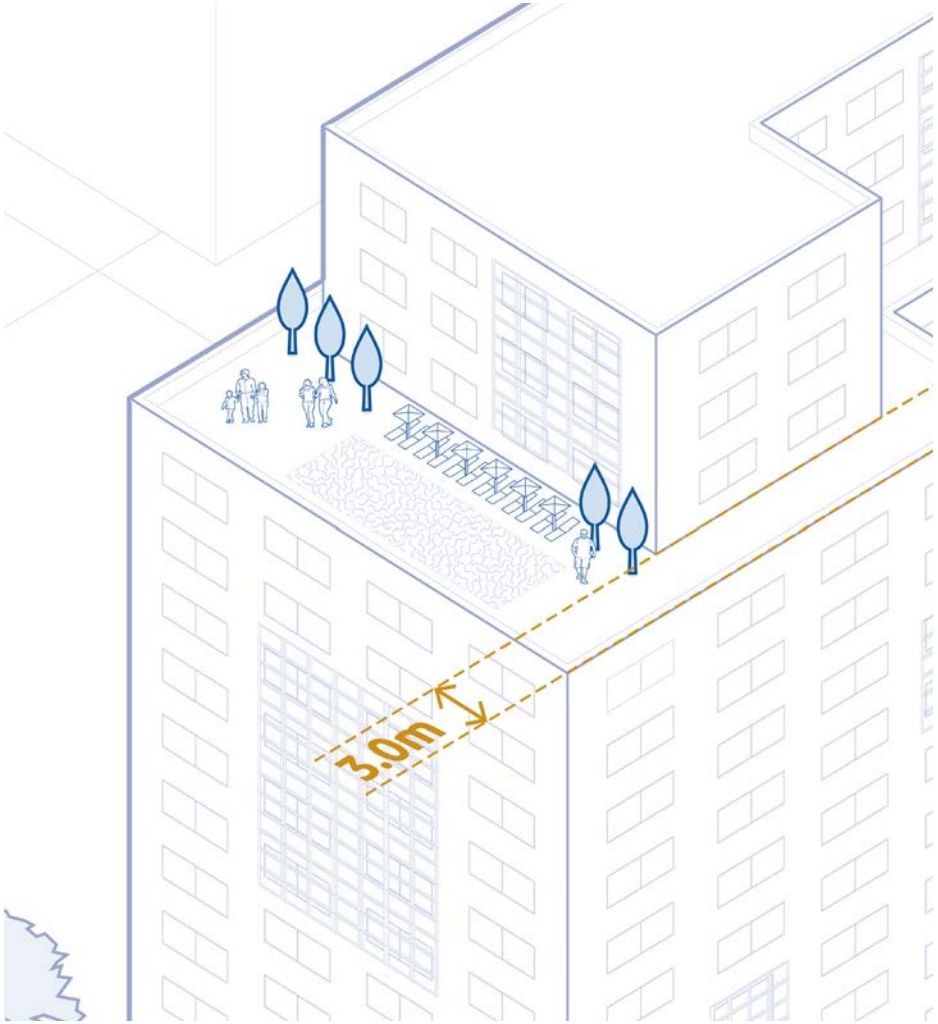
a. Heights should be contextually appropriate, i.e. with the encouragement of the maximum number of floors in intensively developed portions of the Coastline, lower number of floors in a quieter area.

b. New buildings must observe Article 3.2.5(5) of this Manual for height transition regulations.

c. Floors above the 10th floor must be stepped back at least 3.0 meters from the base building façade. Stepback areas may be used as outdoor amenity space.

d. Tall, slab-form buildings are to be discouraged along the waterfront, as they may restrict views and create an overly imposing appearance. Narrow buildings are encouraged, as they result in a more active, walkable and engaging streetscape.

e. In compliance with Article 3.2.6 of this Manual, building heights must not interfere with view corridors.



Upper level stepbacks with potential amenity use.
[Guideline 3.4.5 (2) (c)]

3.4.6 Building Massing, Placement and Orientation

In addition to the regulation of Article 3.2.6, the following guidelines are recommended for Type 2 (Urban Residential) buildings:

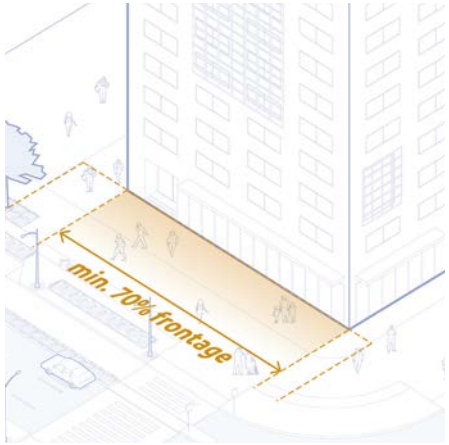
(1) To promote privacy, and at-grade access to sunlight and sky views, and to reduce reliance on energy-intensive cooling equipment and systems in accordance with best practices, it is recommended that high-rise buildings, whether attached or standalone, maintain a minimum separation of 20 meters from each other. Additionally, the orientation of the buildings in relation to solar and wind patterns to be considered when determining their placement.

(2) The minimum percentage of plot frontage to be occupied by a building is 70% to achieve the desired sense of urban continuity. Front setbacks more than the allowed front setbacks as per Article 3.2.4 of this Manual do not qualify to meet this standard.

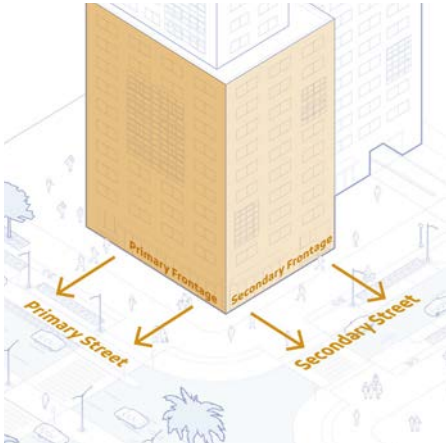
(3) All buildings must be oriented to the street they front, with their primary frontage parallel to that street and their primary entrance facing it. Primary entrances must be highly visible to show as the most important entrance.

(4) Buildings located on corner plots must relate to both streets, by providing windows, entrances, or other architectural elements to contribute to the quality of the adjacent public realm. At least one of the streets must be identified as a "Primary Street" and must meet the Primary Street regulations and guidelines. Any other streets (including back streets, as may be applicable) may be identified as "Side Streets" and must meet the required Side Street regulations and guidelines.

(5) Where a building abuts a public park or an open space, or directly abuts waterfront, that building frontage must meet the required Primary Street regulations and guidelines.



Minimum 70% plot frontage 50m.
[Guideline 3.4.6 (3)]



Corner plots must address Primary and Secondary streets accordingly. [Guideline 3.4.6 (5)]

3.4.7 Built-Form Elements

In addition to the guidelines recommended in Article 3.2.7 of this Manual, the following regulations and guidelines shall apply for Type 2 (Urban Residential) buildings:

(1) Building facades facing open spaces, and especially those facing the waterfront, must achieve a high standard of design and material construction.

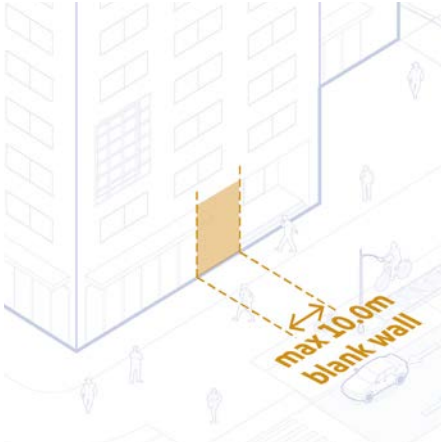
(2) Windows and doors are to be used to create high transparency. Ground floor facades adjacent to primary or side streets, the waterfront, a park or any other open space must have a transparency of 30% at minimum and a blank wall of 10 meters in length at maximum.

(3) Ground floor facades should be equipped with weather protection (awnings), openings and other architectural elements as appropriate to provide activity and interest for people.

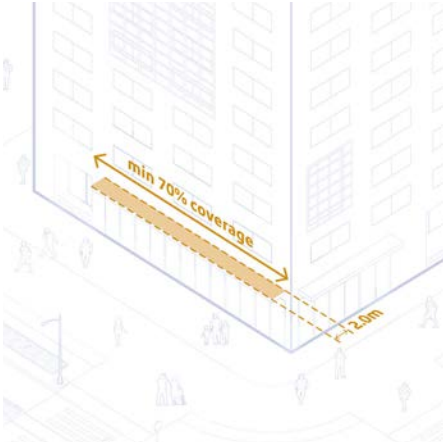
(4) The minimum percentage of a building frontage to have at least 2.0 meters of shaded clearway is 70%. To encourage walking opportunities for people, shading the public realm through awnings, canopies or covered arcades should be encouraged, also in compliance with Article 7.6 of this Manual.

(5) Trash containers and mechanical equipment must be screened from view from the public realm with built-form, landscaping, or other screening elements.

Minimum 30% transparency of ground floor facades adjacent to public spaces. [Guideline 3.4.7 (2)]



10m maximum length of blank wall to primary or side streets, or public spaces [Guideline 3.4.7 (2)]



Building frontage to have at least 2.0 meters of shaded clearway min 70%. [Guideline 3.4.7 (4)]

3.4.8 Parking and Access

(1) See Article 3.2.8 (1) for parking standards.

(2) Underground parking should be encouraged, as it maximizes the ground area for other purposes that may enhance the experience of the site, such as landscaping and plazas or other active spaces.primary or side street, measured from the street-facing façade.

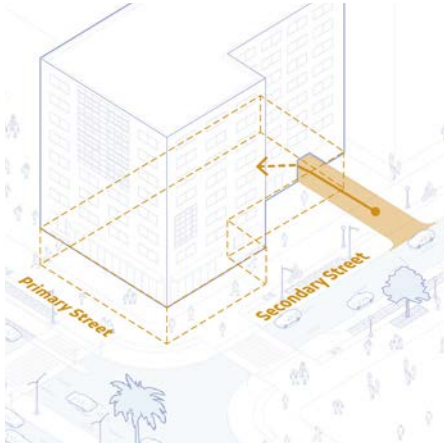
(3) Where ground parking is incorporated, it must be screened from the public realm using built forms, walls, fences or landscape elements.

(4) Loading or drop-off areas may not be located between the building and the primary street. They must be located to the rear or side of the building.

(5) Driveways or other vehicular entrances to parking areas must be minimized in width to improve walkability and increase pedestrian safety.

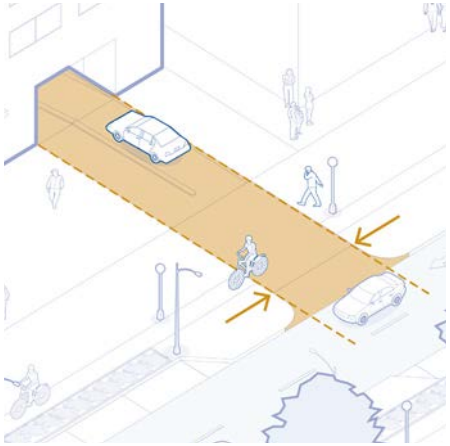
(6) The provision of general-purpose public parking should be considered within buildings, to accommodate visitors to the surrounding area.

(7) Parking areas and vehicular accessways must be designed to accommodate maintenance and emergency vehicles as needed.



Underground parking encouraged, with parking access not from the primary street. [Guideline 3.4.8 (2)]

Screen ground parking from the public with built forms, walls, fences or landscape elements. [Guideline 3.4.8 (3)]



Minimise driveways to improve walkability and pedestrian safety. [Guideline 3.4.8 (5)]

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3.5 Built-Form Type 3 - Low-Density Residential

Definition

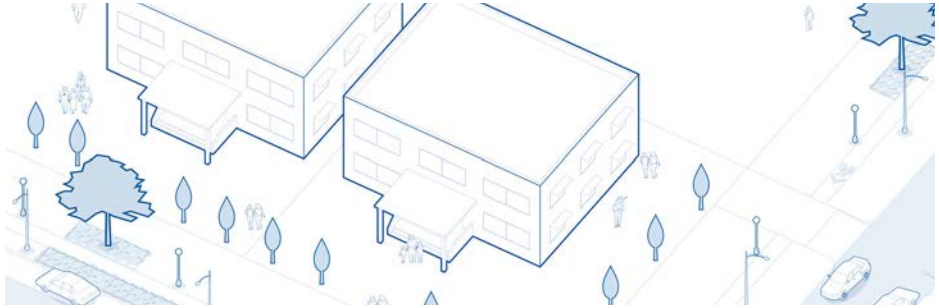
(1) The following buildings shall be deemed to fall under the Built-Form type "Low-Density Residential":

a. **Villa, detached,** a stand-alone residential unit.

b. **Villa, attached,** a residential unit that is attached to another residential unit horizontally on one or more sides. May include "townhomes" (attached on both sides).

c. **Apartment,** a building up to three stories in height combining residential units that are attached to each other either horizontally or vertically or both.

Example of a. Villa, dettached

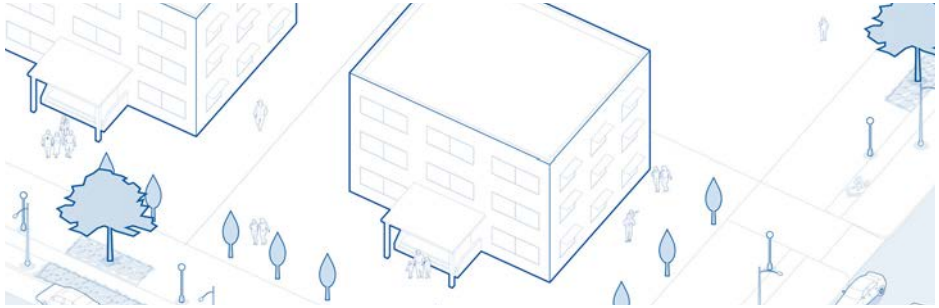


Type A - Villa, detached.

Example of b. Villa, attached

Type B - Villa, attached.

Example of c. Apartments



Type C - Apartment.

3.5.1 Applicability

(1) Subject to the applicability permitted in the 10th Report or the case of the assessment of a plot land use modification/exemption request. The Built-Form Type 3 (Low-Density Residential) is permitted to apply to the (Zone & District category) of the 10th Report as per the table below.

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
(Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Type 1 - Urban Mixed Use	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	
Type 2 - Urban Residential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Type 3 - Low Density Residential	✓	✓	✓	✓	✓	✓	✓	✓											✓	✓*
Type 4 - Resort	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓*
Type 5 - Community Facility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Type 6 - Public			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

* Subject to the permitted % of Built area and heights stipulated in the 10th report

3.5.2 Plot Area

(1) All Type 3 (Low-Density Residential) buildings must observe the regulations concerning the plot area and the plot frontage for each district category as per Article 3.2.2 of this Manual. No further recommendations are applicable.

3.5.3 Building Area

(1) All Type 3 (Low-Density Residential) buildings must observe the regulations concerning the building area for each district category as per Article 3.2.3 of this Manual.

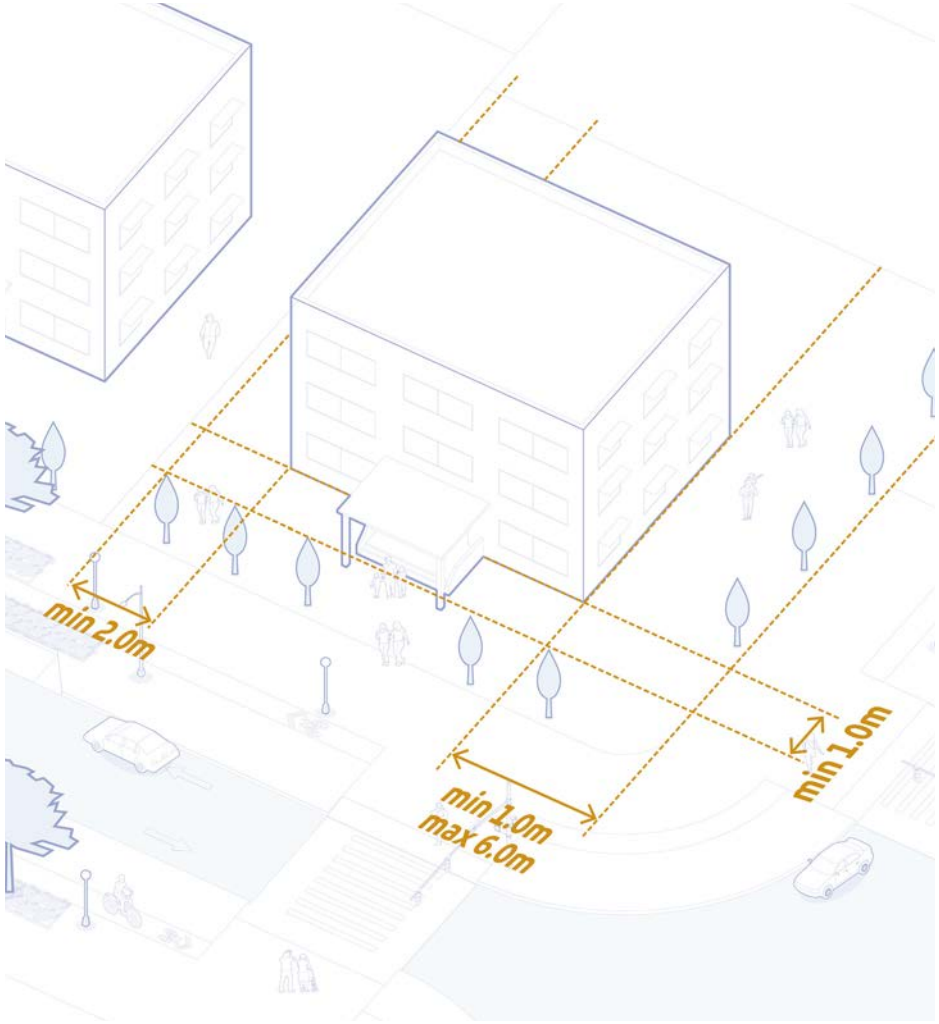
(2) In addition to the above regulations, the following regulations shall apply for Type 3 (Low-Density Residential) buildings:

a. Low-Density Residential buildings and associated paved and impervious surfaces (such as driveways, pedestrian pathways and patios) must not to exceed 70% of the plot area for plots containing one residential unit and 80% of the plot area for plots containing two or more residential units to allow outdoor amenity spaces on soil grounds.

b. Large plots should take advantage of the site at ground level to create well-designed open spaces. Buildings should incorporate such spaces in the form of courtyards, forecourts, patios or rear amenity areas.

3.5.4 Setbacks

(1) All Type 3 (Low-Density Residential) buildings must observe the regulations concerning the setback for each district category as per Article 3.2.4 of this Manual.



Typical setbacks for Low-Density Residential.
[Guideline 3.5.4 (1)]

3.5.5 Building Heights and Floor Area Ratio (FAR)

(1) All Type 3 (Low-Density Residential) buildings must observe the regulations and guidelines concerning the building height for each district category as per Article 3.2.5 of this Manual. No additional regulations or guidelines are applicable.

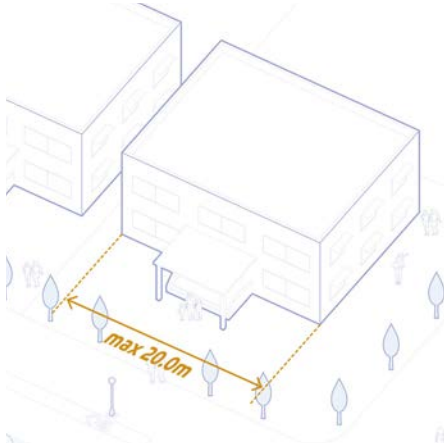
3.5.6 Building Massing, Placement and Orientation

In addition to Article 3.2.6 of this Manual, the following regulations shall apply for Type 3 (Low-Density Residential) buildings:

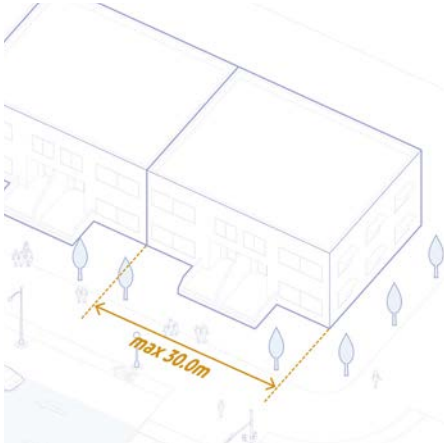
(1) All buildings must have a maximum width of 20 meters, unless more than one residential unit is located within the building. Buildings containing more than one residential building may have a maximum width of 30 meters.

(2) The minimum percentage of plot frontage to be occupied by a building is 50% to achieve the desired sense of urban continuity.

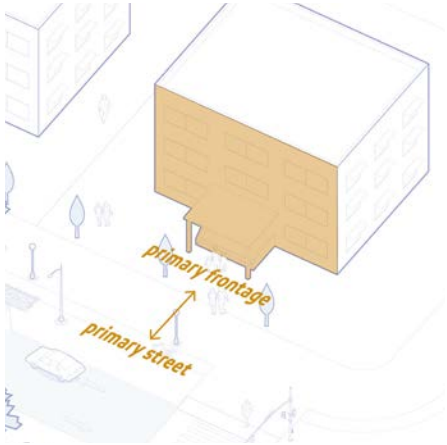
(3) All buildings must be oriented to the street they front, with their primary frontage parallel to that street and their primary entrance facing it. Primary entrances must be highly visible to show as the most important entrance.



Maximum 20m frontage for single dwellings.
[Guideline 3.5.6 (1)]



Maximum frontage of 30m for buildings containing multiple dwellings. [Guideline 3.5.6 (2)]



Orient Primary frontage to primary street.
[Guideline 3.5.6 (3)]

3.5.7 Built-Form Elements

In addition to the guidelines recommended in Article 3.2.7 of this Manual, the following regulations and guidelines shall apply for Type 3 (Low-Density Residential) buildings:

(1) Facades must be detailed to mitigate the sun's impact on the building interior, with use of the following methods (the list is not exhaustive):

a. Place more windows on the lower floors to increase ventilation.

b. Provide smaller windows on south, east and west-facing facades,

c. Provide shading structures, such as awnings, above windows.

(2) Walls and fences are generally not recommended for Type 3 (Low Density Residential) buildings. Where they are incorporated, they should meet the following guidelines:

a. The primary entrance to the building should be reflected in a gate or door along the wall or fence directly in line with the building entrance.

b. Fencing design and material should be complementary to the neighborhood character, the building and the surrounding landscape. Refer to Article 7.5 of this Manual for appropriate building materials and colors.

3.5.8 Parking and Access

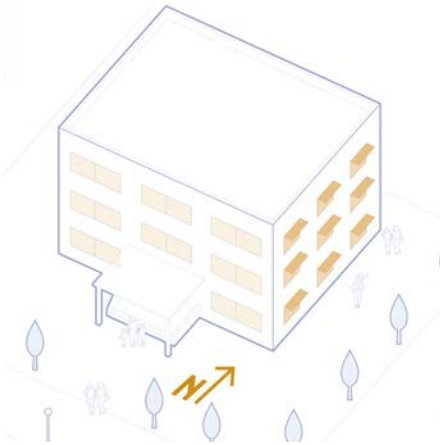
(1) Minimum required parking spaces to be provided:

- 1 space per one residential unit.

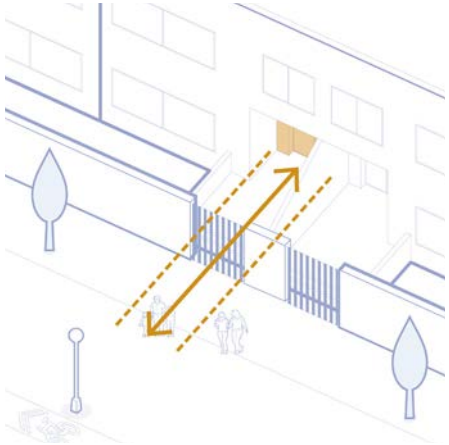
(2) Ground parking areas must not be located between the building and the primary or side street.

(3) Driveways should be kept to a minimum in width to improve walkability and increase pedestrian safety.

(4) No plot should have more than one driveway.



Smaller windows to the east, west and south. Window shading to mitigate sun impact. [Guideline 3.5.7 (1)]



Gates to reflect position of primary entrance. [Guideline 3.5.7 (2) (a)]

Keep parking away from primary/side streets. [Guideline 3.5.8 (2)]

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3.6 Built-Form Type 4 - Resort

Definition

The following buildings shall be deemed to fall under the Built-Form type "Resort":

a. **Hotels, boarding and guest houses.** Facilities providing short-term residential stays (typically less than one month) with any number of beds.

b. **Apartments, boarding houses and other types of communal homes**, combining residential units (typically second-home residences) that are attached to each other either horizontally or vertically or both.

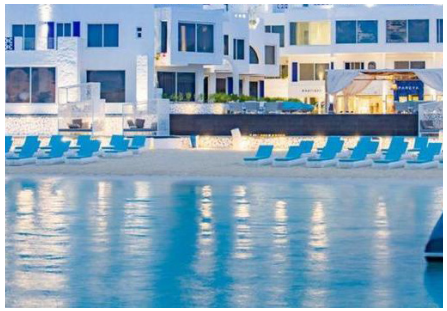
c. **Indoor and outdoor entertainment centers and show places**, e.g. cinemas, theatres, concert halls and arenas, including amusement centers, game or video arcades, skating rinks, mini golf, funfairs and circuses.

d. **Indoor and outdoor sports facilities** other than Community Facilities (for which see Article 3.7 of this Manual), e.g. football stadiums, sports centers, swimming pools, boating and sailing, marinas etc.

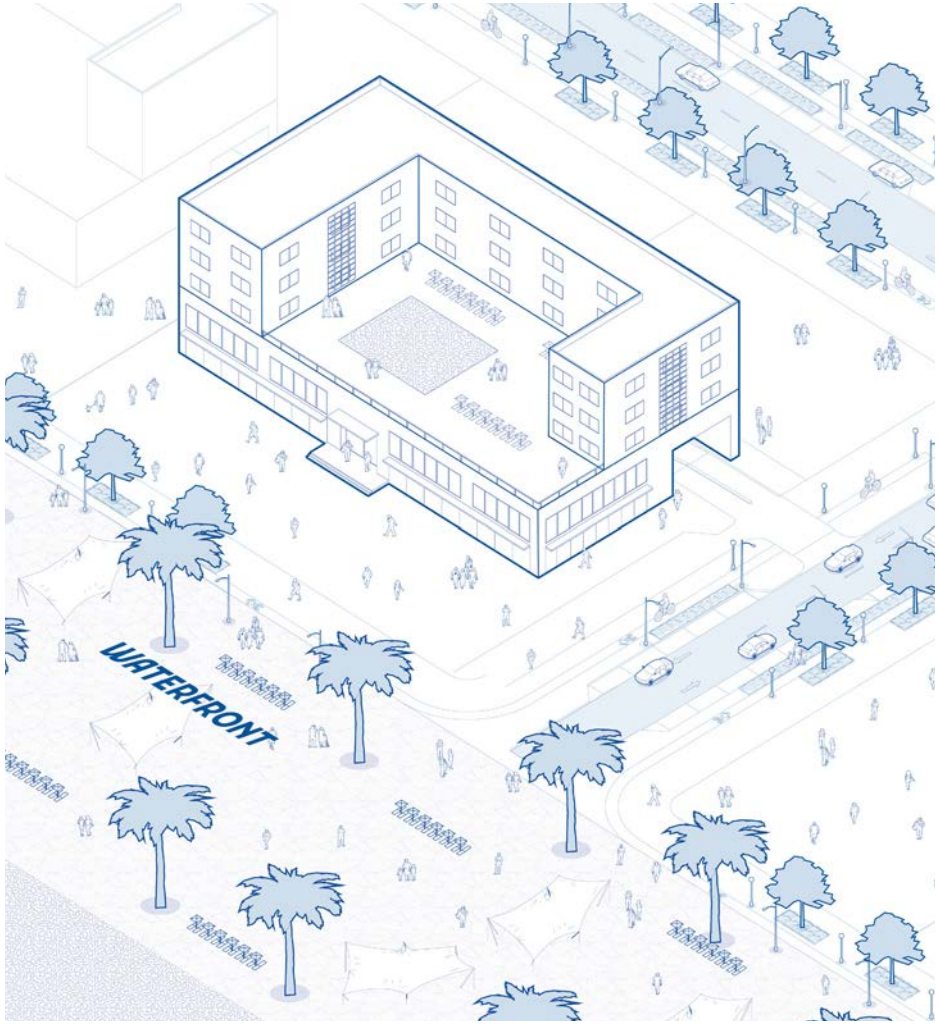
e. **Residential and holiday complexes**, secluded and screened complexes of residential units (typically second-home residences) and bungalows, with specific entrance and exit.

Typical Example of a Resort Building

Typical Example of a Resort Building



Typical Example of a Resort Building



Example of a Resort on the Waterfront.

3.6.1 Applicability

(1) Subject to the applicability permitted in the 10th Report or the case of the assessment of a plot land use modification/exemption request. The Built-Form Type 4 (Resort) is permitted to apply to the Land Use (Zone & District category) of the 10th Report as per the table below.

(2) Type 4 (Resort) buildings shall be encouraged to be located along the waterfront.

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
Land Use (Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Type 1 - Urban Mixed Use	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	
Type 2 - Urban Residential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Type 3 - Low Density Residential	✓	✓	✓	✓	✓	✓	✓	✓											✓	✓*
Type 4 - Resort	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓*
Type 5 - Community Facility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Type 6 - Public			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

* Subject to the permitted % of Built area and heights stipulated in the 10th report

3.6.2 Plot Area

(1) All Type 4 (Resort) buildings must observe the regulations concerning the plot area and the plot frontage for each district category as per Article 3.2.2 of this Manual. No further recommendations are applicable.

3.6.3 Building Area

(1) All Type 4 (Resort) buildings must observe the regulations concerning the building area for each district category as per Article 3.2.3 of this Manual. No further recommendations are applicable.

3.6.4 Setbacks

(1) To allow for greater flexibility in site design, all Type 4 (Resort) buildings shall be exempted from the regulations concerning the setbacks for each district category as per Article 3.2.4 of this Manual. It is highly recommended that Resort buildings be located as close to the associated primary street as possible, especially in more central settings.

3.6.5 Building Heights and Floor Area Ratio (FAR)

(1) All Type 4 (Resort) buildings must observe the regulations and guidelines concerning the building height and FAR for each district category as per Article 3.2.5 of this Manual.

(2) In addition to the above regulations, the following guidelines are recommended for Type 4 (Resort) buildings:

a. Heights should be contextually appropriate, i.e. with the encouragement of the maximum number of floors in intensively developed portions of the Coastline, lower number of floors in a quieter area.

b. New buildings must observe Article 3.2.5(5) of this Manual for height transition regulations.

c. Floors above the 10th floor must be stepped back at least 3.0 meters from the base building façade. Stepback areas may be used as outdoor amenity space.

d. Tall, slab-form buildings are to be discouraged along the waterfront, as they may restrict views and create an overly imposing appearance. Narrow buildings are encouraged, as they result in a more active, walkable and engaging streetscape.

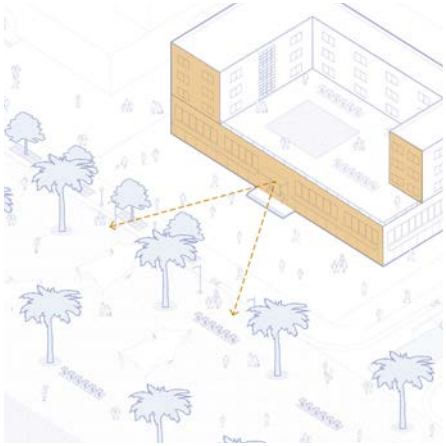
3.6.6 Building Massing, Placement and Orientation

In addition to the guidelines recommended in Article 3.2.6 of this Manual, the following guideline is recommended for Type 4 (Resort) buildings.

(1) It's recommended that measures be taken into consideration to protect the views and accessibility of the waterfront and any key landmarks (such as major public squares).

Lower numbers of floor in quieter areas.
[Guideline 3.6.5 (2) (a)]

Higher number of floors where contextually appropriate.
[Guideline 3.6.5 (2) (a)]



Views of waterfront to be protected.
[Guideline 3.6.6 (1)]

3.6.7 Built-Form Elements

In addition to the guidelines recommended in Article 3.2.7 of this Manual, the following guidelines are recommended for Type 4 (Resort) buildings:

(1) Building facades facing the public realm, and especially those facing the waterfront, must achieve a high standard of design and material construction.

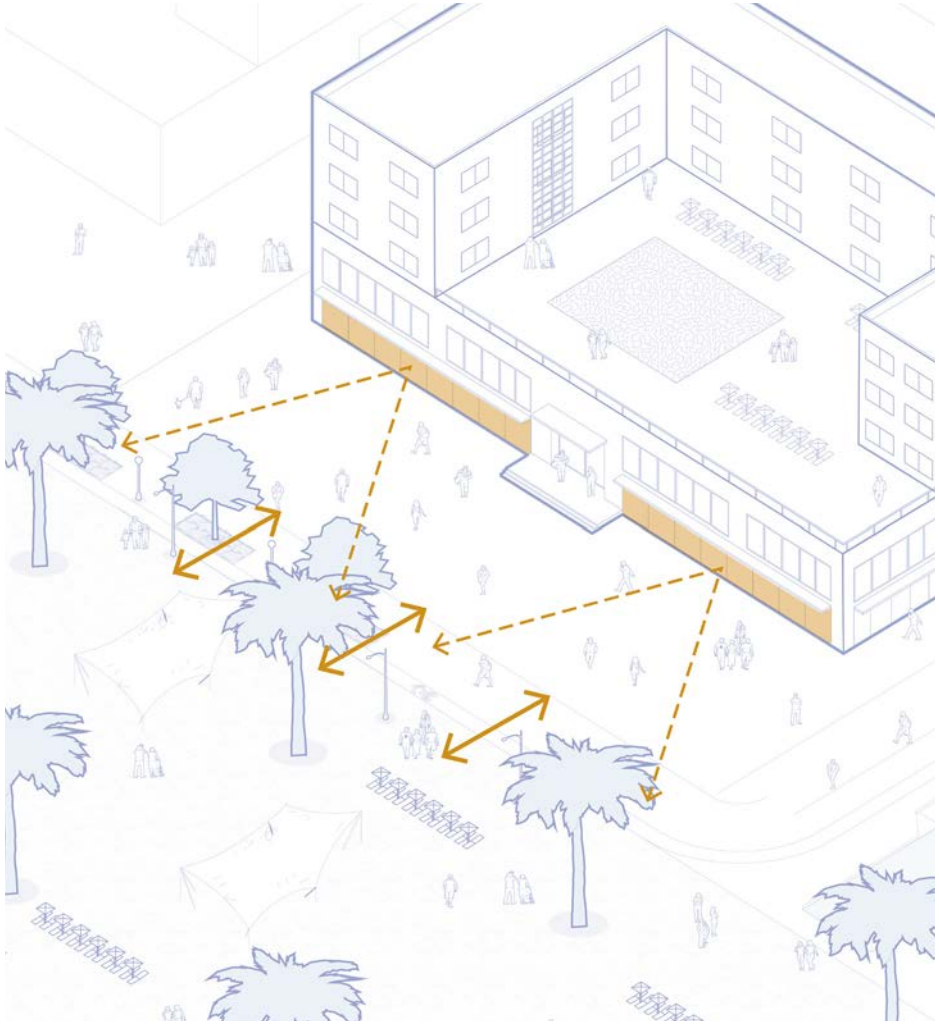
(2) Windows and doors are to be used to create high transparency. Ground floor facades adjacent to primary or side streets, the waterfront, a park or any other public space must have a transparency of 30% at minimum and may have a blank wall of 10 meters in length at maximum.

(3) Ground floor facades should be equipped with weather protection (awnings), openings and other architectural elements as appropriate to provide activity and interest for people.

(4) In urban contexts, walls and fences are not permitted. In outlying areas, where sites are larger and less intensely built, walls and fences are permitted but not encouraged. Walls should utilize natural materials and should not be painted. Refer to Article 7.5 and 7.7 of this Manual for appropriate building materials and colors.

(5) Trash containers and mechanical equipment must be screened from view from the public realm with built-form, landscaping, or other screening elements.

(6) Minimize the impact of artificial lighting on the coastal environment by implementing dark sky principles to reduce light pollution and protect local wildlife.



Maximise transparency on façades adjacent to waterfront or primary streets [Guideline 3.6.7 (2)], avoid barriers and fences in urban contexts. [Guideline 3.6.7 (4)]

3.6.8 Parking and Access

(1) See Article 3.2.8 for parking standards.

(2) Underground parking should be encouraged, as it maximizes the ground plane for other purposes that may enhance the experience of the site, such as landscaping and plazas or pother active spaces.

(3) Parking located at or above grade within the building must be wrapped with another use at least 5 meters deep on any sides of the building facades facing a primary or side street, measured from the street-facing façade.

(4) Where surface parking is incorporated, it must be screened from the public realm using built forms, walls, fences or landscape elements.

(5) Loading or drop-off areas may not be located between the building and the primary street. They must be located to the rear or side of the building.

(6) Driveways or other vehicular entrances to parking areas must be minimized in width to improve walkability and increase pedestrian safety.

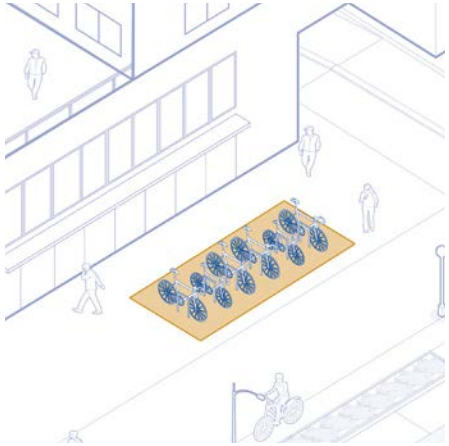
(7) Where buildings are located on corners, parking access is encouraged not to be taken from the primary street.

(8) Parking areas and vehicular accessways must be designed to accommodate maintenance and emergency vehicles as needed.

(9) Secure micro-mobility parking should be provided free of charge and may be located between the building and the street.

Underground parking encouraged.
[Guideline 3.6.8 (2)]

Drop-off zones to be located away from primary street.
[Guideline 3.6.8 (5)]



Provision of Micro-mobility parking.
[Guideline 3.6.8 (9)]

3.7 Built-Form Type 5 - Community Facility

Definition

The following buildings shall be deemed to fall under the Built-Form type “Community Facility”:

a. **Educational buildings**, like schools of all levels.

b. **Health establishments**, like health centres, clinics, hospitals.

c. **Places of worship**, like mosques.

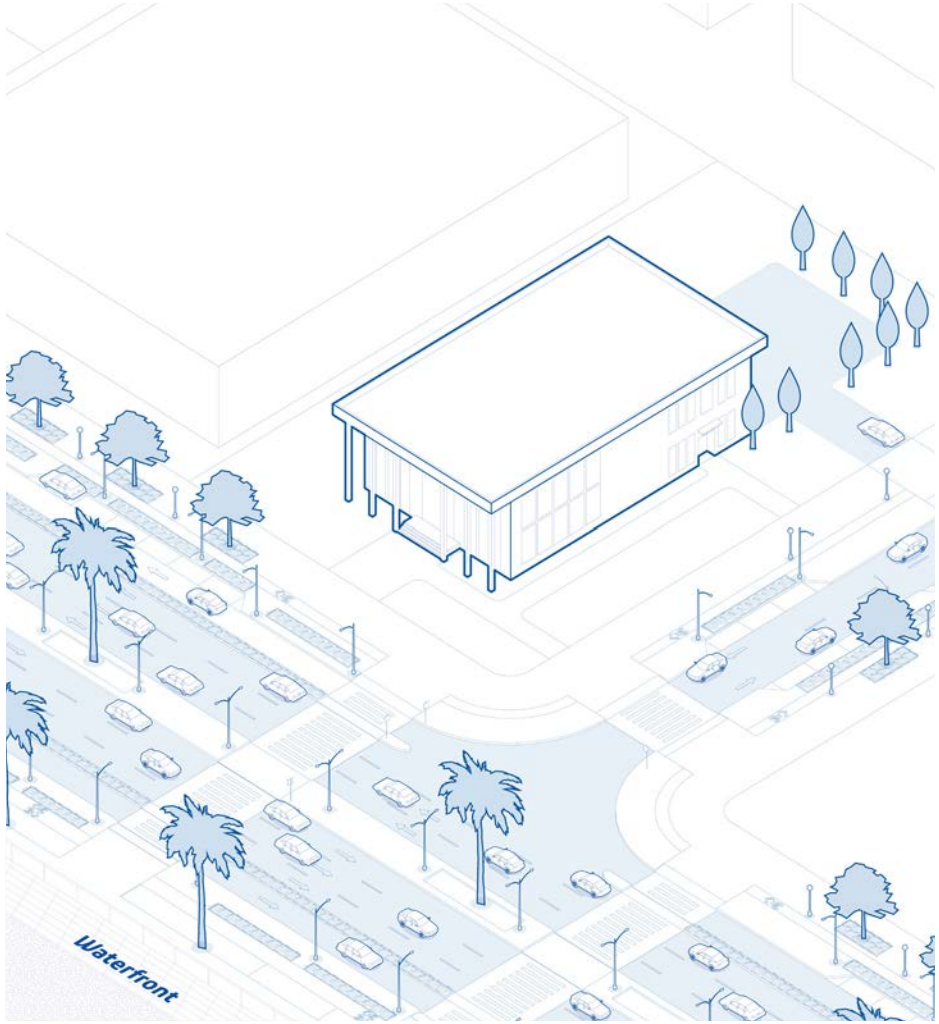
d. **Cultural activity places**, like theatres, cinemas, concert halls.

e. **Other civic buildings**, like museums, libraries, police station.

Typical Example of a Community Facility "Kindergarten & Elementary School"

Typical Example of a Community Facility building "Mosque"

Typical Example of a Community Facility building National Museum, Riyadh, KSA



Example of a Community Facility.

3.7.1 Applicability

(1) Subject to the applicability permitted in the 10th Report or the case of the assessment of a plot land use modification/exemption request. The Built-Form Type 5 (Community Facility) is permitted to apply to the (Zone & District category) of the 10th Report as per the table below.

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
(Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Type 1 - Urban Mixed Use	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	
Type 2 - Urban Residential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Type 3 - Low Density Residential	✓	✓	✓	✓	✓	✓	✓	✓											✓	✓*
Type 4 - Resort	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓*
Type 5 - Community Facility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Type 6 - Public			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

3.7.2 Plot Area

(1) All Type 5 (Community Facility) buildings must observe the regulations concerning the plot area and the plot frontage for each district category as per Article 3.2.2 of this Manual. No further recommendations are applicable.

3.7.3 Building Area

(1) All Type 5 (Community Facility) buildings must observe the regulations and guidelines concerning the building area for each district category as per Article 3.2.3 of this Manual. No additional regulations or guidelines that are applicable.

3.7.4 Setbacks

(1) To allow for greater flexibility in site design, all Type 5 (Community Facility) buildings shall be exempted from the regulations concerning the setbacks for each district category as per Article 3.2.4 of this Manual. It is highly recommended that certain Community Facility buildings be located as close to the associated primary street as possible, especially in more central locations.

3.7.5 Building Heights and Floor Area Ratio (FAR)

(1) All Type 5 (Community Facility) buildings must observe the regulations and guidelines concerning the building area for each district category as per Article 3.2.5 of this Manual. No additional regulations or guidelines that are applicable.

3.7.6 Building Massing, Placement and Orientation

In addition to the regulations and guidelines recommended in Article 3.2.6 of this Manual, the following guidelines are recommended for Type 5 (Community Facility) buildings:

(1) Views of the waterfront and any key landmarks (such as major public squares) must be protected by limiting building height or avoiding the erection of buildings along corridors of the plots lying in-between.

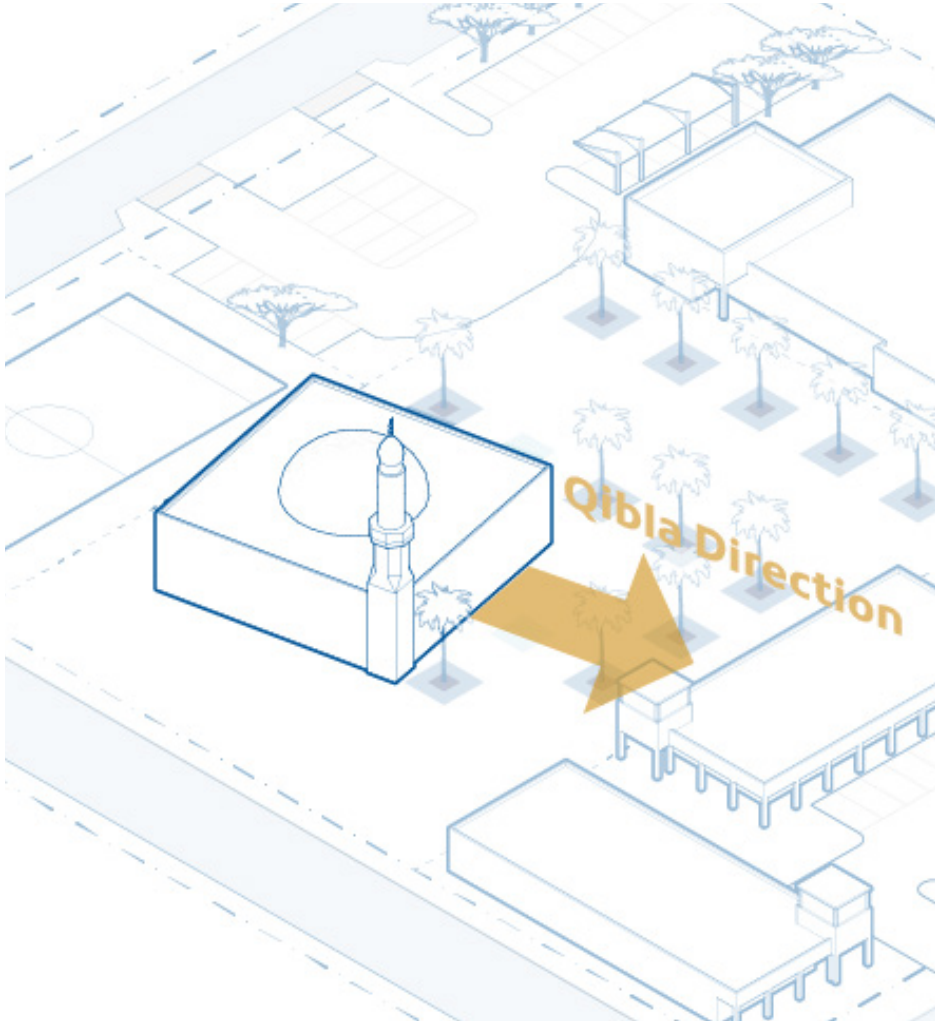
(2) Where sports fields, arenas, schools, and other uses with high levels of outdoor recreation activities occurring are located in close proximity to private residences, adequate buffering must be provided.

(3) Children's playgrounds and activity areas should be located away from vehicular roads and parking areas.

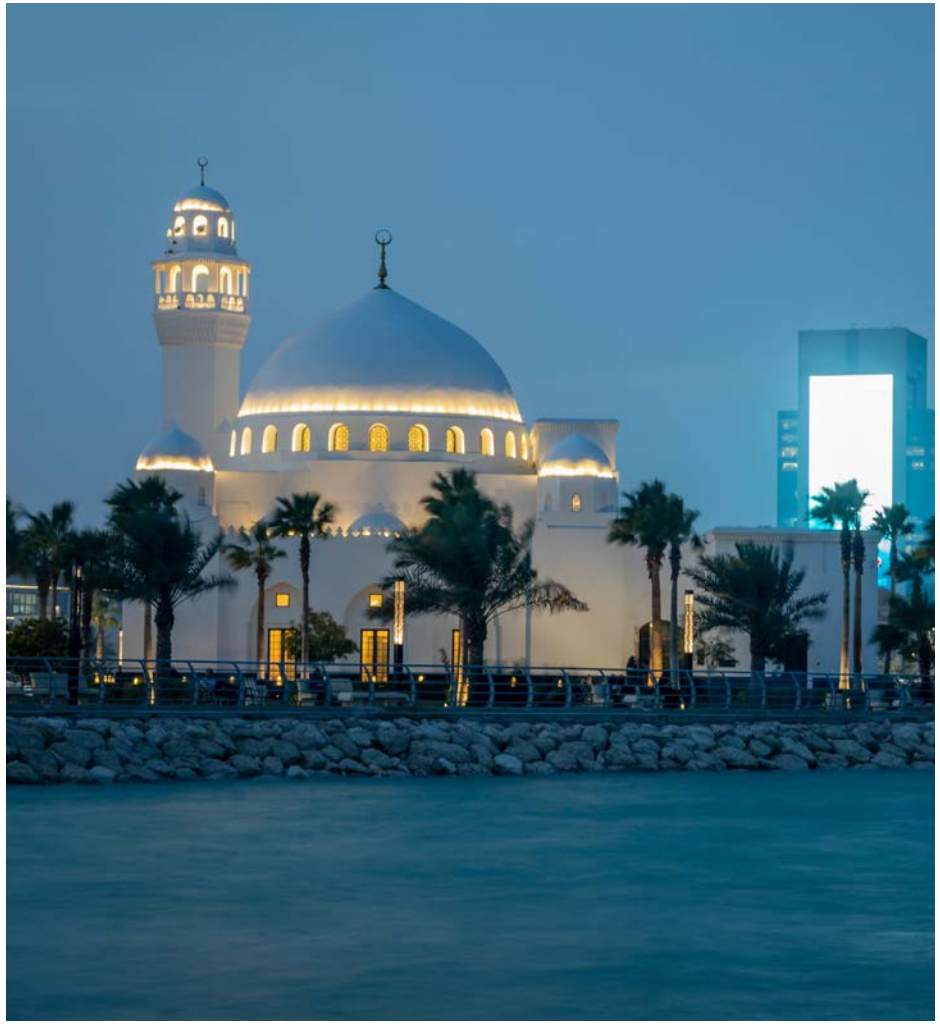
(4) For local and grand mosques, the following additional guidelines apply:

   a. Mosques should be located so that they are clearly visible and accessible from primary vehicular and pedestrian routes.

   b. Mosques must be oriented towards the direction of the Makkah.



Mosques should be clearly visible [Guideline 3.7.6 (4) (a)], and oriented towards the direction of the Makkah.
[Guideline 3.7.6 (4) (b)]



Example of a Mosque.

3.7.7 Built-Form Elements

In addition to the guidelines recommended in Article 3.2.7 of this Manual, the following guidelines are recommended for Type 5 (Community Facility) buildings:

(1) The architectural design of Community Facilities should emphasize and support Al Qatif Area and the rest of Greater Dammam Metropolitan Area character and architectural style.

(2) Building facades facing the public realm, and especially those facing the waterfront, must achieve a high standard of design and material construction.

(3) Windows and doors are to be used to create high transparency. Ground floor facades adjacent to primary or side streets, the waterfront, a park or any other public space must have a transparency of 30% at minimum and may have a blank wall of 10 meters in length at maximum.

(4) Ground floor facades should be equipped with weather protection (awnings), openings and other architectural elements as appropriate to provide activity and interest for people.

(5) In urban contexts, walls and fences are not be permitted for any land use, with the exception of schools. In outlying areas, where sites are larger and less intensely built, walls and fences are permitted, though not encouraged. Walls should utilize natural materials and should not be painted. Refer to 7.5 and 7.7 of this Manual for appropriate building materials and colors.

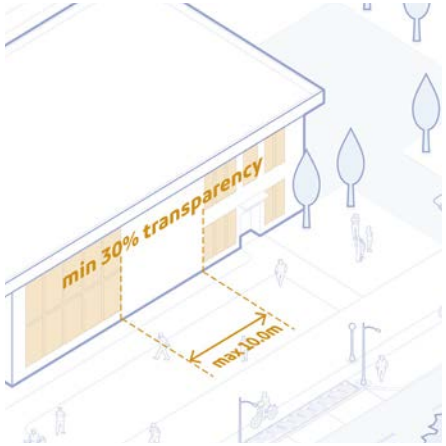
(6) Trash containers and mechanical equipment must be screened from view from the public realm with built-form, landscaping, or other screening elements.

(7) For elementary schools, the following additional guidelines apply:

a. Outdoor play spaces should provide adequate shading to minimize sun and heat exposure.

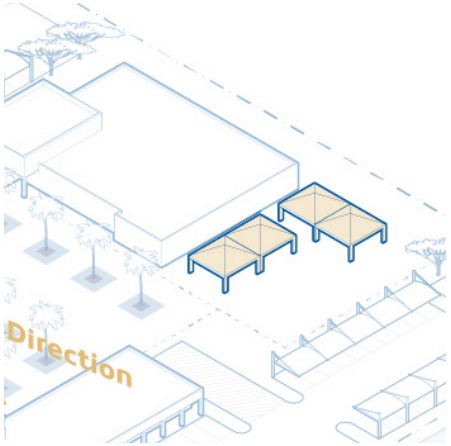
b. Outdoor play spaces should be located away from roads.

c. Outdoor play spaces should be enclosed by a fence or wall.



Min. 30% transparency to public facing façades, max. 10m of continuous blank wall. [Guideline 3.7.7 (3)]

No fencing or barriers in an urban context.
[Guideline 3.7.7 (5)]



Adequate shading to outdoor play spaces at schools.
[Guideline 3.7.7 (9) (a)]

(8) For intermediate and high schools, the following additional guidelines apply:

a. An internal landscaped courtyard should be provided with shading devices to provide a relatively cool, private and safe space for assembly, recreation, and other outdoor activities.

b. Walls and fences are permitted, though staff and visitor parking and vehicular access routes to and from the parking area should not be enclosed by the wall.

(9) For children's playgrounds, the following additional guidelines apply:

a. All playground equipment should meet or exceed the requirements in SASO 755, 766, and 767, Playground Equipment for Children's Parks.

b. Playgrounds should be surrounded by a wall 1.5 meters or less in height.

(10) For mosques, the following additional guidelines apply:

a. An arcaded entry courtyard should be located on the side of the main entrance to provide a protected gathering area.

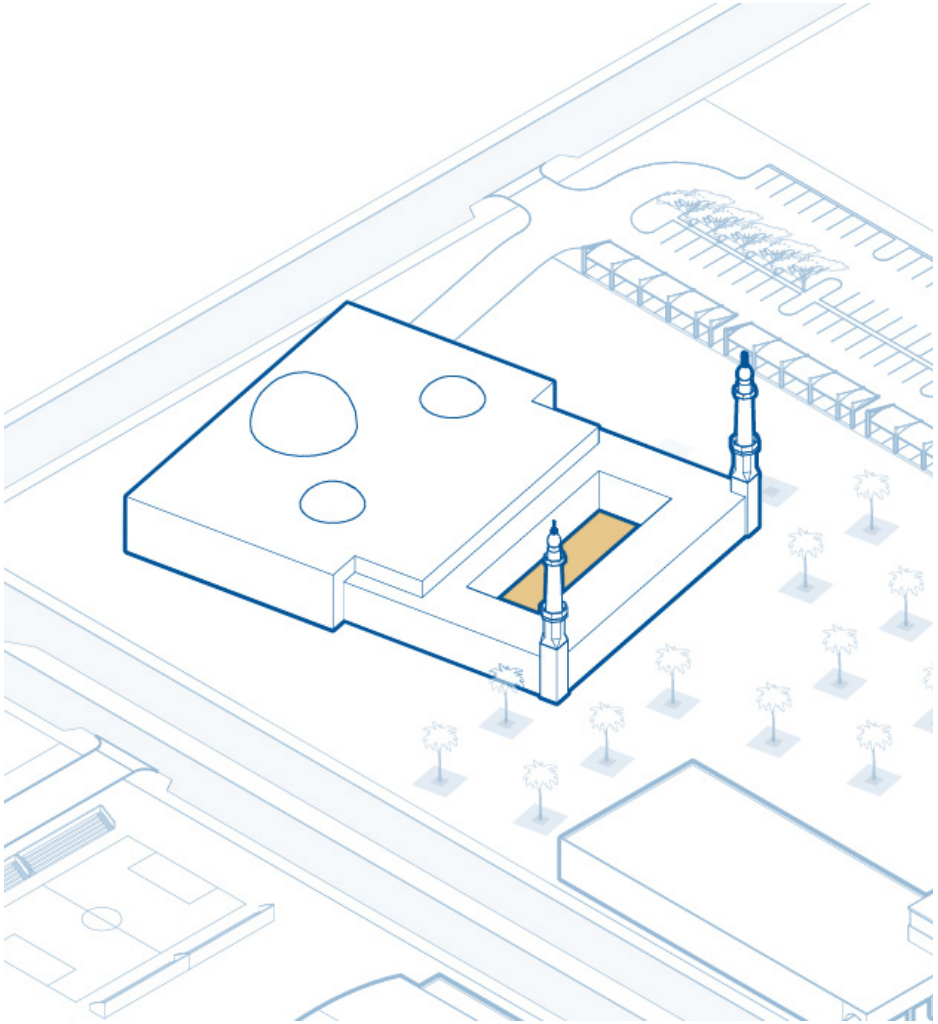
b. A landscaped entry plaza should be located in front of the entry courtyard to provide a space for outdoor activities related to the mosque. The plaza should be formal, with manicured landscaping and a water feature included at the center.

c. Grand mosques should include domes and minarets.

(11) For hospitals, the following additional guidelines apply:

a. A shaded arcade must be provided along the ground floor to protect pedestrians entering and exiting the building.

b. Entrances to the building must be designed in a way to be clearly identifiable as an entrance.



Mosques should have an arcaded entry courtyard, with a landscaped plaza.
[Guideline 3.7.7 (10) (a)]

3.7.8 Parking and Access

(1) See Article 3.2.8 for parking standards.

(2) Sidewalks along the adjoining roads and developments must be connected to create direct pedestrian access to the building.

(3) On-street parking should be used to the greatest extent possible. For smaller community facilities it may not be necessary to have off-street parking.

(4) Community facilities should serve as example in encouraging alternative modes of transport. Where possible, they should be located in walkable neighborhoods, be near to public transit stops and incorporate ample micro-mobility parking.

(5) Parking for community facilities must be screened from public view. This typically means either locating parking underground or in parking lots that are well-screened with plantings or Built-form elements.

(6) Parking areas should be landscaped for screening, shading, and environmental benefits.

(7) Loading and service areas should be located at the rear or side of the building and be properly screened from view from the public realm.

(8) Either curb ramps or curbless streets must be used at primary entry points with tactical paver's along the curb edge.

(9) For schools, the following additional guidelines apply:

a. Bus access and car access to the site must be separate,

b. Consideration of the bus route should be used to determine location of bus drop-off lanes and building entries,

c. Parking areas must be separate from drop-off areas.

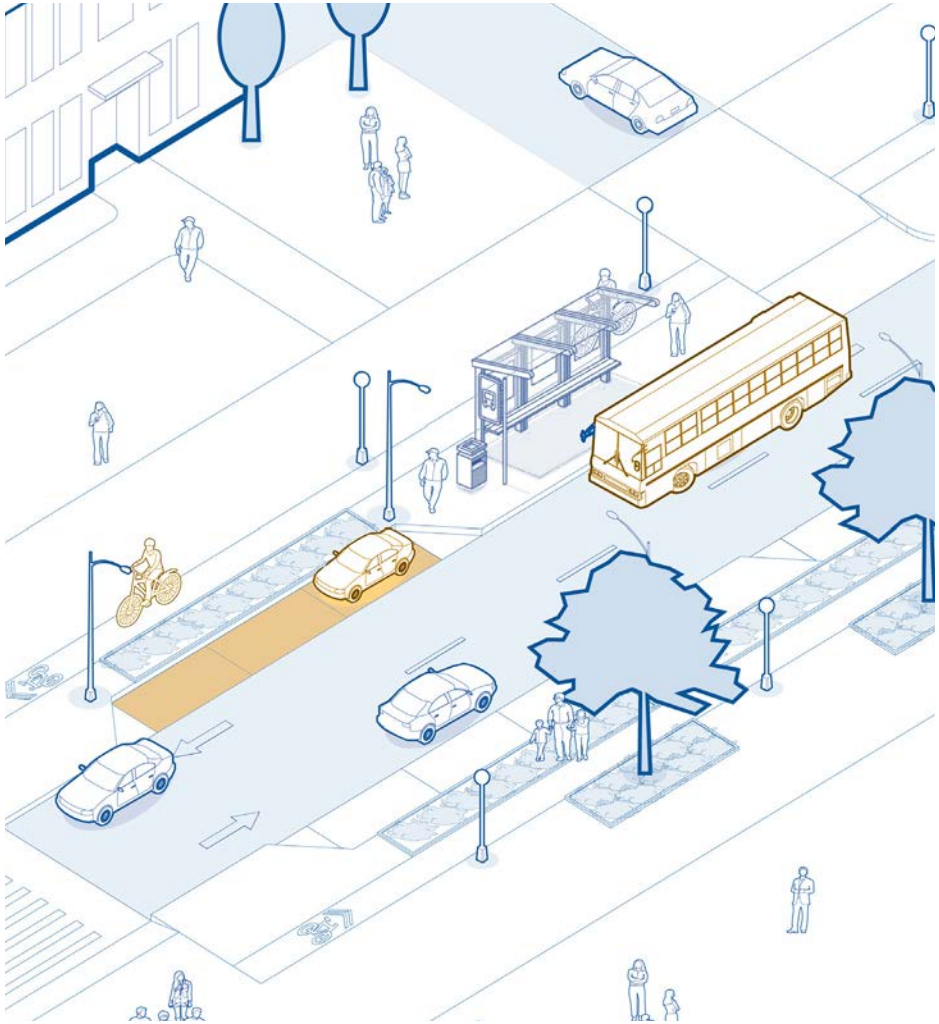
(10) Community Facilities buildings containing the following uses should include a vehicular drop-off court near an entrance and at least 2 two-way vehicular entries to the site to facilitate access:

a. Grand mosques,

b. Sports centers,

c. Schools,

d. Hospitals.



Reliance on street parking [Guideline 3.7.8 (3)], and alternative modes of transport. [Guideline 3.7.8 (4)]

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3.8 Built-Form Type 6 - Public

Definition

The following buildings shall be deemed to fall under the Built-Form type "Public":

a. **Kiosks, stands and stalls** for fine grained sale of **convenience goods**, flowers, souvenirs, pottery, antiques, picture frames, toys etc.

b. **Kiosks, stands and stalls** for the sale of **food and beverage** (coffee, juice, ice cream, fast food) for consumption on-site.

c. **Visitor protection and administration services**, such as coastguard and lifeboat stations, first-aid stations and similar facilities.

d. **Public sanitation facilities**, e.g. restrooms.

e. **Entertainment facilities**, e.g. amusement arcades, funfairs and circuses.

f. **Prayer areas** and ablution units.

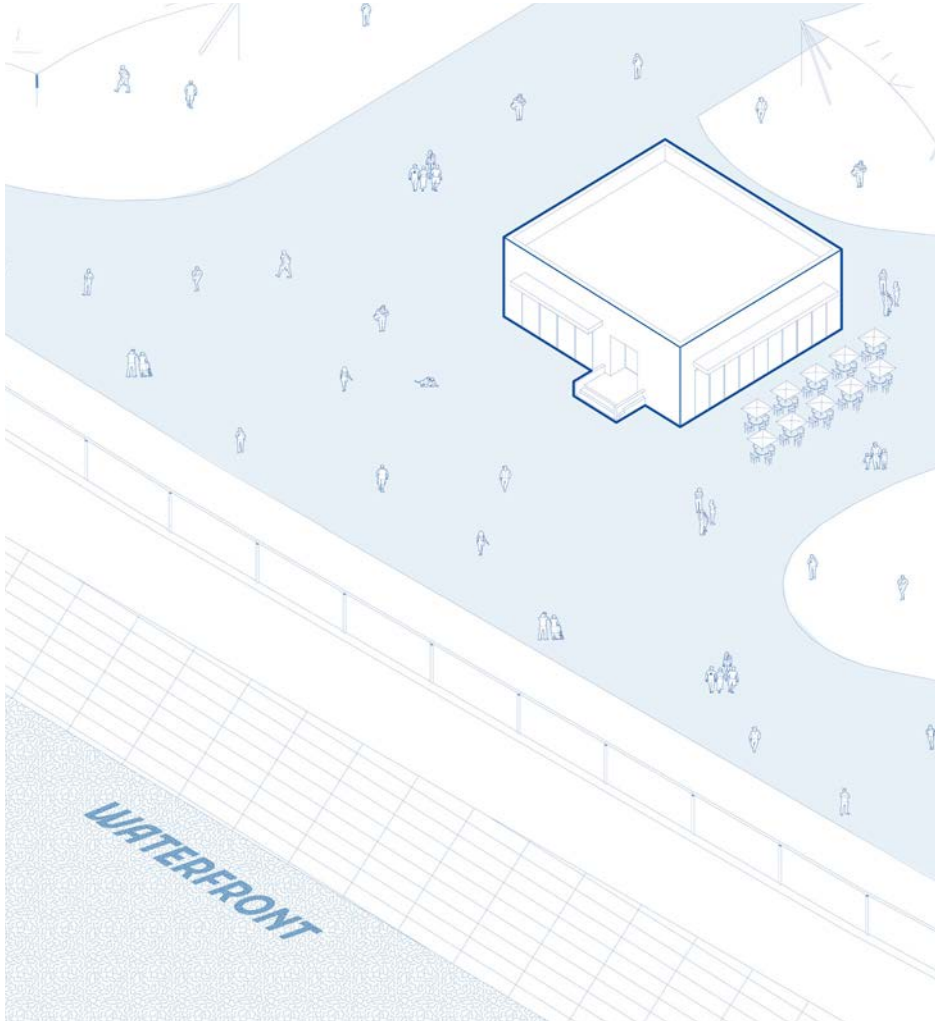
g. **Public and family assembly places**, e.g. pavillions.

h. **Stand-alone visitor centers** and information centers.

Example of a public food kiosk.

Example of a public restroom facility.

Example of a public prayer area.



Example of public Built-Form.

3.8.1 Applicability

(1) Subject to the applicability permitted in the 10th Report or the case of the assessment of a plot land use modification/exemption request. The Built-Form Type 6 (Public) is permitted to apply to the (Zone & District category) of the 10th Report as per the table below.

(2) Type 6 (Public) buildings shall be continuously open to the general public, with no access restrictions. They shall be located in such a way to be easily incorporated into or attached to an existing urban fabric or public realm, making use of existing street networks, pathways, park networks or other public networks of mobility.

	10th Report District Categories (existing in the demarcated Coastline)																		
	Recreational / Residential		Residential						Commercial					Local Service Center	Warehousing	Light Industrial Zone	Utilities	Government	Recreational	Agricultural
Number of Floors	2	2	2	3	4	6	8	16	3	4	6	8	10	4	1	1				
Land Use (Zone & District category)	RR1	RR2	R1A	R1B	R2A	R3A	R8	R16	C3	C1A	C1B	C2A	C10	LC	WH	LI	UT	GI	RR	A
Type 1 - Urban Mixed Use	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	
Type 2 - Urban Residential	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Type 3 - Low Density Residential	✓	✓	✓	✓	✓	✓	✓	✓											✓	✓*
Type 4 - Resort	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓*
Type 5 - Community Facility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Type 6 - Public			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

3.8.2 Plot Area

(1) As of the nature of Type 6 (Public) buildings, no regulations or guidelines concerning the plot area and the plot frontage shall be applicable.

3.8.3 Building Area

(1) In general, the size of the building area of Type 6 (Public) buildings must be complementary to the adjacent public space and its surroundings but should not exceed 100 sq.m.

3.8.4 Setbacks

(1) As of the nature of Type 6 (Public) buildings, no regulations or guidelines concerning setbacks shall be applicable.

3.8.5 Building Heights and Floor Area Ratio (FAR)

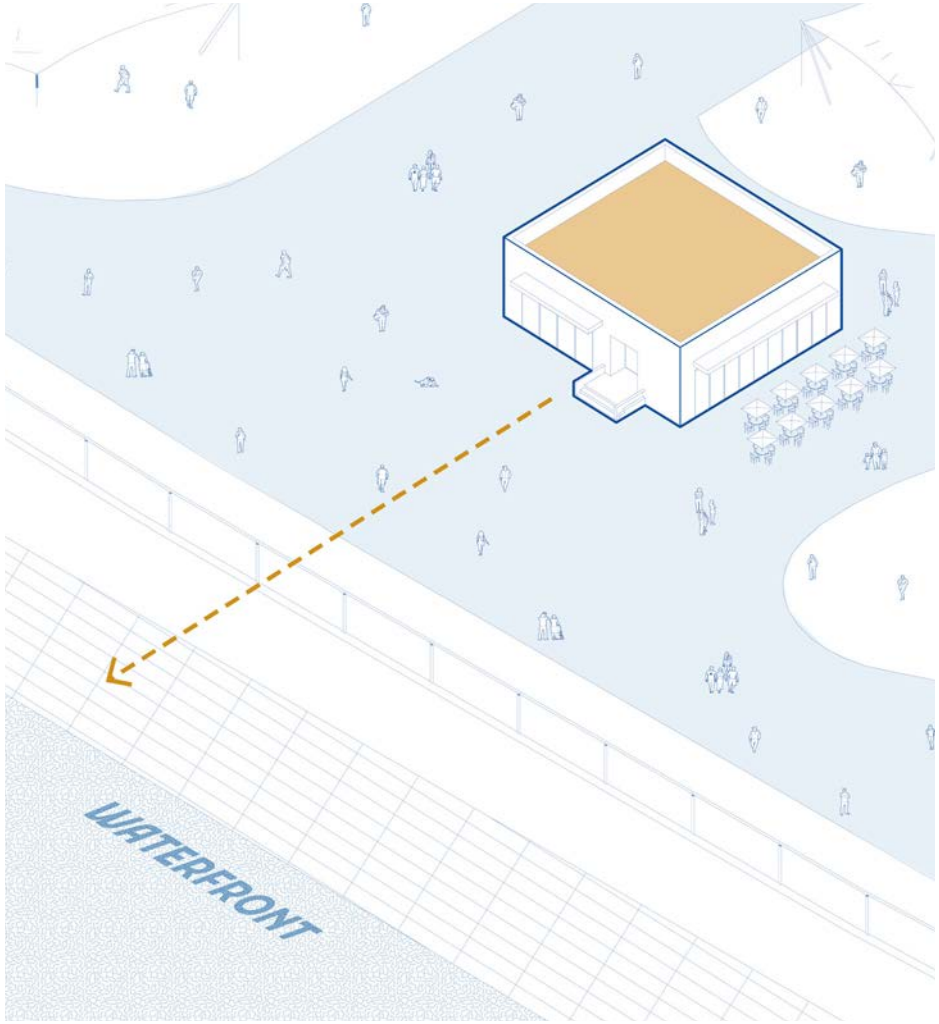
(1) All Type 6 (Public) buildings must not exceed the ground floor.

3.8.6 Building Massing, Placement and Orientation

In addition to the guidelines recommended in Article 3.2.6 of this Manual, the following guidelines are recommended for Type 6 (Public) buildings:

(1) Depending on the use of each building, Type 6 (Public) buildings should be oriented towards an adjacent park, waterfront or other public space and should be connected to such areas exclusively by pathways.

(2) Building massing should generally adhere to contextual relationship and may follow a landmark-placing image.



Orient towards adjacent park, waterfront or public space, [Guideline 3.8.6 (1)]

3.8.7 Built-Form Elements

In addition to the guidelines recommended in Article 3.2.7 of this Manual, the following guidelines are recommended for Type 6 (Public) buildings:

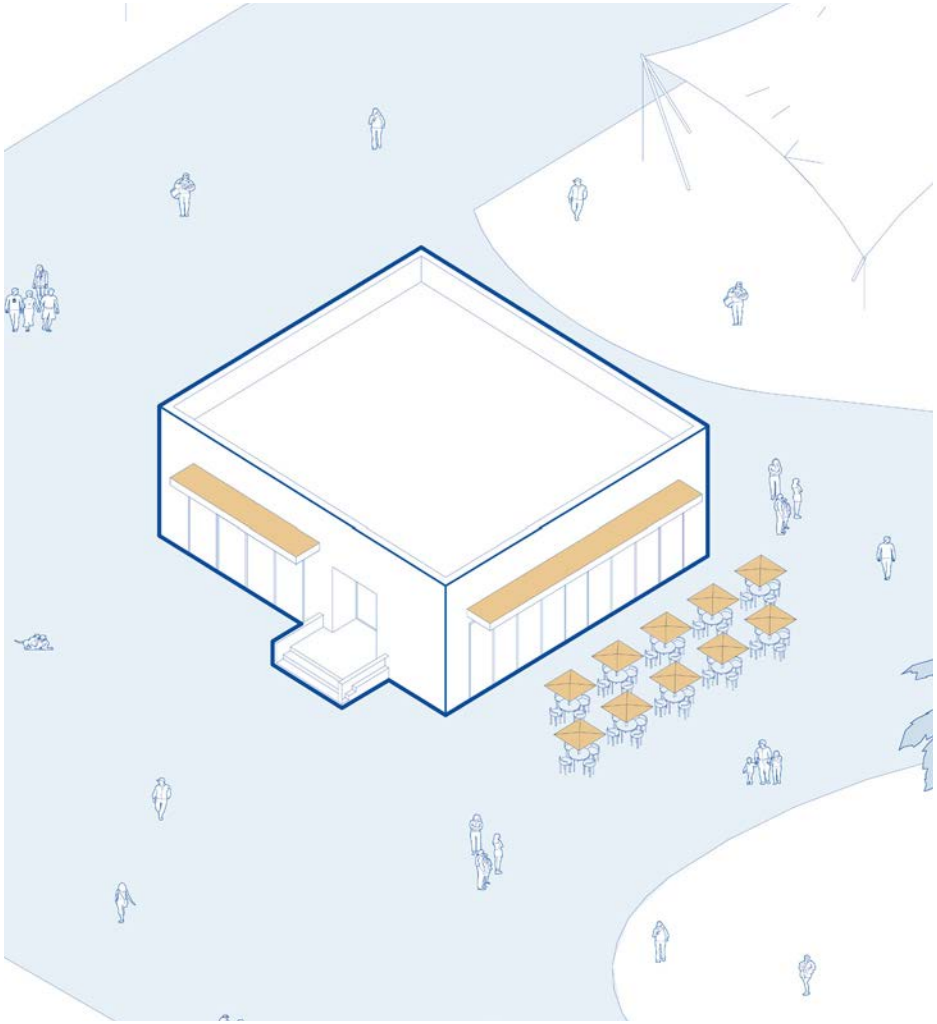
(1) Opportunities for shading of the public realm should be maximized. This may include awnings, canopies, umbrellas, overhangs and similar elements extending from buildings or structures.

(2) Walls and fences are generally not recommended.

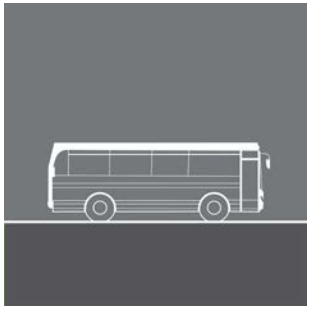
(3) Trash containers and mechanical equipment should be screened from view from the public realm with Built-Form, landscaping or other screening elements.

3.8.8 Parking and Access

(1) As of the nature of Type 6 (Public) buildings, no regulations or guidelines concerning parking and the plot frontage are applicable.



Opportunities for shading, awnings, umbrellas etc.
[Guideline 3.8.7 (1)]



4 Streets and Mobility

4.1 Types of Streets & Mobility

The Streets and Mobility module establishes 5 types of streets to be applied in the Coastal Strip, each with its own design standards and guidelines.

The types of streets are, where applicable, complying with the National Street Design Standards*, with additional recommendations to reflect urban conditions and needs of the Coastline of DMA.

*Road engineering Design Manual (2019), issued by MOMAH.

* Saudi Highway Code (2023), issued by RGA.

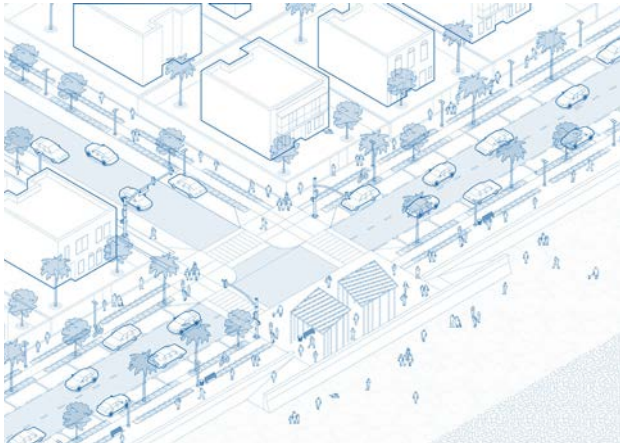
Type 1, Pedestrian-Only Street

- A predominantly hardscape corridor that, like a trail, can read similar to a linear park, but is typically no wider than 10 meters, including landscaping.
- It is used by pedestrians and cyclists, but is closed to motorized traffic.
- It must be paved and should include furnishings, such as benches or lighting. It may also include landscaping of a formal nature.

Type 2, Local Street

- Usually lined with lower intensity uses, with lower level of connectivity than Collector Streets or Arterial Streets.
- Its character is quieter and more intimate than these other types and its design can be simpler.

Example of Pedestrian-Only Street.



Example of Local Street.

Type 3, Collector Street

- A type that appears in high intensity contexts.
- Collector streets are wider than Local Streets, but narrower than Arterial Streets.
- Because of their surroundings, they should be designed to accommodate substantial pedestrian traffic and incorporate appropriate levels of amenity. Unlike Local Streets, they typically have a high level of connectivity.

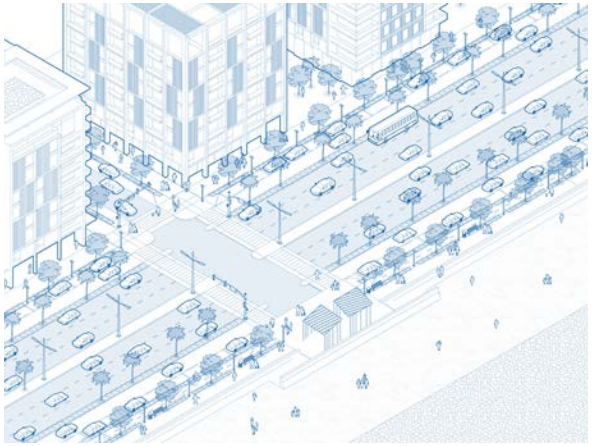
Type 4, Arterial Street

- Generally found in areas containing or designed for higher development intensities.
- An Arterial Street is the largest of the street types permitted in the Coastline, identifiable by its greater number of travel lanes, greater sidewalk widths, greater bicycle lane requirements and other standards and guidelines that help to ensure user safety and comfort.

Type 5, Unpaved Street

- Unpaved Streets are found in areas outside of urban centers. They vary in their size and intensity of use.
- Unpaved Streets are established to access and navigate to those more remote areas of the DMA Coastline with limited built development, and may be constructed with compacted earth materials.
- They are not required to be paved.

Example of Collector Street.



Example of Arterial Street.

Example of Unpaved Street.

4.2 Design Guidelines and Standards (All Types)

Streetscapes refer to elements of a street including the sidewalk, median, street furniture, trees, and open spaces that combine to form the street's character.

They are important public resources and are an essential part of the open spaces.

Streetscapes represent an urban city and a rural town's vitality and livability.

The following guidelines should apply for the design of all Streets and should be implemented wherever possible.

4.2.1 Overall Functionality

(1) Design streets to be equitable and inclusive, serving the needs and functions of diverse users with particular attention to people with disabilities, seniors, and children.

(2) Well designed intersections promote public safety and walkability and should be followed where possible

(3) Design streets to be safe and comfortable for all users. Prioritize the safety of the most vulnerable users - pedestrians and cyclists. Design. Streets to move vehicular traffic at the lowest speeds possible.

(4) The width of the street pavement must be minimized as much as possible to limit impervious surface area and the total land area dedicated solely to vehicular use.

(5) Public transportation should be promoted and prioritised along all streets, as well as bicycling and micro-transit.

(6) The number of curb cuts along a street, and the width of each curb cut, should be minimized to improve walkability and public safety.

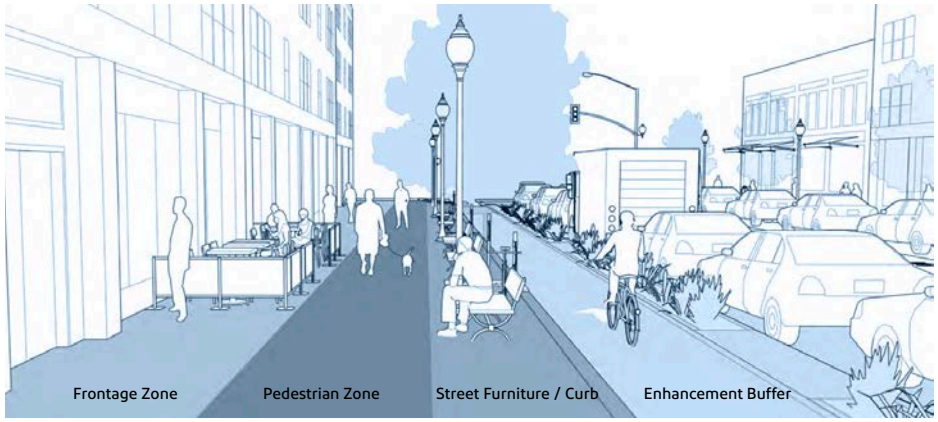
(7) Gated streets are not permitted. All streets should be publicly accessible to contribute to the overall connectivity network.

(8) All streets and street elements must comply with the Convention on the Rights of Persons with Disabilities and be fully accessible to individuals with disabilities and older people, in accordance with the Universal Accessibility: Built Environment Guidelines for the Kingdom of Saudi Arabia (1431 H - 2010 G).

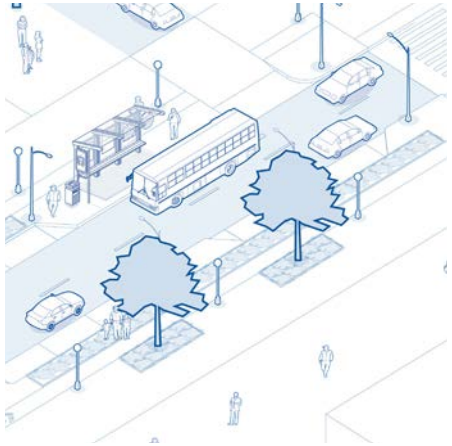
4.2.2 Travel Lanes

(1) The number of travel lanes provided must be the minimum number required to respond to the traffic needs resulting from traffic studies.

(2) The width of each travel lane provided must be at least the minimum width of the respective street type.



Streetscape Design.



Design streets to be comfortable for all users.
[Guideline 4.2.1 (3)]

Promote alternative modes of transport.
[Guideline 4.2.1 (5)]

4.2.3 On-street Parking

(1) On-street parking should be provided where possible, with the exception of along Unpaved Streets..

(2) Parallel on-street parking is preferred to angled parking.

(3) Where on-street parking is provided, pedestrian bump-outs should be considered to extend the sidewalks at intersections or between parking bays.

(4) Trees and shade structures should be provided to help shade parking spaces.

(5) Alternate parking spaces with other services and uses such as refuge islands, sheltered transit stops, bike-share stations, rain gardens, and loading areas.

4.2.4 Bicycle Facilities

(1) One-way bicycle lanes or cycle tracks must be at least 1.5 meters wide.

(2) Two-way bicycle lanes or cycle tracks must be at least 2.4 meters wide.

(3) Bicycle lanes should always be separated from vehicular traffic by a physical barrier.

(4) Bicycle lanes should be shaded as much as possible.

(5) Mark bicycle lanes at conflict zones such as mid-block crossings, curb cuts, and through intersections to clearly identify and prioritize the bicycle facilities.

(6) Lighting must be provided regularly along bicycle lanes to clearly illuminate the land and the cyclist.

(7) Additional facilities for bicyclists should be provided, such as bicycle parking racks, storage lockers, and maintenance stations.

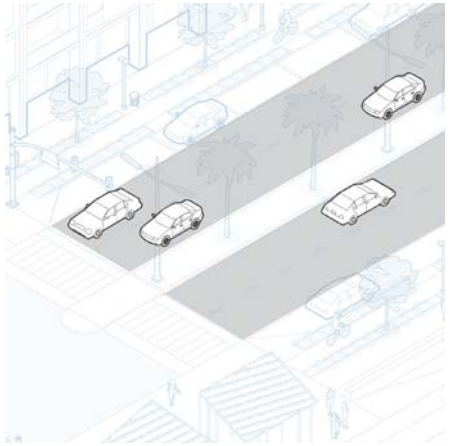
(8) Where a street is adjacent to the waterfront or a park space, and a two-way cycle track is provided, it should be provided on the side of the street closest to the waterfront or park space.

4.2.5 Sidewalks and Pedestrian Amenities

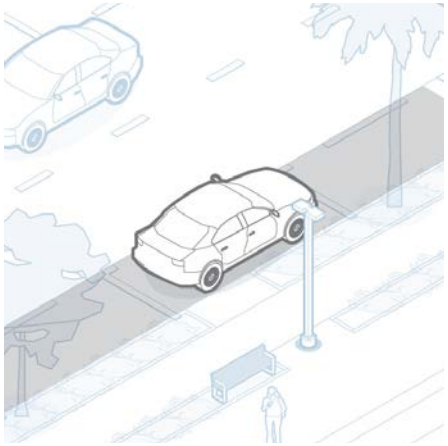
(1) Sidewalks must be as wide as possible to allow for easy and simultaneous use by a variety of users, including people with disabilities and older persons, to increase activity along the public realm, and improve pedestrian safety (guardrails, pavement material, ramps etc.).

(2) Pedestrian amenities include many elements such as seating and other “street furniture”, trash bins, bus shelters, community kiosks, bicycle parking racks, public art, news racks, and more.

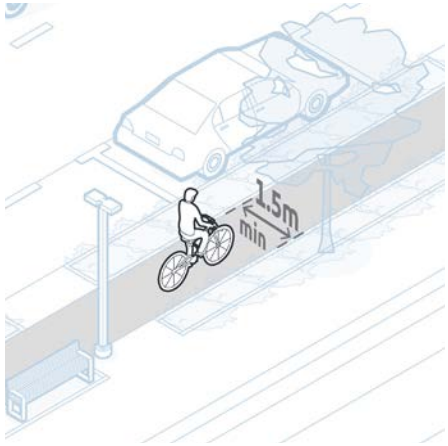
(3) Pedestrian amenities should be provided in the furniture zone – the area between the pedestrian zone and the street right-of-way



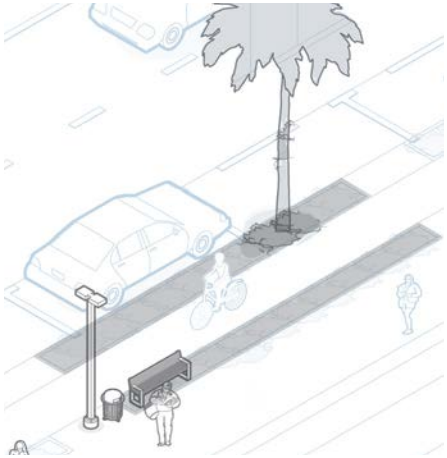
Number of travel lanes to respond to traffic needs. [Guideline 4.2.2 (1)]



On-street parallel parking preferred. [Guideline 4.2.3 (1)]



Single-direction bicycle lanes must be at least 1.5 meters wide.[Guideline 4.2.4 (1)]



Bicycle lanes provided, separated by physical barrier. [Guideline 4.2.4 (3)]

(4) Seating and trash bins should be provided regularly along all street types.

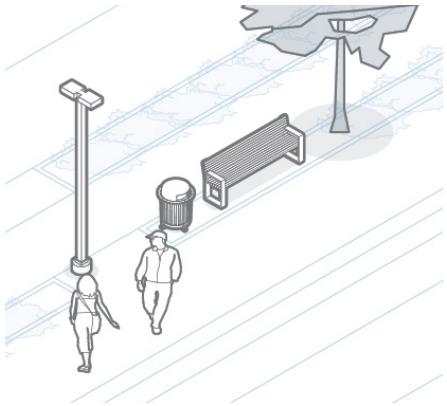
(5) Seating areas should be shaded as much as possible.

(6) Bus shelters must be shaded.

(7) Install ramps and tactile strips to make sidewalks and pedestrian crossings more accessible.

(8) The design of pedestrian amenities should complement the surrounding architectural style or character of the area.

(9) Where pedestrian paths or crosswalks intersect with bicycle facilities, the pedestrian pathway must be prioritized. This may be done with ground markings, paving materials, signage, or lighting.

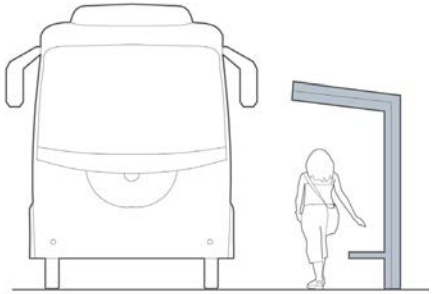


Provide street furniture regularly.
[Guideline 4.2.5 (2)]

(10) New developments must ensure easy pedestrian access by aligning ground levels with adjacent sidewalks, using ramps, slopes, and clear pathways. Existing buildings should also incorporate these features during any redevelopment phase, for smooth transitions and accessibility.

(11) Ensure clear visibility and unobstructed access to the various entrances of retail units and buildings.

(12) The creation of parklets is permitted to extend the sidewalk or furniture zone into the street right-of-way for areas that have high pedestrian volumes and a lack of sidewalk space by converting on-street parking spaces into small public spaces, that can be either temporary or permanent. Parklets must meet the following guidelines and standards:



Provide sheltered bus stops.
[Guideline 4.2.5 (6)]

a. Parklets must be provided directly adjacent to the sidewalk or furniture zone.

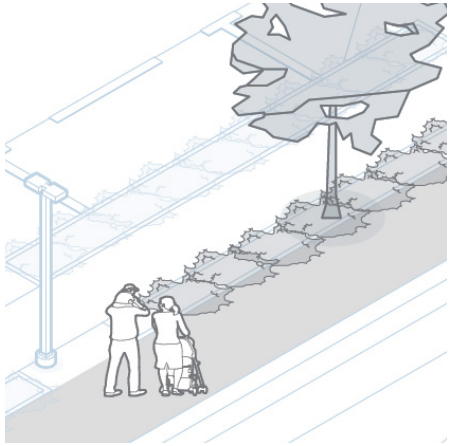
b. Incorporate vertical design elements such as posts or bollards to make parklets clearly visible to traffic.

c. Place parklets at least 5 meters away from any intersection. Where the installation of a parklet is under consideration for a site near an intersection, analyze volumes of turning traffic, pedestrian flows, sight lines, and visibility.

d. Parklets must be buffered using a wheel stop at a desired distance of 1.2 meters from the parklet to ensure visibility to moving traffic, pedestrians, and parked vehicles.

e. Provide small channels between the base and the platform to facilitate drainage, so that the design of a parklet does not inhibit stormwater runoff.

f. Ensure that parklets have a flush transition at the sidewalk and curb to allow easy access and avoid trip hazards.



Trees and other planting to enhance pedestrian experience.
[Guideline 4.2.6 (1)]

4.2.6 Landscaping

(1) Trees and other plantings must be provided along all streets to create shade and improve the overall environmental health and pedestrian experience of the area.

(2) Landscaping areas should be provided between the sidewalk and the street curb. Pedestrian and bicyclist amenities may be provided in this area also.

(3) Where possible, landscaping areas should be designed to capture and redistribute stormwater, to avoid the need for additional infrastructure.

(4) Landscaping must meet the applicable guidelines and standards of Article 7.9, Landscaping.

4.2.7 Signage

(1) Wayfinding signage must be provided along all streets.

(2) Information provided on signs must be the appropriate size, font and color to be read easily by the intended user.

(3) To promote walking and biking, consider incorporating pedestrian-oriented signage that provides the time in minutes it would take to walk and bike to key locations.

(4) Materials used for signage should be easy to clean and maintain.

(5) The signage design and materials must complement the surrounding architectural style.

(6) Signs should be illuminated at night.

(7) Signs may not be digital or internally illuminated.

4.2.8 Lighting, Utilities & Stormwater

(1) All streets should be appropriately lit at night to ensure safety and safe navigation.

(2) Separate pedestrian lighting must be provided to illuminate sidewalks. Pedestrian light poles must be between 3 and 6 meters in height.

(3) The spacing between two light poles must be roughly 2.5 to 3 times the height of the pole. Shorter light poles should be installed at closer intervals. The density, speed of travel, and the type of light source along a corridor will also determine the ideal height and spacing.

(4) Steps, ramps, and edges of pedestrian pathways must be illuminated for safety.

(5) Lighting must be shielded to protect the dark sky and must not create a substantial amount of upward-directed light, or light directed onto neighboring properties. Avoid too-bright lighting that creates blinding glare or deep shadows.

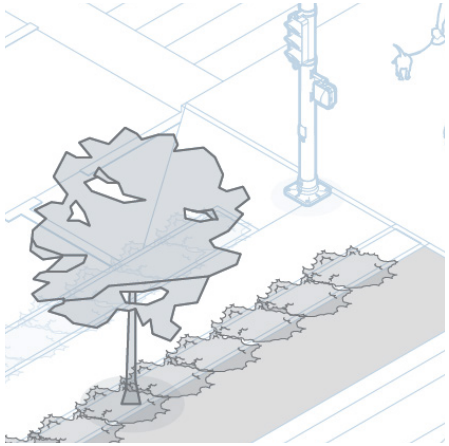
(6) Where possible, solar facilities should be considered to power lighting equipment.

(7) Electrical and communications wiring must be buried wherever possible.

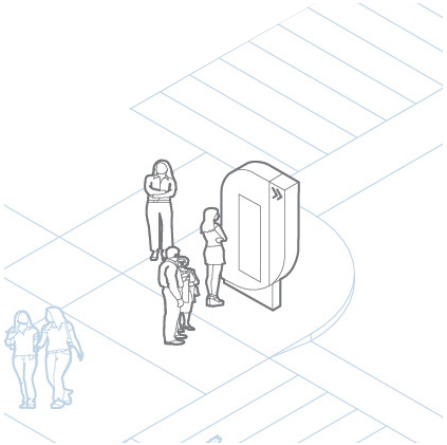
(8) Large electrical boxes and other above-grade utilities must be screened from the public view. This may be achieved with landscaping or with solid (masonry or fence) design elements.

(9) Adopt green infrastructure strategies, including rain gardens and permeable paving, to improve water management and reduce water stagnation in low-lying areas.

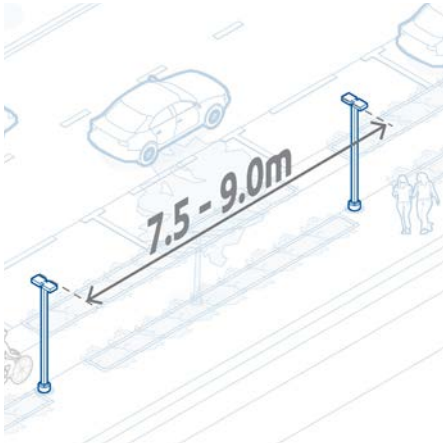
(10) An emergency power source such as a back-up generator should be considered for lighting along major corridors, especially where electricity supply is unreliable or where storm events may cause power loss.



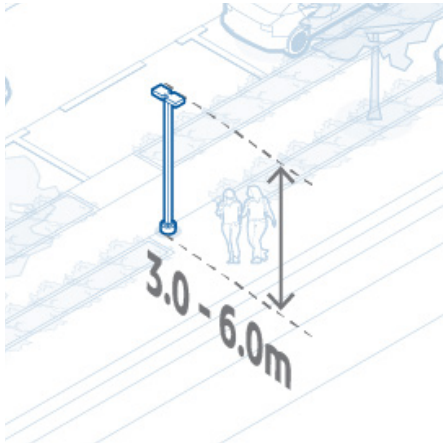
Landscaping areas should be provided between the sidewalk and the street curb. [Guideline 4.2.6 (2)]



Signage and wayfinding provided. [Guideline 4.2.7 (2)]



The spacing between two light poles must be roughly 2.5 to 3 times the height of the pole [Guideline 4.2.8 (3)]



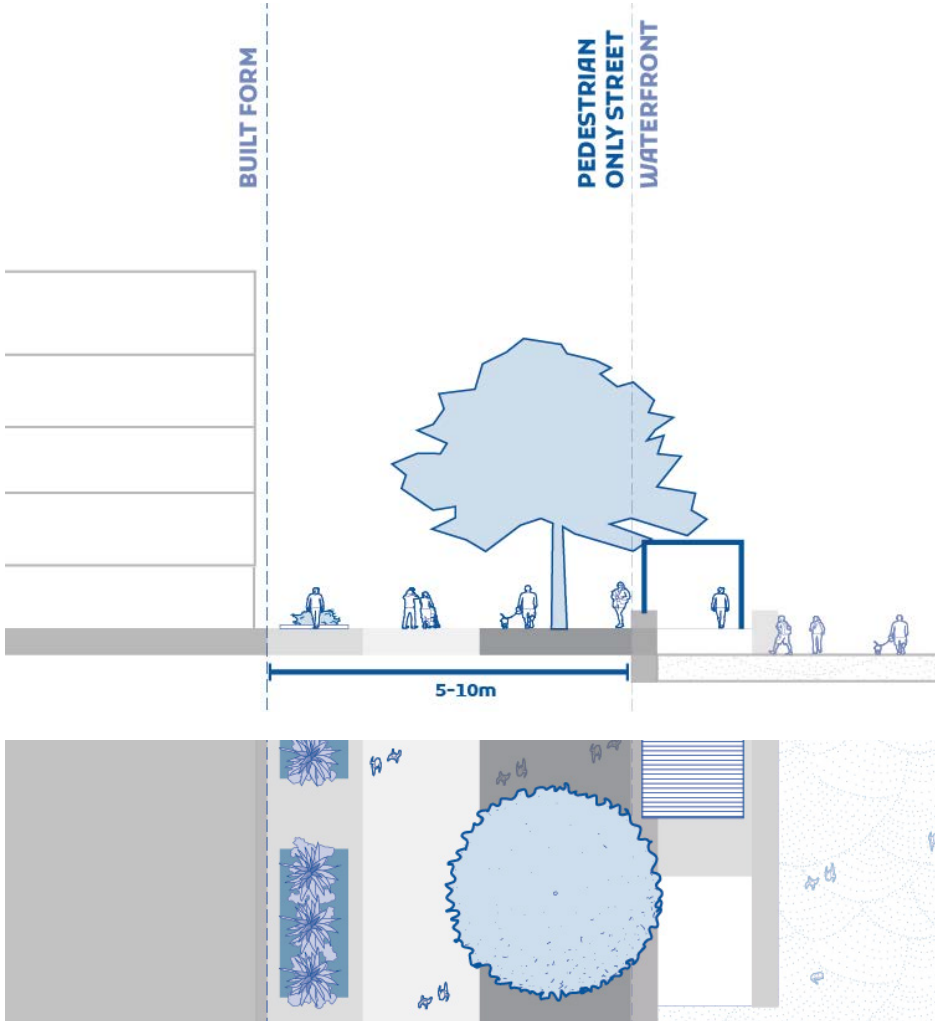
Height of pedestrian lightpoles. [Guideline 4.2.8 (2)]

4.3 Streets and Mobility Type 1 - Pedestrian-Only Street

A Pedestrian-Only Street is a corridor that is dedicated exclusively for use by pedestrians and cyclists. No motorized traffic is permitted. They are often predominantly hardscaped and can often read similar to a linear park or trail. They should typically be no wider than 10 meters, and include a wide paved pedestrian and bicyclist clearway, landscaping, street furniture, and other pedestrian amenities.

The following table summarizes the required and recommended design standards and guidelines for Pedestrian-Only Streets. Details on the information provided in this table and additional standards and guidelines that apply to Pedestrian-Only Streets are provided in the sections below.

Pedestrian-Only Streets In accordance with international best practices		
Criteria	**Standard Design**	**Dedicated Bike Lane**
Design speed (max)	-	-
Street Key Dimensions		
Pedestrian Realm	10m	10m
Setback (optional)	2m	2m
Sidewalk (min)	-	-
Furniture zone (optional)	1m	1m
Cycle Track	applicable	applicable
Edge (min)	n/a	n/a
Side Median (min)	n/a	n/a
Frontage Lane	n/a	n/a
Public Transit / Travel Lane (min)	n/a	n/a
Parking (exact)	n/a	n/a
Roadway	n/a	n/a
Central Median (min)	n/a	n/a
Lane width (exact)	n/a	n/a
Emergency Lane	n/a	n/a
Curb Lane / Bus / LRT / BRT (optional)	n/a	n/a
Bicycle	Shared space	Shared space
Parking / Flex Lane	n/a	n/a
Public Transport		
Bus Access	n/a	n/a
LRT	n/a	n/a
Bus Access (exact)	n/a	n/a
LRT (exact)	n/a	n/a
Streetscape Materials		
Pedestrian Realm	Unit pavers (concrete, brick, cut stone)	Unit pavers (concrete, brick, cut stone)
Parking Zone	n/a	n/a
Roadway	n/a	n/a
Pedestrian Crossing	n/a	n/a
Lighting and Furniture	See Guidelines	
Plantings	See Guidelines	



Indicative Pedestrian-Only Street Section and Plan.

Indicative Pedestrian-Only Street.

4.3.1 Overall Functionality

(1) Pedestrian-Only Streets must have a total right-of-way width between 5 and 10 meters. Where necessary, the Pedestrian-Only Street must be wide enough to accommodate emergency vehicles.

(2) For safety and accessibility purposes, Pedestrian-Only Streets must not be dead-end. They must connect to the overall network of streets and mobility.

(3) Pedestrian-Only Streets should be public in ownership, but may be private so long as they remain publicly accessible. No gated Pedestrian-Only Streets are permitted.

(4) The pedestrian relam must be as wide as possible, to allow for easy and simultaneous use by a wide variety of users.

(5) Pedestrian-Only Streets should be hardscaped with a material that is easy to travel on for users of all abilities, including those in wheelchairs.

(6) Activation of Pedestrian-Only Streets with shops or residential entrances is encouraged. A Pedestrian-Only Street may be considered a "primary street" for a Built-Form development.

(7) Pedestrian-Only Streets can also incorporate park elements. Seating areas, children's playgrounds, and other gathering spaces are encouraged along Pedestrian-Only Streets.

4.3.2 Travel Lanes

(1) No vehicular traffic is permitted on Pedestrian-Only Streets, except for emergency vehicle access when needed.

(2) If emergency vehicle access is necessary along the Pedestrian-Only Street for the adjacent development, the travel lane must be wide enough and kept clear for the required emergency vehicle access.

4.3.3 On-Street Parking

(1) No on-street parking is permitted on Pedestrian-Only Streets.

4.3.4 Bicycle Facilities

(1) Bicyclists and pedestrians may share a pathway along Pedestrian-Only Streets. Where large volumes of bicyclists or pedestrians are expected, separate bicycle paths are encouraged.

4.3.5 Sidewalks and Pedestrian Amenities

(1) The majority of a Pedestrian-Only Streets should be dedicated to the pedestrian clearway and pedestrian amenities.

(2) The design of pedestrian-only streets must ensure ease of accessibility and use for older persons, and comply with Article 4.2.1.(8) for persons with disabilities.

(3) The pedestrian clearway width must be at least 2 meters.

4.3.6 Landscaping

(1) Landscaping along Pedestrian-Only Streets is highly encouraged.

(2) Landscaping along Pedestrian-Only Streets, particularly with shading providing trees and similar elements, are highly encouraged.

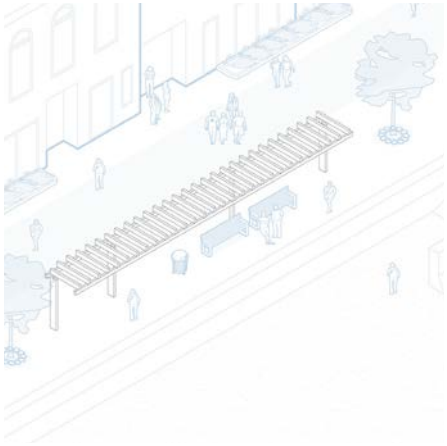
(3) Landscaping must be maintained to keep the pedestrian realm and any bicycle pathways clear at all times.

4.3.7 Signage

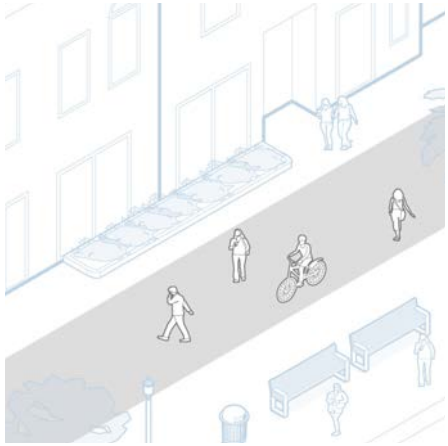
(1) Wayfinding signage along Pedestrian-Only Streets must not exceed 2 meters in height.

(2) Pedestrian and bicyclist-oriented signage that provides the time in minutes it would take to walk and bike to key locations is highly encouraged along Pedestrian-Only Streets.

Activate street with shops or residential entrances.
[Guideline 4.3.1 (6)]



Incorporate rest areas.
[Guideline 4.3.1 (7)]



Shared use paths in less intense areas.
[Guideline 4.3.4 (1)]

4.3.8 Lighting, Utilities and Stormwater

(1) Pedestrian-scaled lighting is required to increase safety and extend the street's hours of usability.

(2) Lighting should be provided at regular distances enough to illuminate the entire pedestrian clearway.

(3) Consider using lighting as a placemaking tool for any gathering areas, or to highlight design features along the Pedestrian-Only Street.

4.3.9 Streetscape

Streetscape constitutes an integral part of the public realm. A walkable environment that is defined by safe and comfortable conditions and includes facilities such as benches, street lighting, shading structures, landscaping elements and water features can promote healthier lifestyles across all ages. Enhancing streetscapes in Greater Dammam Metropolitan Area Coastline and thinking of Pedestrian-Only Streets as places for people can contribute to the development of a high-quality pedestrian public realm, considering the mild climate in the waterfront.

(1) Streetscape design should take into consideration the context and scale of the road.

(2) Adjacent land uses along Pedestrian-Only Streets can affect the streetscape design significantly. Sidewalk and pedestrian paths design should be directly related to the types of buildings and uses that line the street.

(3) Streetscape design should allow for a variety of transportation modes, including micro- mobility travel and public transit.

(4) The selection of plant species and the proper use of water management techniques can modify the local climate and establish long-term resilience.

4.3.10 Pavement Materials

(1) Pavement materials should be selected according to reflectivity, green manufacturing, local sourcing and permeability. They should be smooth, stable and slip resistant.

(2) The main hardscape materials that can be used in Greater Dammam Metropolitan Area Coastline are concrete unit pavers and tiles. Concrete can form the main paving material while concrete finishes, aggregate types and module sizes can be used for variation.

(3) Hardscape materials should be selected to ensure that the ground absorbs and stores less heat, thereby reducing the urban heat island effect.

(4) Local tile patterns should be incorporated to enhance the quality of public space.

Indicative Pedestrian-Only Street. aerial view.

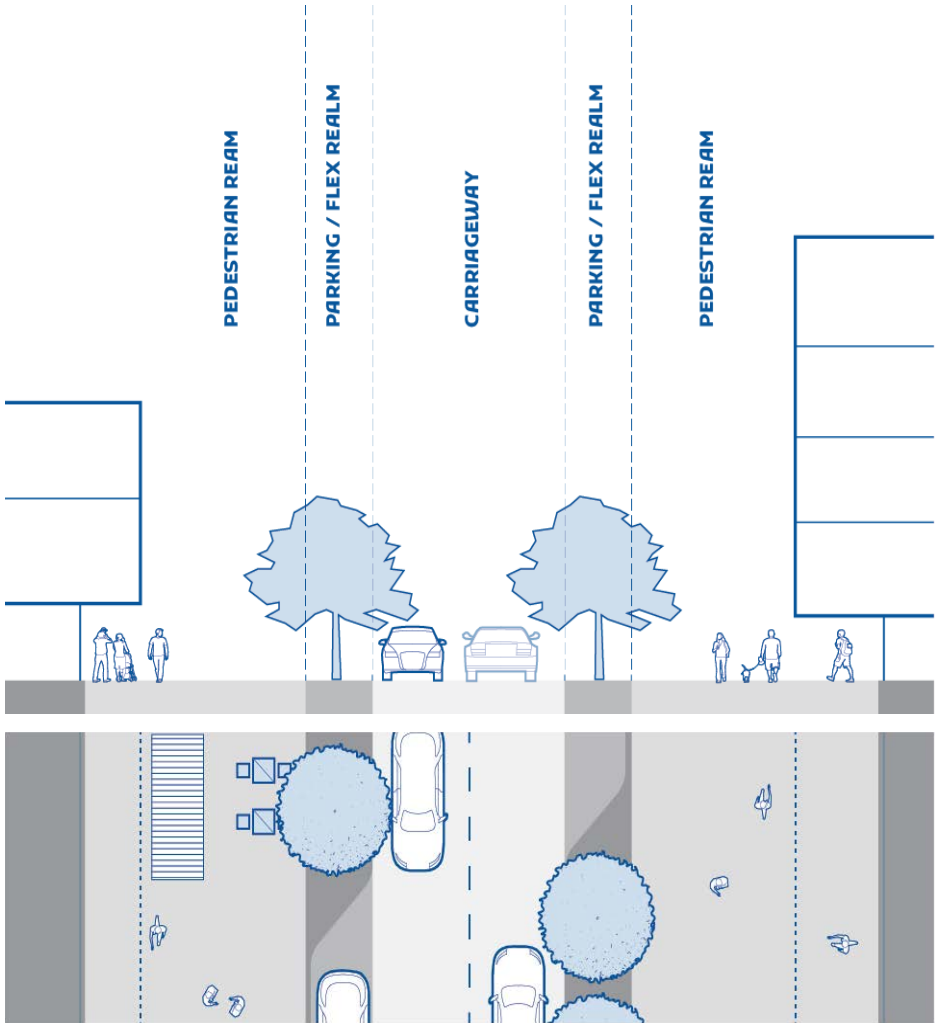
4.4 Streets and Mobility Type 2 - Local Street

Local Streets are the connector streets that move travelers between larger street types – such as Collector Streets and Arterial Streets and give access to abutting properties. Local Streets range from narrow neighborhood streets to small urban connector streets.

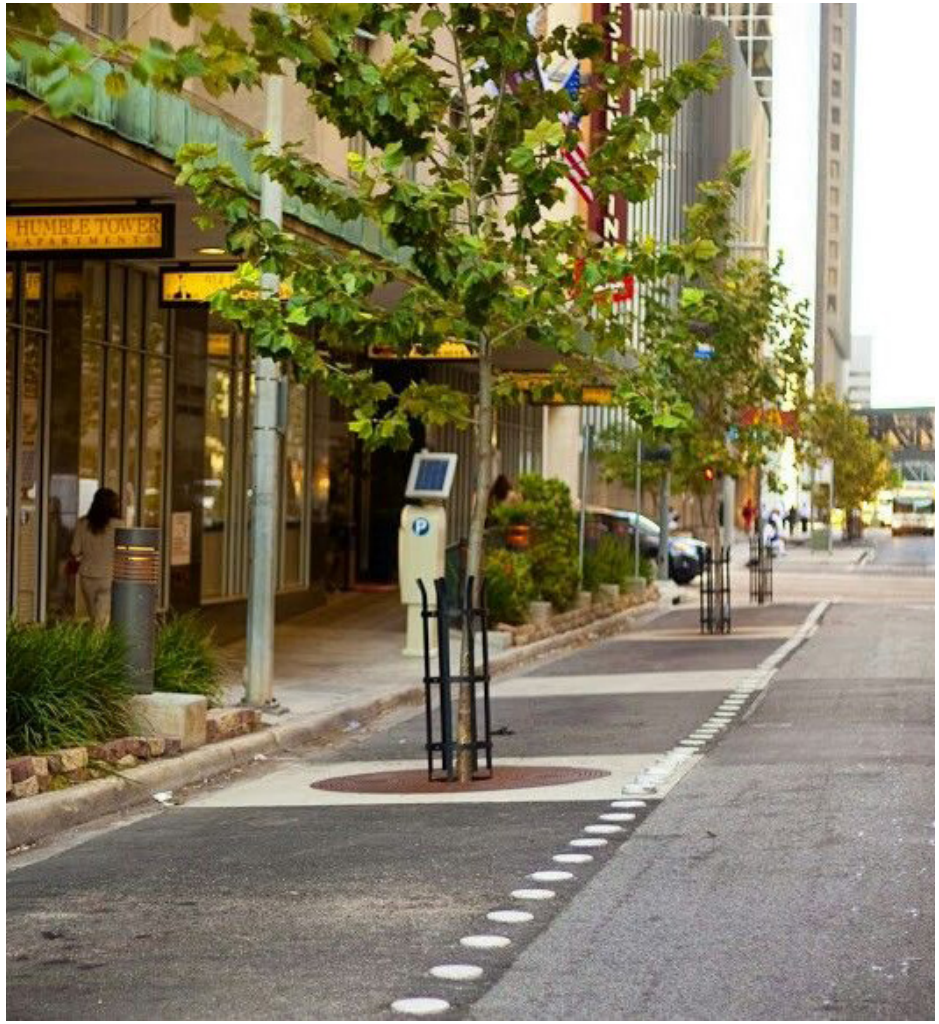
Local Streets are normally lined with lower intensity uses, such as single-family residential or neighborhood-scale commercial uses, with lower levels of traffic than Collector Streets or Arterial Streets. Their character is quieter and more intimate than these other larger street types and their design can be simpler.

The following table summarizes the required and recommended design standards and guidelines for Local Streets based on the Road Engineering Design Manual (2019) issued by the Ministry of Municipal and Housing on 11/04/1441 AH, based on Article (48) of the Municipalities and Villages Law issued by Royal Decree No. (M/5) dated 21/02/1397 AH, Saudi Highway Code (2023) issued by the General Authority for Roads, based on the organizational arrangements of the General Authority for Roads issued by the Council of Ministers Resolution No. (14) dated 04/01/1444 AH. Details on the information provided in this table and additional standards and guidelines that apply to Local Streets are provided in the sections below, to be implemented wherever possible.

	Local Street	In accordance to Road engineering Design Manual	
Criteria	Standard Design	Dedicated Bike Lane	No Parking
Design speed (max)	30 km/hr	30 km/hr	30 km/hr
Street Key Dimensions			
Pedestrian Realm	6m (on each side)	7.5m (on each side)	6m (on each side)
Setback (optional)	1.5m	1.5m	1.5m
Sidewalk (min)	2m	2m	2m
Furnishing Zone (optional)	2m	2m	2m
Cycle Track (min)	n/a	1.5m	n/a
Edge (min)	0.5m	0.5m	0.5m
Side Median (min)	n/a	n/a	n/a
Frontage Lane	n/a	n/a	n/a
Public Transit / Travel Lane (min)	n/a	n/a	n/a
Parking (exact)	n/a	n/a	n/a
Roadway	3.5m (on each side)	3m (on each side)	4m (on each side)
Central Median (min)	n/a	n/a	n/a
Lane width	3.5m	3m	4m
Emergency Lane	n/a	n/a	n/a
Curb Lane / Bus / LRT / BRT (optional)	n/a	n/a	n/a
Bicycle	Shared with traffic	n/a	Shared with traffic
Parking / Flex Lane	2.5	2.5m	n/a
Public Transport			
Bus Access	n/a	n/a	n/a
LRT	n/a	n/a	n/a
Bus Access (exact)	n/a	n/a	n/a
LRT (exact)	n/a	n/a	n/a
Streetscape Materials			
Pedestrian Realm	Unit pavers (concrete, brick, cut stone)	Unit pavers (concrete, brick, cut stone)	Unit pavers (concrete, brick, cut stone)
Parking Zone	Concrete unit pavers	Concrete unit pavers	n/a
Roadway	Asphalt	Asphalt	Asphalt
Pedestrian Crossing	Concrete with min 70% visual contrast	Concrete with min 70% visual contrast	Concrete with min 70% visual contrast
Lighting and Furniture	See Guidelines		
Plantings	See Guidelines		



Indicative Local Street Section and Plan.



Indicative Local Street.

4.4.1 Overall Functionality

(1) Design Local Streets to accommodate vehicular travel at speeds up to 40 kilometers per hour.

(2) Local Streets may have a total right-of-way (the width of the area between plot lines) between 8 and 16 meters. Where necessary, the street must be wide enough to accommodate emergency vehicles.

4.4.2 Travel Lanes and On-Street Parking

(1) Local Streets may be designed to accommodate single or two-directional vehicular travel.

(2) Up to two travel lanes may be provided along Local Streets.

(3) The width of each travel lane should be between 2.4 and 3.6 meters. Narrower travel lanes are preferred to help control the speed of traffic.

4.4.3 On-Street Parking

(1) The provision of on-street parking spaces is highly encouraged.

(2) On-street parking spaces may be parallel or angled at 45 degrees.

(3) On-street parking spaces may not be located within 7 meters of an intersection, to allow for adequate visibility for all users at the intersection.

4.4.4 Bicycle Facilities

(1) Bicycle lanes are optional on Local Streets, but are highly encouraged. Where they are not provided, a vehicular travel lane must be shared with cyclists, and must be clearly indicated as such with markings and signage.

(2) Where both bicycle lanes and on-street parking are incorporated, bicycle lanes should be located between the on-street parking and the sidewalk.

4.4.5 Sidewalks and Pedestrian Amenities

(1) Sidewalks should have as wide of a pedestrian clearway as possible, to increase walkability, accessibility, and the activation of the public realm.

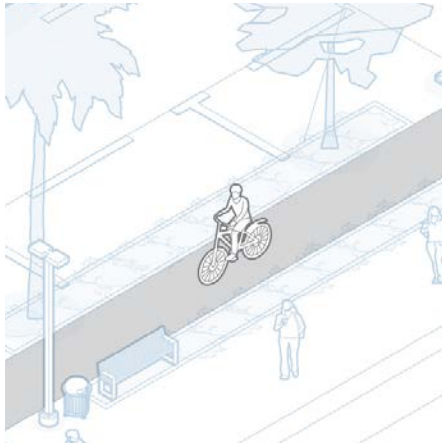
(2) The pedestrian clearway along Local Streets should be at least 1.5 meters wide. The placement of pedestrian amenities or landscaping must not interfere with the required pedestrian clearway.

(3) Pedestrian amenities, including seating and trash bins, should be provided frequently in the furniture zone (the area between the sidewalk and the curb).

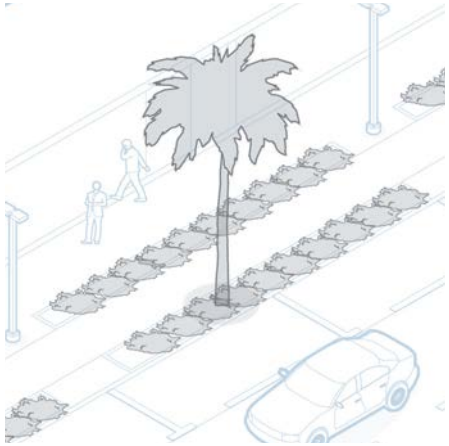
(4) A furniture zone is highly recommended and should be at least 1 meter wide.

(5) Consider providing pedestrian pedestrian crossings at intersections. Where the distance between intersections is large, consider also providing mid-block crosswalks as needed.

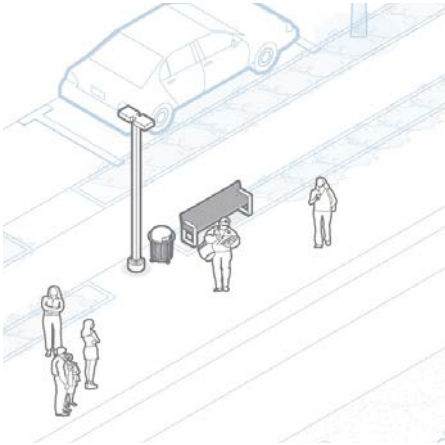
(6) Where pedestrian traffic is high, consider providing raised crosswalks to make the pedestrian more prominent in a driver's field of vision, and allow pedestrians to cross at grade with the sidewalk, while the associated approach ramp may reduce vehicle speeds and improve motorist yielding.



Bicycle lanes located between parking and sidewalk.
[Guideline 4.4.4 (2)]



Street trees provided for shade, planters for landscaping.
[Guideline 4.4.5 (2)]



Street furniture provided, clear of the sidewalk.
[Guideline 4.4.5 (3)]

4.4.6 Landscaping

(1) Street trees should be provided frequently in the area between the sidewalk and the curb to create shade for pedestrians, cyclists, and parked cars.

(2) Where appropriate, planters should be considered to provide additional landscaping options.

4.4.7 Signage

(1) Wayfinding signage intended to be used by pedestrians or cyclists should not exceed 2 meters in height.

(2) Pedestrian and bicyclist-oriented signage that provides the time in minutes it would take to walk and bike to key locations is highly encouraged.

4.4.8 Lighting, utilities and Stormwater

(1) No additional lighting, utilities, or stormwater management guidelines or standards apply to Local Streets. See Art. 4.2.8 for General Lighting, Utilities, and Stormwater Management Guidelines and Standards that apply to all street types.

Indicative Local Street aerial view.

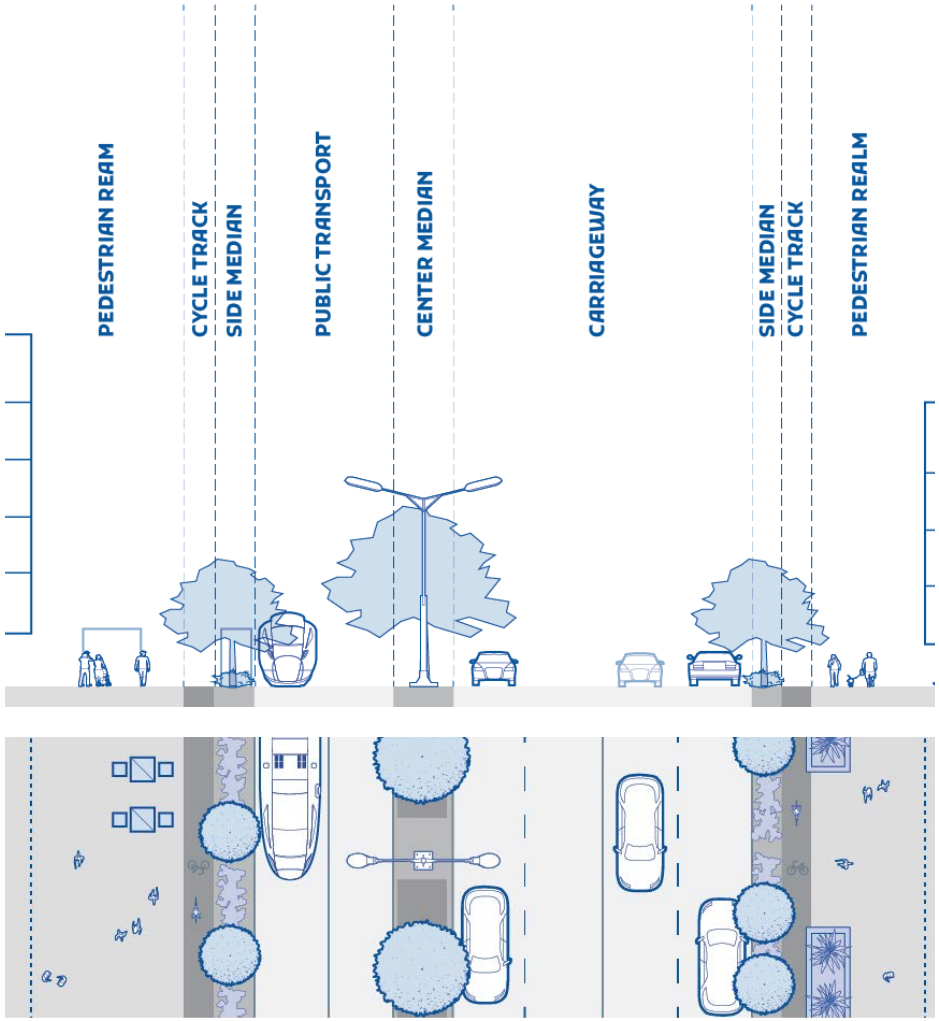
4.5 Streets and Mobility Type 3 - Collector Street

Collector Streets are the connector streets that move travelers between larger urban boulevards. They appear in moderate to high-intensity contexts.

Collector Streets connect a mix of land uses and support safe and comfortable multimodal transit. Because of their surroundings, they should be designed to accommodate substantial pedestrian traffic and incorporate appropriate amounts of pedestrian amenities.

The following table summarizes the required and recommended design standards and collector guidelines for streets based on the Road Engineering Design Manual (2019) issued by the Ministry of Municipal and Housing on 11/04/1441 AH, based on Article (48) of the Municipalities and Villages Law issued by Royal Decree No. (M/5) dated 21/02/1397 AH, Saudi Highway Code (2023) issued by the General Authority for Roads, based on the organizational arrangements of the General Authority for Roads issued by the Council of Ministers Resolution No. (14) dated 04/01/1444 AH. Details on the material provided in this table and additional standards and guidelines that apply to Collector Streets are provided in the sections below, to be implemented wherever possible.

	Collector Street	In accordance to Road engineering Design Manual	
Criteria	Standard Design	No Service Road	Dedicated Transit Lane
Design speed (max)	60 km/hr	60 km/hr	60 km/hr
Street Key Dimensions			
Pedestrian Realm	9m (on each side)	9m (on each side)	7m (on each side)
Setback (optional)	2m	2m	2m
Sidewalk (min)	2.4m / 3.6m	2.4m / 3.6m	2.4m / 3.6m
Furnishing Zone (optional)	1m	1m	n/a
Cycle Track (min)	2m	1.5m	1.5m
Edge (min)	1 m	1 m	1 m
Side Median (min)	2m	2m	1.5m
Frontage Lane	8m (on each side)	6m (on each side)	9m (total)
Public Transit / Travel Lane (min)	3.5m	4m (Bus Lane)	3.5m (on each side)
Parking (exact)	2.5m	n/a	n/a
Roadway	6m (on each side)	9m (on each side)	6m (on each side)
Central Median (min)	1m	1m	3m
Lane width	2 x 3m	3 x 3m	2 x 3m
Emergency Lane	n/a	n/a	n/a
Curb Lane / Bus / LRT / BRT (optional)	4m	n/a	n/a
Bicycle	n/a	n/a	n/a
Parking / Flex Lane	n/a	n/a	n/a
Public Transport			
Bus Access	Yes	n/a	Yes
LRT	Yes (potential)	n/a	Yes
Bus Access (exact)	4m	n/a	3.5m
LRT (exact)		n/a	
Streetscape Materials			
Pedestrian Realm	Unit pavers (concrete, brick, cut stone)	Unit pavers (concrete, brick, cut stone)	Unit pavers (concrete, brick, cut stone)
Parking Zone	Concrete unit pavers	n/a	n/a
Roadway	Asphalt	Asphalt	Asphalt
Pedestrian Crossing	Concrete with min 70% visual contrast	Concrete with min 70% visual contrast	Concrete with min 70% visual contrast
Lighting and Furniture	see Guidelines		
Plantings	see Guidelines		



Indicative Collector Street Section and Plan.

Indicative Collector Street.

4.5.1 Overall Functionality

(1) Design Collector Streets to accommodate vehicular travel at speeds up to 40 kilometers per hour.

(2) Collector Streets may have a total right-of-way (the width of the area between plot lines) between 16 and 25 meters.

4.5.2 Travel Lanes

(1) Collector Streets should be designed to accommodate two-directional vehicular travel. One-way vehicular travel should be limited.

(2) The number of travel lanes provided must be the minimum number required to respond to the traffic needs. Up to two travel lanes moving in either direction may be provided along Collector Streets. No more than four vehicular travel lanes are permitted.

(3) The width of each travel lane should be between 2.7 and 3.6 meters. Narrower travel lanes are preferred to help control the speed of traffic.

(4) Lanes used for public transit (including BRT, LRT, and buses) should be 4 meters wide.

(5) Consider the provision of landscaped medians along Collector Streets to provide pedestrian refuge opportunities, slow traffic speeds, provide shade, and improve stormwater management.

4.5.3 On-Street Parking

(1) The provision of on-street parking spaces is highly encouraged.

(2) On-street parking spaces may be parallel or angled at 45 degrees.

(3) On-street parking spaces may not be located within 7 meters of an intersection, to allow for adequate visibility for all users at the intersection.

4.5.4 Bicycle Facilities

(1) Bicycle lanes are required along Collector Streets.

(2) Bicycle lanes must be separated from vehicular travel lanes by a physical barrier at least .5 meters wide.

(3) Where on-street parking is provided, bicycle lanes should be located between the on-street parking and the sidewalk.

4.5.5 Sidewalks and Pedestrian Amenities

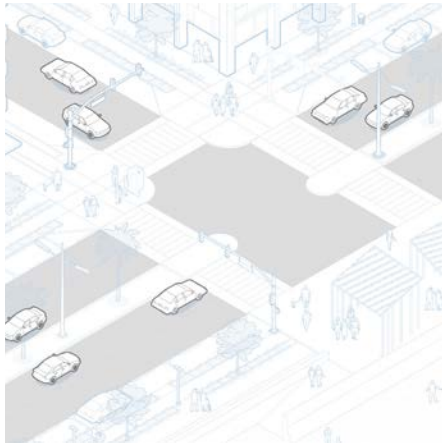
(1) Sidewalks should have as wide of a pedestrian clearway as possible, to increase walkability, accessibility, and the activation of the public realm.

(2) The pedestrian clearway along Collector Streets should be at least 2 meters wide. The placement of pedestrian amenities or landscaping must not interfere with the required pedestrian clearway.

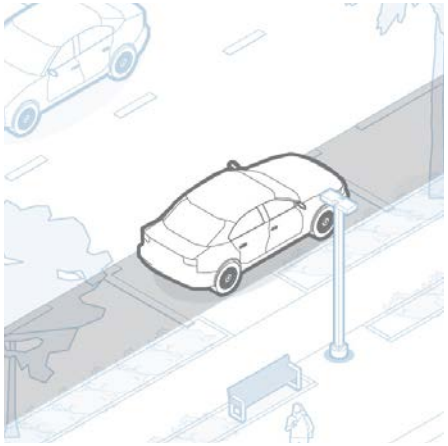
(3) Pedestrian amenities, including seating and trash bins, should be provided frequently in the furniture zone (the area between the sidewalk and the curb).

(4) A furniture zone is required and must be at least 1 meter wide.

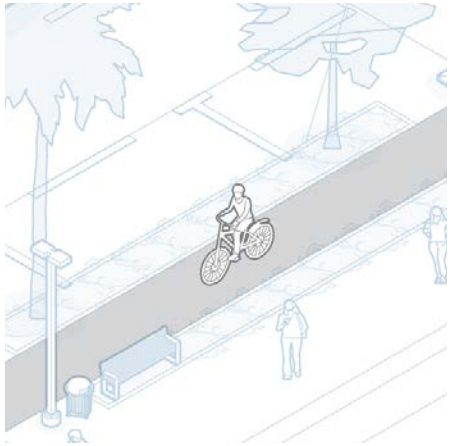
(5) Pedestrian crosswalks should be provided at all intersections. Where the distance between intersections is large, consider also providing mid-block crosswalks as needed.



Design for two directional traffic.
[Guideline 4.5.2 (1)]



On-street parking preferred.
[Guideline 4.5.3 (1)]



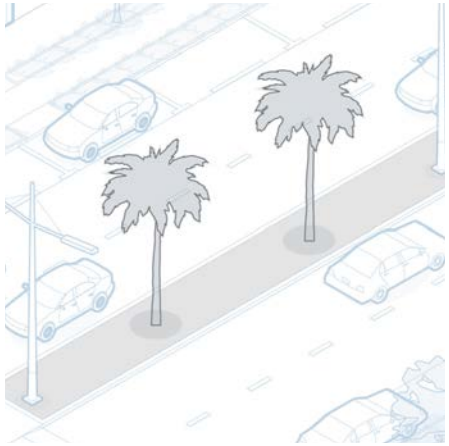
Bicycle lanes located between parking and sidewalk.
[Guideline 4.5.4 (3)]

4.5.6 Landscaping

(1) Street trees should be provided frequently in the area between the sidewalk and the curb to create shade for pedestrians, cyclists, and parked cars.

(2) Where appropriate, planters should be considered to provide additional landscaping options.

(3) Where a landscaped median is provided, trees are highly encouraged to be planted in the median.



Landscaped medians provided where necessary.
[Guideline 4.5.6 (3)]

4.5.7 Signage

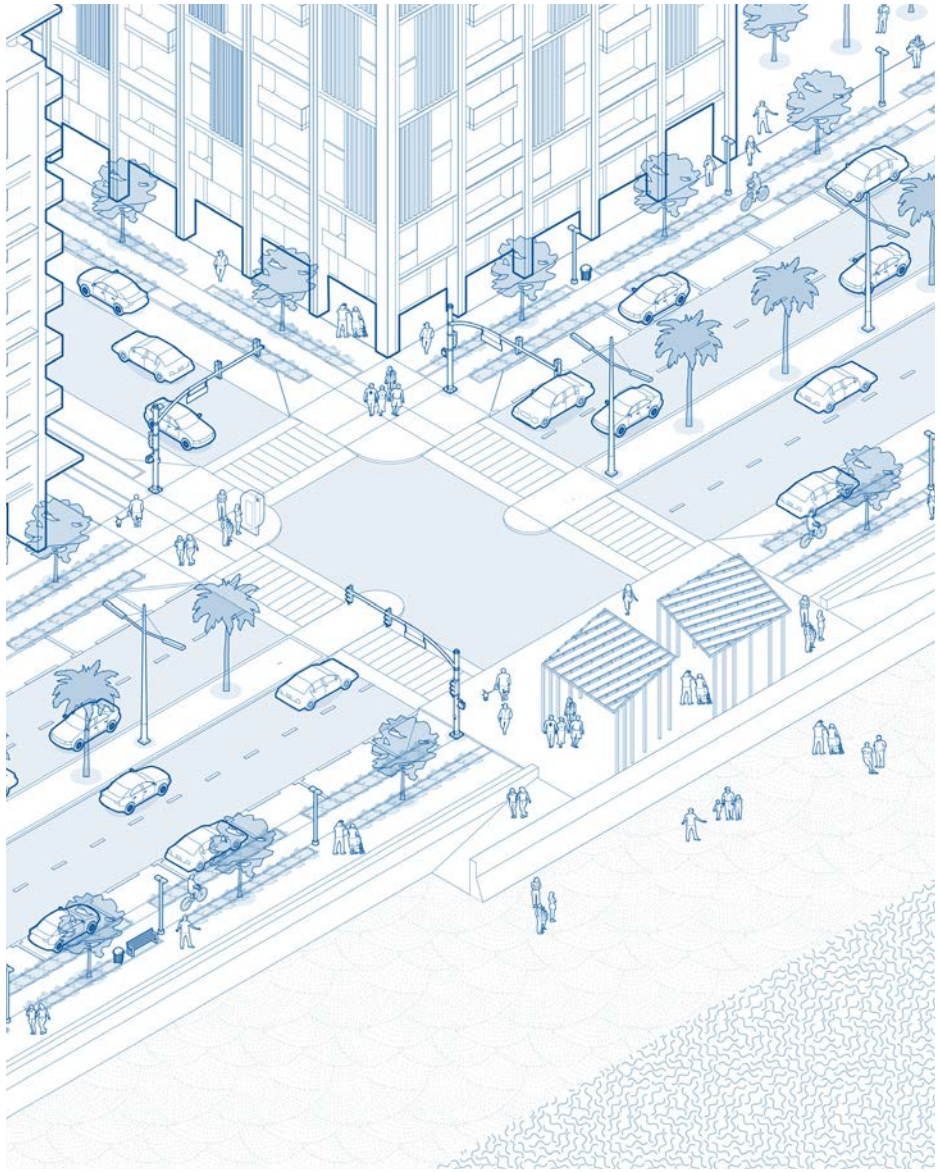
(1) Wayfinding signage intended to be used by pedestrians or cyclists should not exceed 2 meters in height.

(2) The provision of pedestrian and bicyclist-oriented signage that provides the time in minutes it would take to walk and bike to key locations is highly encouraged.

4.5.8 Lighting, utilities and stormwater

(1) No additional lighting, utilities, or stormwater management guidelines or standards apply to Collector Streets. See Art. 4.2.8 for General Lighting, Utilities, and Stormwater Management Guidelines and Standards that apply to all street types.

Wayfinding signage not to exceed 2 meters in height
[Guideline 4.5.7 (1)]



Indicative Collector Street aerial perspective.

4.6 Streets and Mobility Type 4 - Arterial Street

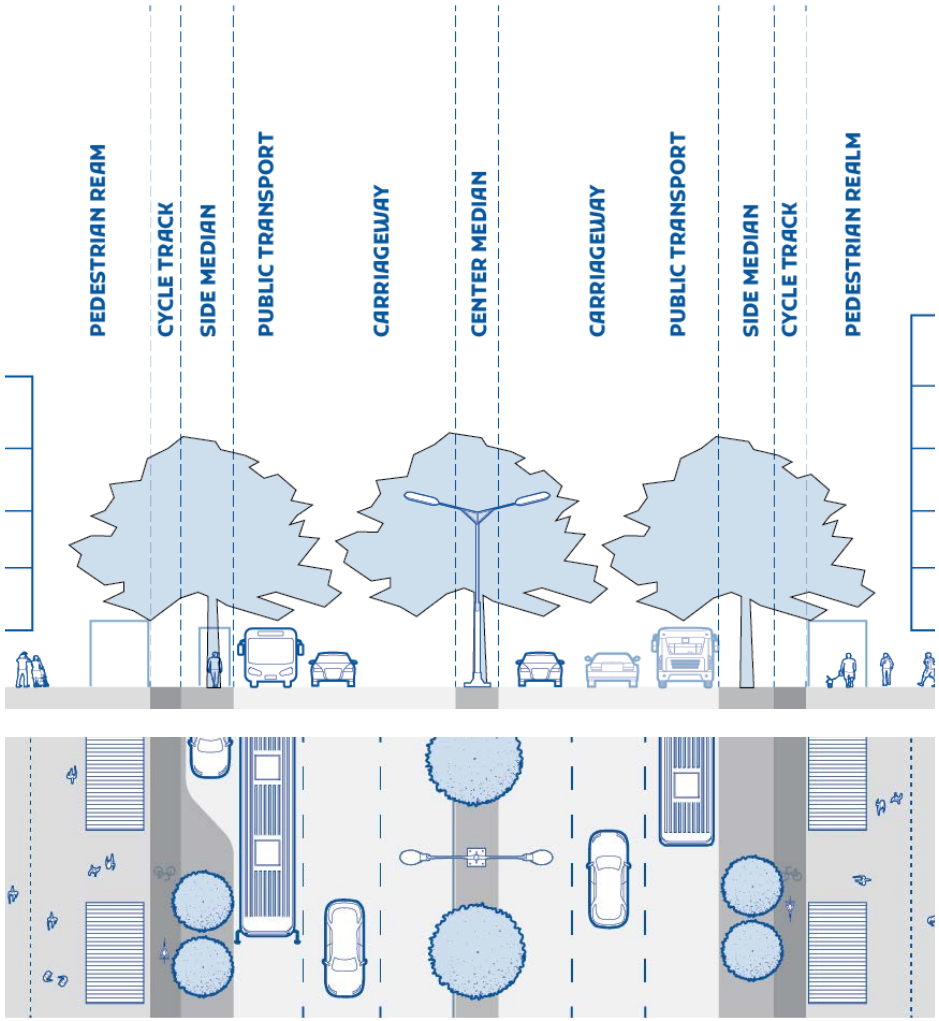
Arterial Streets are the largest street type established in this Manual. Arterial Streets are generally found in areas containing or designed for the highest development intensities.

Arterial Streets are identifiable by their greater number of travel lanes, greater design speeds, extra wide sidewalks, and other additional standards and guidelines that ensure ultimate user safety while promoting walkability and an active public realm.

Arterial Streets streets are characterized by a high density of medium to high rise buildings, greater design standards for pedestrian spaces, open spaces integrated with the streetscape and micro-mobility infrastructure. Public transit service should be frequent and with high capacity, preferably using dedicated BRT lanes.

The following table summarizes the required and recommended design standards and guidelines for Arterial Streets, based on the Road Engineering Design Manual (2019) issued by the Ministry of Municipal and Housing on 11/04/1441 AH, based on Article (48) of the Municipalities and Villages Law issued by Royal Decree No. (M/5) dated 21/02/1397 AH, Saudi Highway Code (2023) issued by the General Authority for Roads, based on the organizational arrangements of the General Authority for Roads issued by the Council of Ministers Resolution No. (14) dated 04/01/1444 AH. Details on the material provided in this table and additional standards and guidelines that apply to Arterial Streets are provided in the sections below, to be implemented wherever possible.

	Arterial Street	In accordance to Road engineering Design Manual	
Criteria	Standard Design	Shared Bike Lane	No Public Transit
Design speed (max)	80 km/hr	80 km/hr	80 km/hr
Street Key Dimensions			
Pedestrian Realm	7m (on each side)	5.5m (on each side)	7m (on each side)
Setback (optional)	1.5m	1.5m	1.5m
Sidewalk (min)	2.5m	3m	2.5m
Furnishing Zone (optional)	1m	1m	1m
Cycle Track (min)	1.5m	n/a	1.5m
Edge (min)	0.5m	0.5m	0.5m
Side Median (min)	n/a	n/a	n/a
Frontage Lane	n/a	n/a	n/a
Public Transit / Travel Lane (min)	n/a	n/a	n/a
Parking (exact)	n/a	n/a	n/a
Roadway	9.5m (on each side)	8m (on each side)	9.5m (on each side)
Central Median (min)	1m	1m	1m
Lane width	2 x 3m	3m	2 x 3m
Emergency Lane	n/a	n/a	n/a
Curb Lane / Bus / LRT / BRT (optional)	3.5m	4m	n/a
Bicycle	n/a	Shared w/ curb lane	n/a
Parking / Flex Lane	n/a	n/a	2.5m
Public Transport			
Bus Access	Yes	Yes	n/a
LRT	n/a	n/a	n/a
Bus Access (exact)	3.5m	4m	n/a
LRT (exact)	n/a		n/a
Streetscape Materials			
Pedestrian Realm	Unit pavers (concrete, brick, cut stone)	Unit pavers (concrete, brick, cut stone)	Unit pavers (concrete, brick, cut stone)
Parking Zone	n/a	n/a	Concrete unit pavers
Roadway	Asphalt	Asphalt	Asphalt
Pedestrian Crossing	Concrete with min 70% visual contrast	Concrete with min 70% visual contrast	Concrete with min 70% visual contrast
Lighting and Furniture	see Guidelines		
Plantings	see Guidelines		



Indicative Arterial Street Section and Plan.

Indicative Arterial Street.

4.6.1 Overall functionality

(1) Design Arterial Streets to accommodate vehicular travel at speeds up to 50 kilometers per hour.

(2) Arterial Streets may have a total right-of-way (the width of the area between plot lines) between 25 and 45 meters.

4.6.2 Travel lanes

(1) Arterial Streets should be designed to accommodate two-directional vehicular travel. One-way vehicular travel is not permitted.

(2) The number of travel lanes provided must be the minimum number required to respond to the traffic needs. Up to three travel lanes moving in either direction may be provided along Arterial Streets. No more than 6 vehicular travel lanes are permitted.

(3) The width of each travel lane should be between 2.7 and 4 meters. Narrower travel lanes are preferred to help control the speed of traffic.

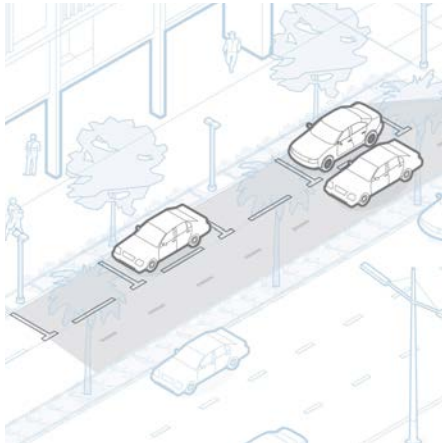
(4) Lanes used for public transit (including BRT, LRT, and buses) should be 4 meters wide.

(5) Where more than four travel lanes are provided, a landscaped median central at least 2 meters wide is required to provide pedestrian refuge opportunities, slow traffic speeds, provide shade, and improve stormwater management.

4.6.3 On-street parking

(1) Where on-street parking is provided, it must be accessed by a designated manoeuvre lane. This travel lane should be separated from other travel lanes with a physical barrier, such as a landscaped median, and should be between 2.4 and 3.4 meters wide.

(2) On-street parking may be parallel or angled at 45 degrees.



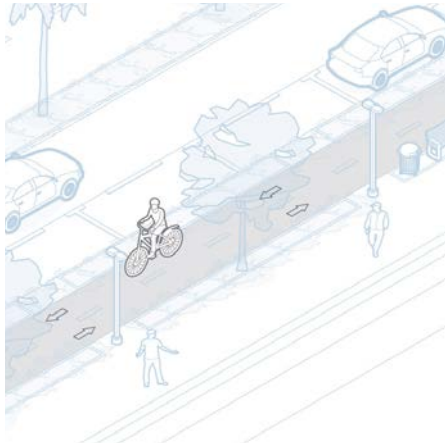
Separated drive lanes for on-street parking.access.
[Guideline 4.6.3 (1)]

4.6.4 Bicycle facilities

(1) Bicycle lanes are required along Arterial Streets.

(2) Bicycle lanes must be separated from vehicular travel lanes by a physical barrier at least 1 meter wide.

(3) Where on-street parking is provided, bicycle lanes should be located between the on-street parking and the sidewalk.



Provide two way bicycle lanes, on the waterfront side.
[Guideline 4.6.4 (2)]

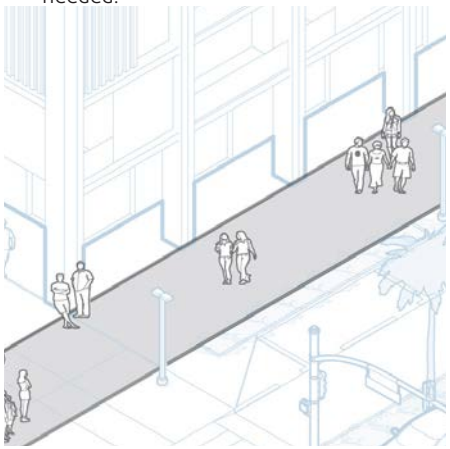
4.6.5 Sidewalks and pedestrian amenities

(1) Sidewalks should have the widest possible pedestrian clearway to increase walkability, accessibility, and public realm. The pedestrian clearway on Arterial Streets should be at least 2.5 meters wide. Pedestrian amenities or landscaping must not obstruct this clearway.

(2) Pedestrian amenities, including seating and trash bins, should be provided frequently in the furniture zone (the area between the sidewalk and the curb).

(3) A furniture zone is required and must be at least 1.5 meters wide.

(4) Pedestrian crosswalks should be provided at all intersections. Where the distance between intersections is large, consider also providing mid-block crosswalks as needed.



Sidewalks should have as wide a clearway as possible.
[Guideline 4.6.5 (1)]

4.6.6 Landscaping

(1) Street trees should be provided frequently in the area between the sidewalk and the curb to create shade for pedestrians, cyclists, and parked cars.

(2) Where appropriate, planters should be considered to provide additional landscaping options.

(3) Where a central median is provided, trees are required to be planted in the median.

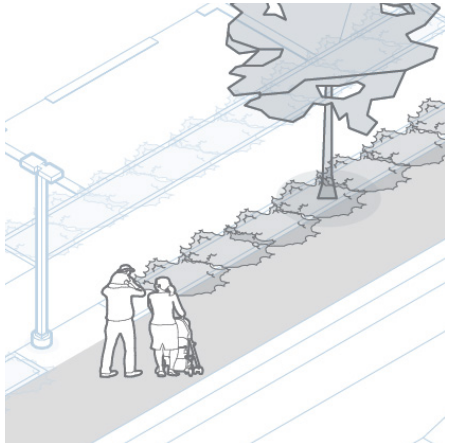
4.6.7 Signage

(1) Wayfinding signage intended to be used by pedestrians or cyclists should not exceed 2 meters in height.

(2) The provision of pedestrian and bicyclist-oriented signage that provides the time in minutes it would take to walk and bike to key locations is highly encouraged.

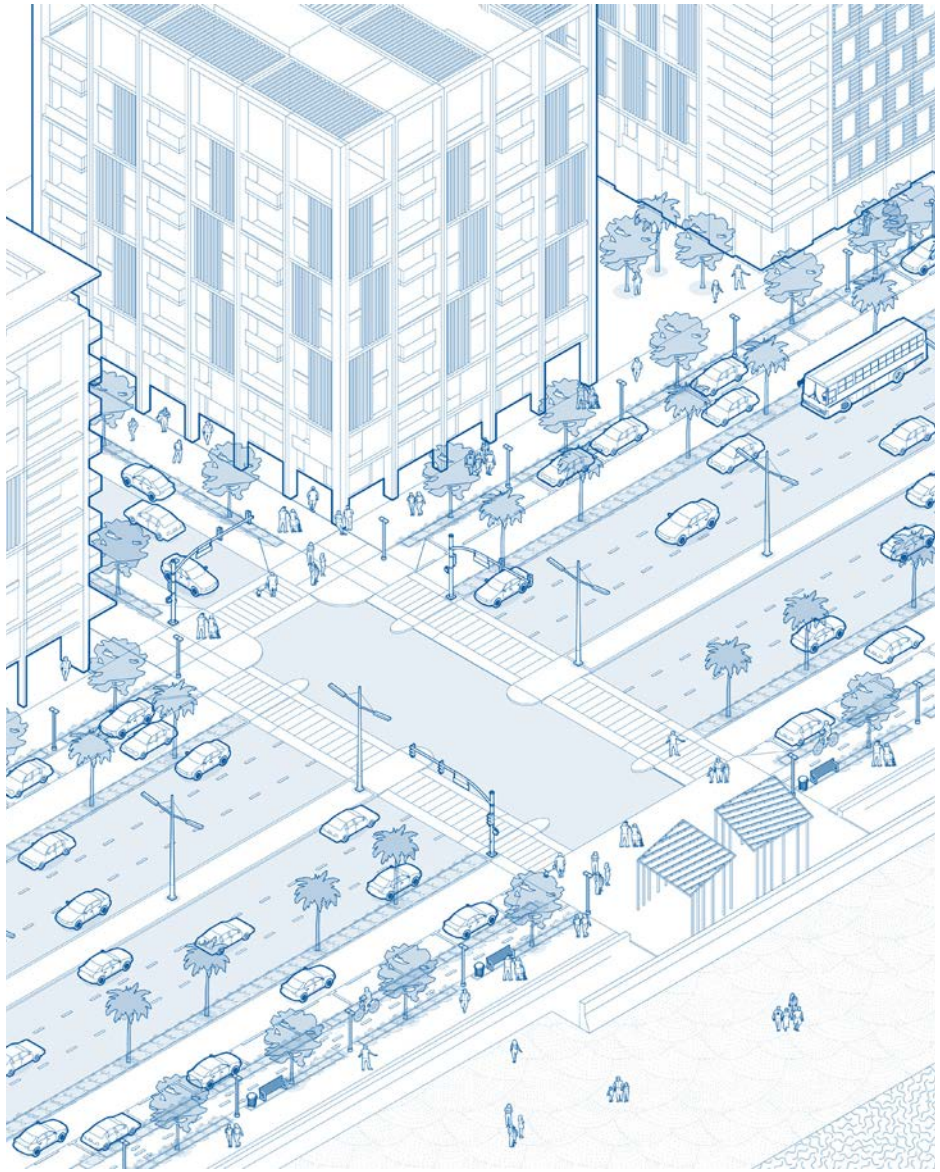
4.6.8 Lighting, utilities and stormwater

(1) No additional lighting, utilities, or stormwater management guidelines or standards apply to Arterial Streets. See Art. 4.2.8 for General Lighting, Utilities, and Stormwater Management Guidelines and Standards that apply to all street types.



Trees and other planting to enhance pedestrian experience.
[Guideline 4.6.5 (1)]

Wayfinding signage not to exceed 2 meters in height
[Guideline 4.6.7 (1)]



Indicative Arterial Street aerial perspective.

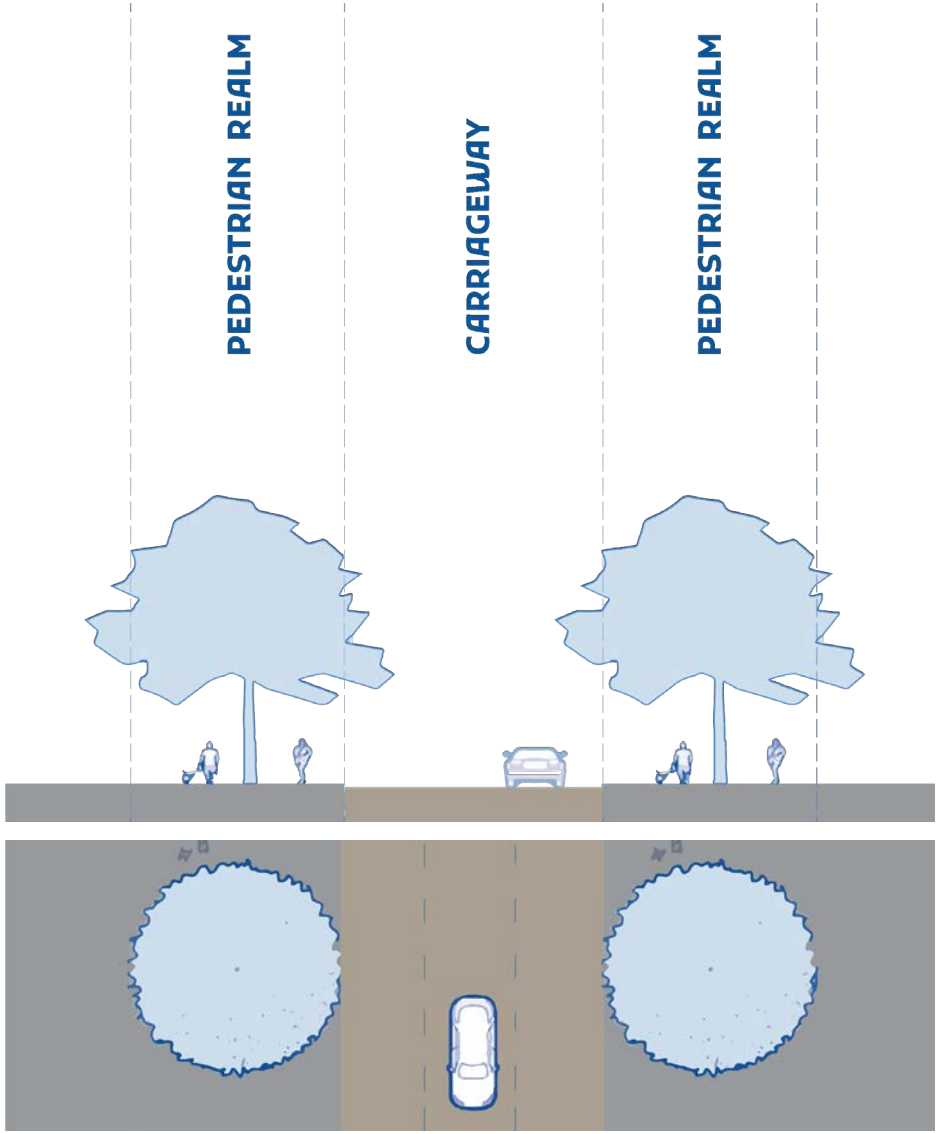
4.7 Streets and Mobility Type 5 - Unpaved Street

Unpaved Streets vary in their size and intensity of use. Ranging from 5.5 to 8 meters, this street type is used in non-urbanised areas, outside of urban and suburban centers.

Unpaved Streets are established to access and navigate to those more remote areas of the DMA Coastline with limited built development. Separate parallel multi-use paths for bicyclists and pedestrians are highly encouraged.

The following table summarizes the required and recommended design standards and guidelines for Unpaved Streets. Details on the material provided in this table and additional standards and guidelines that apply to Unpaved Streets are provided in the sections below.

Unpaved Street In accordance with international best practices	
Criteria	**Standard**
Design speed (max)	50kph
Total curb-to-curb width (min/max)	5.5m / 8m
Travel Lanes	
Number of travel lanes (max)	2
Lane width (min)	2.7m
Transit lane width (exact)	-
Directions of travel	1-way, 2-way
Median	Not required
Median width (min)	-
On-Street Parking	Limited
Angle	Parallel or 45 degrees
Designated travel lane (min/max)	-
Distance from intersection (min)	7m
Bicycle Facilities	Recommended
Sidewalks and Pedestrian Amenities	Recommended
Multi-use path width (min)	Not Required
Furniture zone	Not Required
Landscaping	Recommended
Street trees (in furniture zone)	Recommended
Median trees	-



Example Unpaved Street.

Indicative Unpaved Street

4.7.1 Overall functionality

(1) Design Unpaved Streets to accommodate vehicular travel at speeds up to 50 kilometers per hour. The smaller the street width or more compact the adjacent development, the lower the design speed should be.

(2) Unpaved Streets may have a total right-of-way (the width of the area between plot lines) between 5.5 and 8 meters. The width may be wider than the maximum where turning lanes are added.

4.7.2 Travel lanes

(1) Unpaved Streets may be designed to accommodate one or two-directional vehicular travel.

(2) The number of travel lanes provided must be the minimum number required to respond to the traffic needs. No more than 2 vehicular travel lanes are permitted. An additional turn lane may be provided when necessary.

(3) The width of each travel lane should be between 2.7 and 4 meters. Narrower travel lanes are preferred to help control the speed of traffic.

4.7.3 On-street parking

(1) On-street parking is only permitted along Unpaved Streets.

(2) On-street parking may be parallel or angled at 45 degrees.

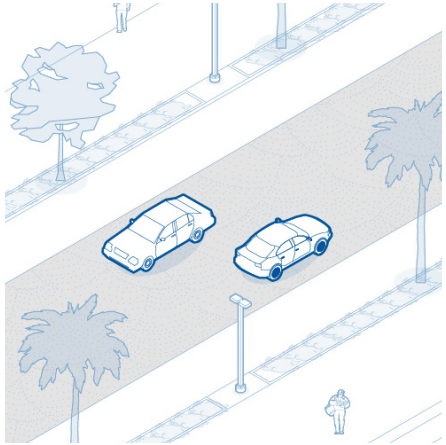
(3) Where bicycle facilities or pedestrian pathways and on-street parking are both provided, the on-street parking spaces should be located between the travel lanes and the bicycle and pedestrian facilities.

4.7.4 Bicycle facilities, sidewalks and pedestrian amenities

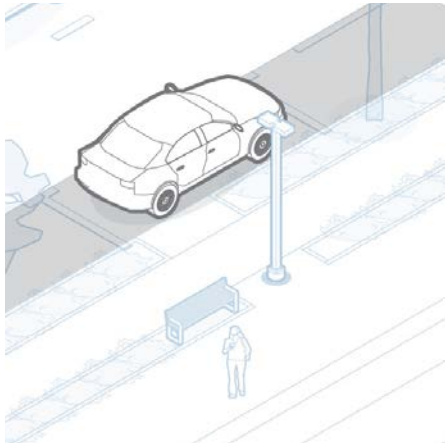
(1) Bicycle lanes and pedestrian pathways are encouraged along Unpaved Streets.

(2) Bicycle facilities and pedestrian pathways are encouraged to be provided as a single multi-use path, to be shared by pedestrians and cyclists. Where a shared multi-use path is provided, it must be at least 2.25 meters wide.

(3) Bicycle facilities and pedestrian paths must be separated from vehicular travel lanes by a physical barrier at least 1 meter. Any pedestrian or cyclist amenities, such as seating, trash bins, or transit shelters, can be located in this space.



No more than 2 vehicular travel lanes are permitted. [Guideline 4.7.2 (2)]



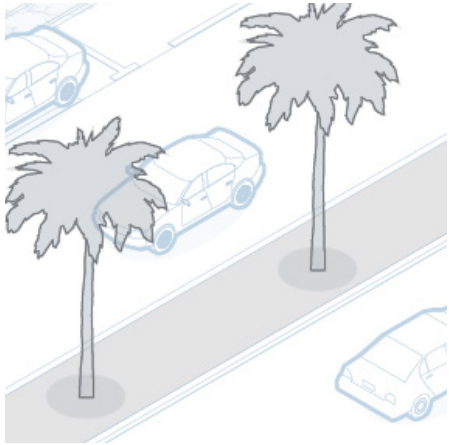
On-street parking located between travel lanes and sidewalks. [Guideline 4.7.3 (3)]

Shared multi-use paths preferred. [Guideline 4.7.4 (2)]

4.7.5 Landscaping

(1) Street trees should be provided in the area between the sidewalk and the curb to create shade.

(2) Where a landscaped median is provided, trees are recommended to be planted in the median.



Trees to be planted when landscaped medians are provided.
[Guideline 4.7.5 (2)]

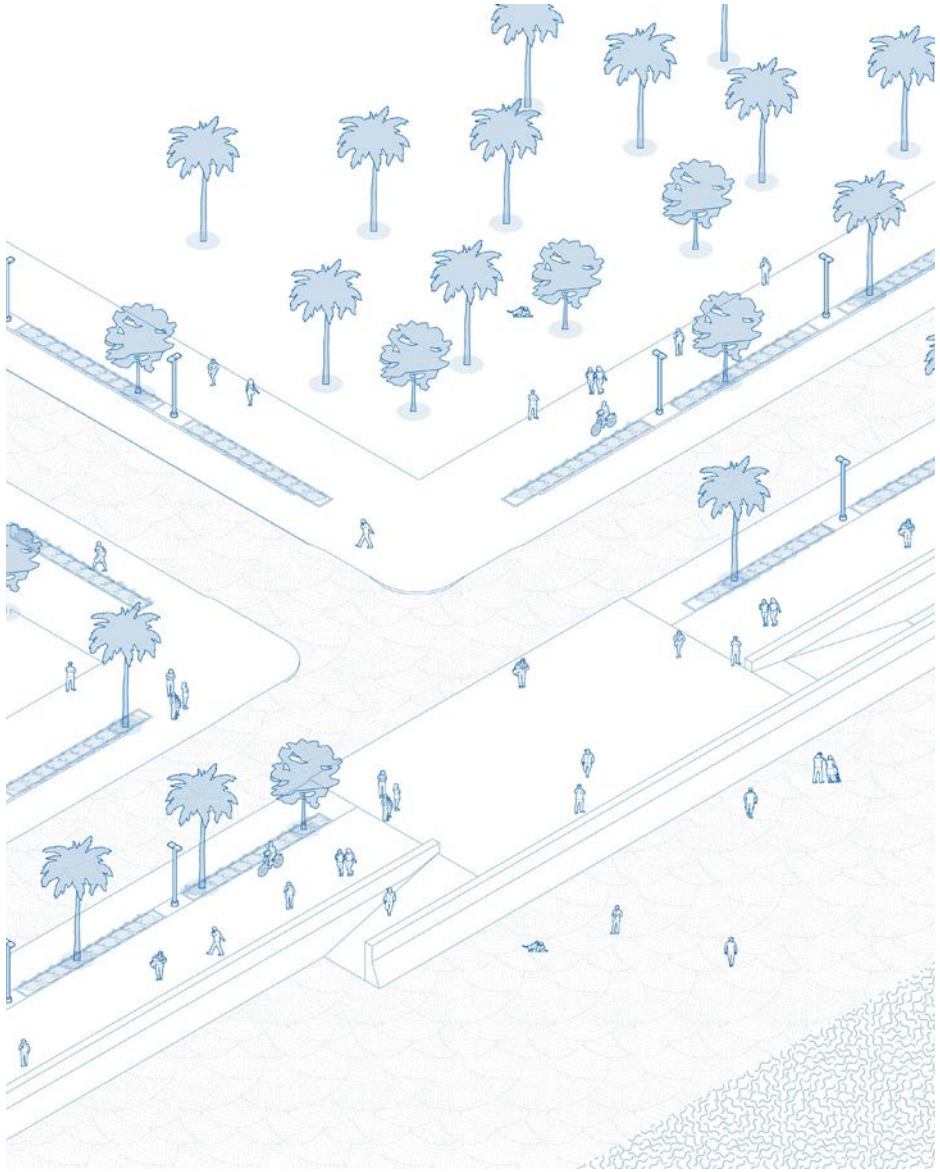
4.7.6 Signage

(1) Wayfinding signage intended to be used by pedestrians or cyclists should not exceed 2 meters in height.

(2) The provision of pedestrian and bicyclist-oriented signage that provides the time in minutes it would take to walk and bike to key locations is highly encouraged.

4.7.7 Lighting, Utilities, and Stormwater Management

(1) No additional lighting, utilities, or stormwater management guidelines or standards apply to Urban Boulevards. See Art. 4.2.9 for General Lighting, Utilities, and Stormwater Management Guidelines and Standards that apply to all street types.



Indicative Unpaved Street aerial perspective.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5 Parks and Open Spaces

5.1 Types of Parks and Open Spaces

Well-designed parks and open spaces at all scales can accommodate and encourage positive interaction of all people across the wide arrays of social, cultural, and economic spectrums. The guidelines and standards contained in this Section aim to guide the creation of parks and open spaces that meet these objectives.

Out of the five types of public spaces and landscapes established by MOMAH*, this Manual establishes three types of parks and open spaces for the Coastline of DMA. Each has unique characteristics and features that may best fit a specific setting. For government agencies, designers, planners, and developers, understanding the applicable type of Park or Open Space will help to best apply the design guidelines established in this Section.

* National Public Realm of Design Manual (NPRDM), 2022.

The other two types are Religious Spaces and Linear Spaces, the latter being matched to "Structural Edge" type of Water Edge (Module 4).

Type 1, Natural Places

- Consisting primarily of natural areas and spaces for passive recreational activities.
- Generally containing minimal or no formal programming for activities, these parks often use more soft-scaping in their design with natural materials and elements, with limited hardscaping.

Type 2, Public Parks

- Often highly designed with formal programming for a variety of activities and uses.
- These parks are often characterized by their use of more hardscaping and highly manicured plantings, when compared to their informal counterparts.

Type 3, Plazas and Squares

- Open public spaces commonly located in urban areas and surrounded on most sides by Built-form or streets.
- Plazas are mostly hardscaped, allowing them to be used as flexible community gathering spaces, contribute in achieving communication and social interactive.

Example of Natural Places.

Example of a Public Park.

Example of a Plaza.

5.2 Design Guidelines and Standards (All Types)

The guidelines and standards provided in this section are recommendations for all types of Parks and Open Spaces, to support the established aspirations for the future of the DMA Coastline. They supplement the design guidelines of NPRDM and should be followed wherever possible.

5.2.1 Harmony with Context

Context refers to the placement of a park or open space within the Coastline and how it connects and interacts with its surrounding urban environment and landscape.

(1) Consider connectivity to adjacent land uses and activities, and the overall urban fabric.

(2) Consider connectivity into any existing or planned "green" network, including parks, trails, types of Water Edge (see Section 6), and expand the overall green network, as well as the pedestrian network.

(3) Locate and orient parks and open spaces to protect and emphasize any views or important sightlines to the waterfront, any landmarks, design features or other focal points on the Coastline or the surrounding areas.

(4) Frame views out from the park towards the waterfront, landmark buildings or major focal points with pathways, landscapes, rows or bosques of trees or topography.

5.2.2 Creating an Identity

Creating an identity refers to the identification and celebration of special features - whether physical, historic, cultural or natural - that make each park and open space unique, to create a sense of place that helps the community engage, connect, and learn.

(1) Incorporate physical, social, cultural and natural features of the Coastline into the design of the Park or open space to attract people, establish an identity and make it a destination or focal point.

(2) Park and open space elements can be designed in a way that reinforces and reflects the architectural style of the area. These elements may include: signage, public art, furniture, building materials, colors, plantings etc.

Example of a linear coastal park ensuring views of the water, while expanding pedestrian networks. [Guideline 5.2.1 (2)]

Example of park placement ensuring skyline views for the public along the water. [Guideline 5.2.1 (3)]

Example of inspiration from the cultural and heritage values of the region's natural and man-made environment. [Guideline 5.2.2]

5.2.3 Programming

Programming refers to the specific and detailed activities or uses planned for a park or an open space. Programming largely determines how the space will be used and is integral in creating a vibrant, active, and safe place for park users.

(1) Provide for a variety of uses, activities and spaces, both active and passive, both enclosed and open. This allows the visitor or user to choose the type of environment they want to experience. Include opportunities for interactive experiences.

(2) Create spaces that are multifunctional and flexible and provide opportunities for social interaction.

(3) Create subspaces within larger spaces. Design for easy natural surveillance of all spaces. Avoid creating secluded or "hidden" areas.

(4) Use materials that add value to the programmed activity – such as softer surfaces for running, exercising or children's play areas.

(5) Consider movement of sun and shade, as well as wind patterns when locating uses and activities.

(6) Consider incorporating public art, which can be interactive. See Article 7.11 for additional details.

Defining a park space with structures creates an urban "living room". [Guideline 5.2.3 (1)]

Use materials that add value to programmed activity – such as soft surfaces for children's play areas. [Guideline 5.2.3 (4)]

Consider incorporating interactive design features and public art. [Guideline 5.2.3 (6)]

5.2.4 Pathways

Pathways refer to the network of hardscaped and softscaped access routes throughout a park or open space. Pathways generally refer to pedestrian circulation corridors but can include bicycle and multi-modal lanes.

(1) Provide hardscaped pathways that traverse the park or open space and link to key destinations and design features such as waterfront (and beaches in particular), sports fields, shelters, seating areas, playgrounds and similar facilities.

(2) Use impervious materials where needed to help with stormwater management.

(3) Create a hierarchy of pathways, using primary paths as overarching organizing elements and secondary paths to link features throughout the park or open space.

(4) Primary paths may vary according to the adjacency, but should be of a minimum width 2.0 meters, with non-slip materials to accommodate all users, including those in wheelchairs, hardscaped and may be more formal in their design than secondary paths.

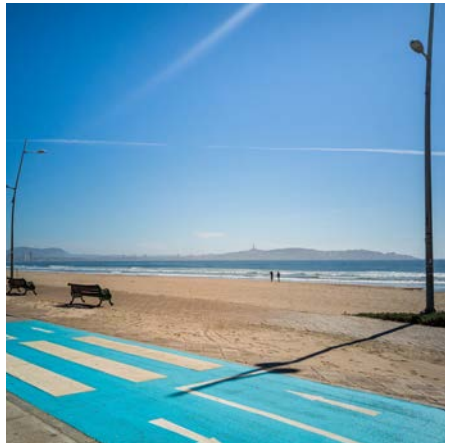
(5) Consider variation of pavement materials (tiling) and colors to contribute to directing visual movement and movement of individuals, and clarifying the type of activity and its changes. Use partly shaded areas and light colors to improve the climate.

(6) Incorporate bicycle and multi-modal pathways through the park or open space that connect with any existing bicycle and multi-modal network of the surrounding area. Clearly identify all pedestrian and cyclist paths and crossings.

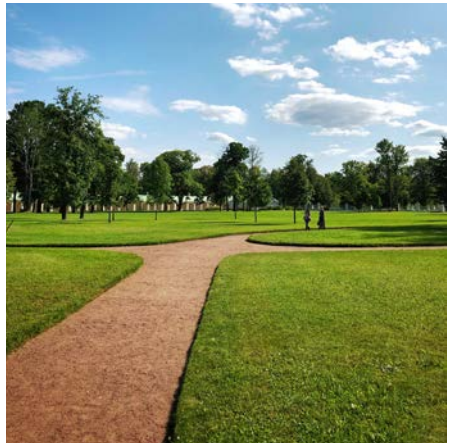
(7) Create visual interest and help guide navigation by framing views and directing attention to landscape features along pathways. Where necessary, include screens, fences and walls to define the pathways.

(8) All pathways should be unobstructed by lighting, signage, plantings, or other furnishings or design elements.

Pedestrian pathways on the coastline. [Guideline 5.2.4 (1)]



Incorporate bicycle and multi-modal pathways.
[Guideline 5.2.4 (5)]



Provide unobstructed hardscaped pathways.
[Guideline 5.2.4 (7)]

(9) Beware of differences in surface grades along pathways to avoid potential injury. Single steps along pathways should be avoided; incorporate ramps as needed.

(10) Provide multiple clearly identifiable ingress/egress points along the park or open space perimeter for pedestrians.

(11) Pedestrian entrances should be separate and clearly distinguishable from vehicular entrances (service and emergency vehicles etc.).

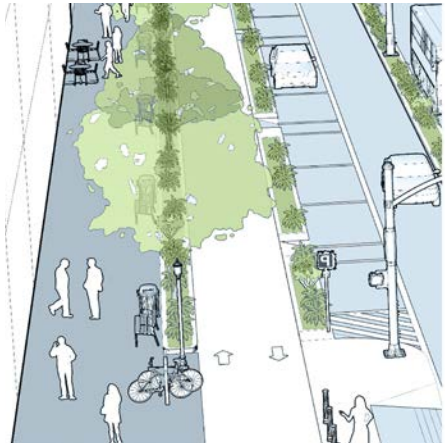
(12) Locate pedestrian entrances near transit centers (bus stops) to encourage alternative modes of transportation to the park or open space.

(13) Universal accessibility should be a design consideration in all pathways; consult design elements of the convention as the Rights of Persons with Disabilities on the American Disabilities Act (ADA).

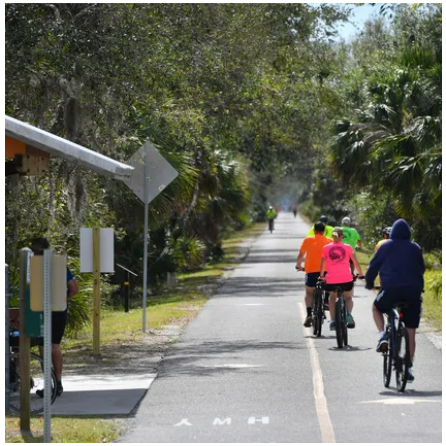
(14) Pedestrian pathways should be a minimum of 2 meters wide. Shared pedestrian and bicycle paths should be at least 3.5 meters wide.

(15) A maximum gradient of 1:20 should be used on all pedestrian routes. Gradients above this should use steps and integrated ramping.

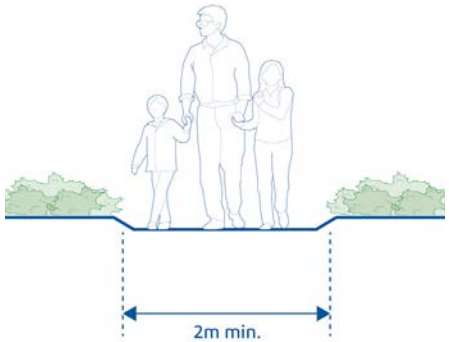
(16) Furnishings (lighting posts, signage and litter bins, bollards, benches, etc). should be located along paths.



Sidewalks and landscaping should be provided along every street, and be as wide as possible. [Guideline 5.2.4 (6)]



Incorporate bike and multi-modal pathways. [Guideline 5.2.4 (13)]



Primary pedestrian pathways should be at least 2 meters wide and must be unobstructed by lighting, seating, or other furnishings or design elements. [Guideline 5.2.4 (13)]

Provide furnishings along pathways. [Guideline 5.2.4 (15)]

5.2.5 Seating

Seating guidelines provide recommendations for the provision of furniture or other design elements to be used as seating, to increase the overall usability and enjoyability of park spaces.

Seating (benches etc.) plays an important role in shaping the experience of users of parks and public places -- places for informal gathering, meeting, rest and relaxation

(1) Provide a variety of seating areas and types for groups of all sizes and people of all abilities, and to allow for different types of social interactions.

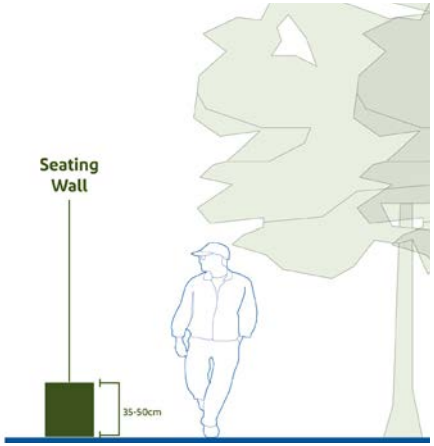
(2) Seating should be located where people are likely to gather or wait, and also at regular intervals to provide rest points. Consider sun and shade patterns.

(3) Provide both movable and fixed seating options to increase the flexibility of a space. Minimum seating wall heights, 0.35 meter, maximum 0.50m meter.

(4) Locate fixed seating options with the backs along the edges of the space to increase the sense of user safety.

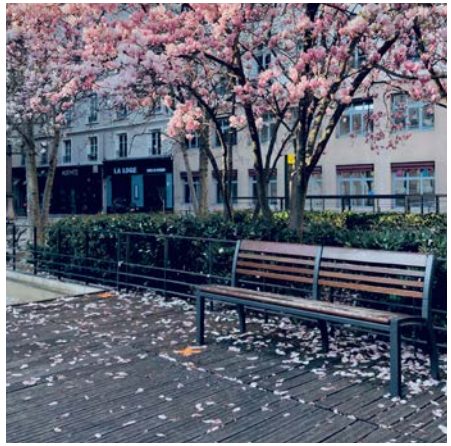
(5) Seating should be consistent in design character with other park elements, using similar materials and styles.

(6) To avoid heat and discomfort, materials used for seating must be natural, light-colored, resistant to the climate, be easy to maintain and not to damage clothing.



Seating wall must be between 35 and 50 cm in height. [Guideline 5.2.5 (3)]

Provide moveable and fixed seating options to increase the flexibility of a space. [Guideline 5.2.5 (3)]



Provide moveable and fixed seating options to increase the flexibility of a space. [Guideline 5.2.5 (3)]

5.2.6 Landscape and Hardscape

Landscape Standards lay out general guidelines for parks and open spaces, although not all will be applicable in every case.

(1) Softscape and hardscape design should always be context sensitive, seeking to connect to adjacent land uses and encourage accessibility.

(2) Materials and designs should be adaptive to climate change and resilient to extreme heat. Both green and blue infrastructure should be designed to work with local environmental and ecological conditions.

(3) These guidelines should also be considered to apply to planted areas within the public right-of-way (see Mobility Guidelines), such as boulevards and medians.

(4) Landscape affects the day-to-day life of citizens and visitors. Specifically, it can provide comfort, physical and mental health benefits, enhancement of micro climatic conditions, habitats for local wildlife, offsets to carbon emissions in the area, and reduction in flooding.

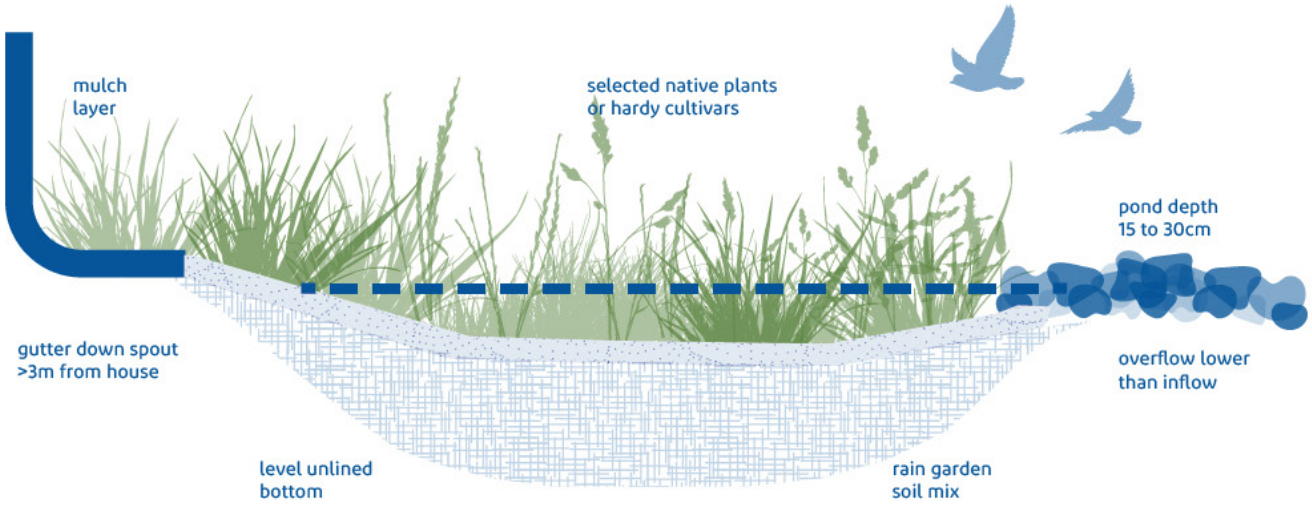
(5) Enhancing the existing public space network and planning for high quality public spaces in new residential areas is a critical goal.

(6) In hot and arid climates, such as the Kingdom of Saudi Arabia, it is important that hardscape surface materials (non-vegetative, hard landscape elements) be able to withstand high temperatures, intense sunlight, low humidity, and minimal rainfall. These guidelines focus on elements of materiality, placement and performance requirements.

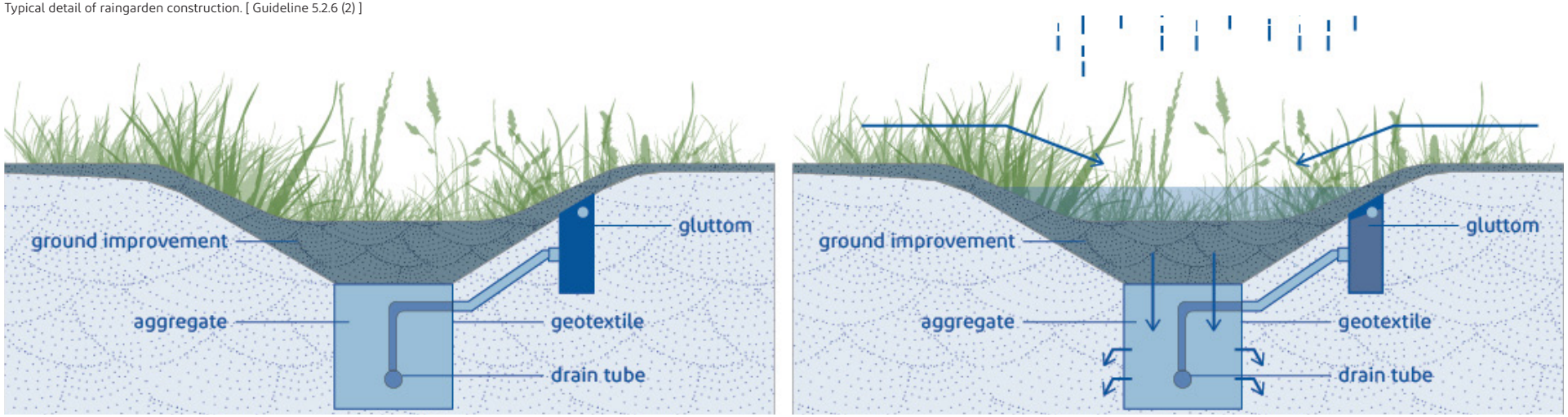
Enhancing the existing public space network and planning for high quality public spaces in new residential areas.
[Guideline 5.2.6 (5)]

Enhancing the existing public space network and planning for high quality public spaces in new residential areas.
[Guideline 5.2.6 (5)]

Enhancing the existing public space network and planning for high quality public spaces in new residential areas.
[Guideline 5.2.6 (5)]



Typical detail of raingarden construction. [Guideline 5.2.6 (2)]



Typical detail of bioswale. [Guideline 5.2.6 (2)]

5.2.7 Structures

Structures in parks and open spaces refer to buildings and other elements including pavilions, restrooms, maintenance facilities, storage facilities, covered gathering areas, children's playground equipment, prayer areas, kiosks, and more.

(1) Buildings located in parks and open spaces should follow the applicable regulations and guidelines of the types of Built-Form (see Section 3), particularly Public (Type 6).

(2) All structures should be located to enhance and not interfere with sightlines or views. Structure entrances must be connected to paved pathways at least 1.25 meters wide for accessibility.

(3) Create shaded outdoor areas, allowing the park or open space to be more usable and enjoyable.

(4) Consider the surrounding architectural styles when designing structures. Use unifying architectural elements (features, colors, materials, etc.) across all structures in a park or open space. Use sustainable and locally-sourced materials where possible.

(5) Restrooms should be located along primary paths to allow families with children, people with disabilities, and older adults to easily find and use the facilities.

(6) All structures must be maintained to upkeep visual appearance and functionality.

(7) Additional guidelines for prayer areas:

   a. Prayer areas should be mostly enclosed with walls, plantings, or other screening materials.

   b. Prayer areas should be covered to provide a comfortable and shaded area for users.

   c. Prayer areas should be located in spaces that are relatively private and secluded if possible, away from primary centers of activity, to help create a comfortable and calming prayer environment.

Play areas to promote physical activity.
[Guideline 5.2.7]

Create shaded areas with structures that match the architectural style of the surroundings. [Guideline 5.2.7 (4)]

Use native plant species only.
[Guideline 5.2.8 (1)]

5.2.8 Planting

Planting refers to the use of natural plant materials in landscape design. Planting can be used to improve the overall usability, visual appearance, and environmental health of a park or open space.

(1) Use a variety of native plants to provide a mix of colors, textures, heights, and fragrances. Non-native species are not permitted.

(2) Ensure that soil and other environmental conditions are supportive of the selected plant to encourage healthy growth. Distinguish sub-spaces within larger spaces as design features.

(3) Use a variety of plants that bloom at different times throughout the year to create a year-round landscape; consider shape of plants and their aesthetic impact in the design process..

(4) Consider plant size at maturity when selecting plant materials, how the plant may affect sightlines, provide shade, and other functions when it is at full size.

(5) Where parks or open spaces are adjacent to streets, the placement of plants should not interfere with sightlines for drivers or pedestrians.

(6) In Public ("Type 2"), plantings should be maintained and manicured as needed to prevent overgrowth. In Natural Places (Type 1), plantings may be less manicured.

5.2.9 Lighting

Lighting is a key design element for creating safe and visually appealing spaces, and extends the usable time of outdoor spaces.

(1) Lighting should be designed to ensure all usable areas are well-lit, to increase safety and extend the space's usability.

(2) Consider lighting as a placemaking tool. It can define a space's boundaries and atmosphere.

(3) Pathways must be illuminated. Light poles should be spaced in order to illuminate the entire pathways.

(4) Light poles must be kept to a height between 3.0 and 6.0 meters.

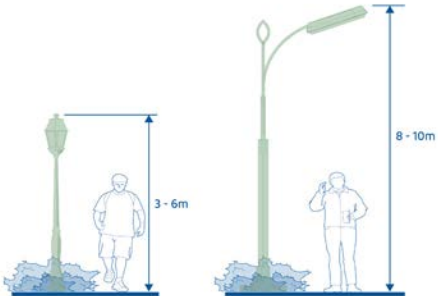
(5) Lighting must be shielded to protect the dark sky and must not create a substantial amount of upward-directed lighting.

(6) Avoid too bright lighting that creates blinding glare or deep shadows.

(7) Use lighting to highlight the aesthetic features of the overall design or create clear sightlines to restrooms, playgrounds, trees, public art, water elements and architectural features. Wayfinding signage must be illuminated.

Use lighting to increase safety and extend daily usability. [Guideline 5.2.9 (1)]

Illuminate pathways for safety and visibility. [Guideline 5.2.8 (3)]



Light poles must be kept to a height between 3.0 and 6.0 meters. [Guideline 5.2.9 (4)]

5.2.10 Screening

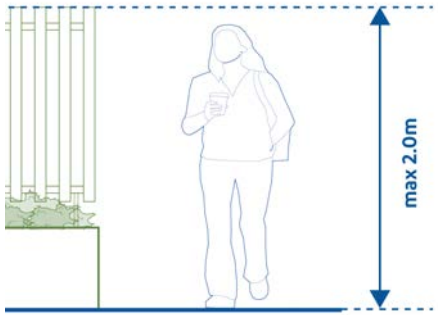
Screening refers to the creation of a physical barrier between spaces to lessen any negative visual, audible, or other impacts of a space on neighboring areas.

(1) Screening can be created with plants, walls, fences, or other structures and can be used to create "subspaces" within larger areas. Maximum screen height is 2.0 meters.

(2) Use screening to define utility areas and restrict public access where required. Minimize perimeter fencing to increase park accessibility and safety.

(3) Screens should also be used to minimize the effects of park uses on any sensitive neighboring land uses, such as residences.

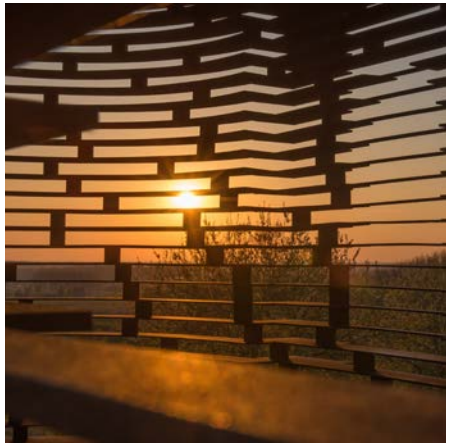
(4) Use materials that fit in with other materials used throughout the park, either man-made or natural.



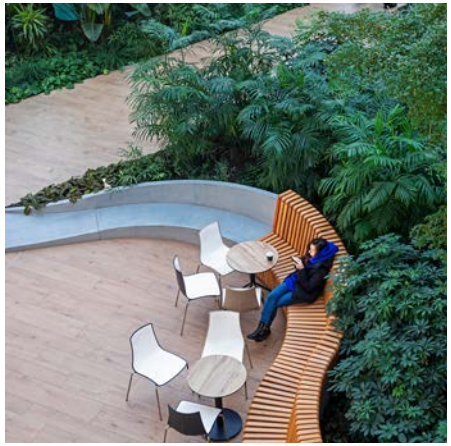
Maximum screen height is 2.0 meters.
[Guideline 5.2.10 (1)]

An example of screening being used to create 'subspaces'.
[Guideline 5.2.10 (1)]

An example of screening being used to create 'subspaces'.
[Guideline 5.2.10 (1)]



Screening can be created with plants, walls, fences, or other structures. [Guideline 5.2.10 (1)]



An example of screening being used to create 'subspaces'.
[Guideline 5.2.10 (1)]

An example of screening being used to create 'subspaces'.
[Guideline 5.2.10 (1)]

5.2.11 Signage and Wayfinding

Signage and wayfinding guidelines provide guidance for the type and placement of signs for building identification, branding, and wayfinding in a cohesive style that makes navigating parks and open spaces easy, safe and enjoyable for all users.

(1) Provide maps or directory information at entrances and pathway intersections. Emphasize primary entrances, restrooms, and key design park layout features.

(2) Avoid placement of signage in locations that interfere with pedestrian or cyclist movements and sightlines.

(3) Provide a consistent hierarchy of signage and wayfinding elements, using consistent fonts, text styles, colors, and similar elements. Illuminate signage in areas of high night-time usage.

(4) Use materials that are durable and easily-maintained with non-reflective matte finish on all signage. Incorporate green-certified and locally sourced materials.

(5) Clear road signs should be provided to give sufficient information for drivers and pedestrians to determine their routes.

(6) Signage should not clutter the streetscape. Where practicable, rational layouts with shared mounting poles should be adopted.

Provide maps or directory information at entrances and pathway intersections. [Guideline 5.2.11 (1)]

Simple, clear, hierarchical [Guideline 5.2.11 (3)]

Simple, clear, hierarchical [Guideline 5.2.11 (3)]

Strong identifying style. [Guideline 5.2.11 (3)]

Use materials that are durable and easily maintained [Guideline 5.2.11 (4)]

Place maps and directories at key locations. [Guideline 5.2.11 (1)]

5.3 Parks and Open Spaces Type 1 - Natural Places

Natural Places and Landscapes often feature organically placed pathways and opportunities for people to reconnect with nature. They may be applied anywhere but are often located in or near existing natural areas. The ideal size varies on the availability of such natural areas.

A natural place in the form of an informal park is the largest and most sensitive park typology. It acts as a regional attractor, potentially drawing users from multiple municipalities. It has a natural, ecological value adjacent to water's edge and can include natural, underdeveloped landscapes that are generally restricted to public use or accessible under strict guidance.

Nature Reserve Parks also fall under this typology. They offer environmental value and simultaneously facilitate major recreation activities.

5.3.1 Harmony with Context

(1) Context refers to the placement of an informal park within the Coastline and how it connects and interacts with its surrounding natural environment.

(2) Consider connectivity to adjacent land uses and activities, and the overall urban fabric.

(3) Consider connectivity into any existing or planned "green" network, including parks, trails, types of Water Edge (see Section 6), and expand the overall green network, as well as the pedestrian network.

(4) Locate and orient an informal park to protect and emphasize any views or important sightlines to the waterfront, any landmarks, design.

Ecopark, Dammam.
[Guideline 5.3.1 (1)]

5.3.2 Programming

(1) Consider including in an informal park, passive recreational spaces, opportunities to connect with nature, some educational facilities or features.

(2) Spaces in Natural Places should be planned with the preservation of the natural area as the number one priority. Any development involving the removal of trees or other severe impacts on the natural landscape is strongly discouraged.

(3) Recreational spaces should be dedicated primarily to passive or unstructured recreation activities.

(4) Consider incorporating more natural materials and colors into the design of recreational equipment and children's play areas.

Programmed activities may be formal or informal.
[Guideline 5.3.2 (1)]

Natural materials and colors into the design of recreational equipment [Guideline 5.3.2 (4)]

5.3.3 Pathways

(1) Pathways in an informal park can be more organic than other park types. Pathways that curve and flow with the topography and landscape of the park are encouraged.

(2) If use is made of gravel for primary pathways, it should be compacted enough for easy accessibility by users with wheels.

(3) For secondary pathways, softscaping materials that complement the natural environment, such as compacted dirt or gravel, are preferred.

5.3.4 Structures

(1) Buildings and structures should be limited as much as possible, to preserve the natural landscape.

5.3.5 Planting

(1) Plants in an informal park can be less manicured, and left to grow more naturally than is appropriate in a formal park or plaza.

5.3.6 Screening

(1) Where they are absolutely necessary, other than natural fences should be , minimal in height and never exceed 2 meters in height.

(2) Plants, and other naturally occurring elements, should be strongly encouraged to be used to create screening elements where possible, rather than man-made elements.

5.3.7 Sustainable and Ecological Design

(1) Construction of buildings, structures and impervious surface area should be limited, to maintain and protect the natural ecosystems and stormwater management of the area.

Use softscaping materials that complement the natural environment. [Guideline 5.3.3 (3)]

Plants in an Public park can be less manicured, and left to grow more naturally. [Guideline 5.3.5 (1)]

Planting to accommodate biodiversity. [Guideline 5.3.7 (1)]

Example of a Nature Reserve Park.

5.4 Parks and Open Spaces Type 2 - Public Parks

5.4A Public Parks

Public Parks may be applied anywhere but are often located in or near more urban settings. They can range from small neighborhood garden to a multi-hectare DIstrict Park that can accommodate a large group of recreational activities.

Public parks may include a mixture of both hardscaping and softscaping materials, with a formal programming of spaces for a variety of activities and uses.

5.4A.1 Harmony with Context

(1) Context refers to the placement of a Public Park within the Coastline and how it connects and interacts with its surrounding urban environment and landscape.

(2) Public Parks should generally be easily accessible by the means of public transport from of urban areas or neighborhoods. Where possible, connections to adjacent parks, natural areas, or pedestrian networks should be made.

(3) Public Parks should be oriented to incorporate any city-scale community facilities or public uses (libraries, recreation centers, etc.) into the overall park design.

(4) Where a Public Park is adjacent to the waterfront, it should treat the waterfront as a design feature, and allow easy public access to and viewing of the water.

5.4A.2 Programming

(1) Provide a variety of spaces programmed and designed for a variety of activities, including active and passive recreation, such as gathering spaces, both informal and formal, sports and recreational facilities, open air spaces for large community events etc.

(2) Create spaces that are flexible in use, both planned and spontaneous, to be used for a variety of activities, and for all age groups, including play areas for children.

Where a Public Park is adjacent to the waterfront, it should treat the waterfront as a design feature.
[Guideline 5.4A.1 (4)]

Provide a variety of spaces programmed and designed for a variety of activities.
[Guideline 5.4A.2 (1)]

Provide a variety of seating types and locations to create spaces for multiple types of passive recreation.
[Guideline 5.4A.4 (1)]

(3) The following regulations and guidelines apply to programmed spaces for sports, including sports fields and courts:

a. Where possible, design sports fields and courts for multiple sports activities, so no space is dedicated to a singular use. For example, a single grass field can be designed to be used for football, lacrosse and cricket. Tennis courts can also be used for pickle-ball courts and basketball.

b. Consider locating children's playgrounds within eyesight of sports fields and courts, to allow families with children playing sports to watch the game while keeping other children entertained on the playground.

c. Consider providing shaded seating areas for both players and spectators.

d. Consider locating food kiosks or vendors near sports fields.

e. Consider locating publicly accessible emergency medical equipment and call-boxes nearby, including defibrillators and first-aid kits.

f. Ensure access to free drinking water is provided nearby.

g. Ensure that site grading, surface materials and drainage systems are designed to adequately manage stormwater on site.

5.4A.3 Pathways

(1) Primary pathways should be hardscaped and provide direct connections to key park features and facilities.

5.4A.4 Seating

(1) Provide a variety of seating types and locations to create spaces for multiple types of passive recreation, including social gatherings.

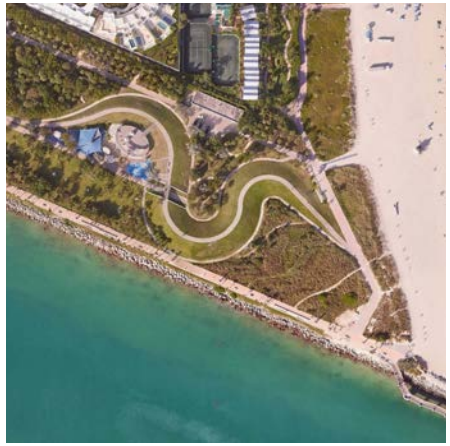
5.4A.5 Planting

(1) Plants should be highly maintained and manicured.

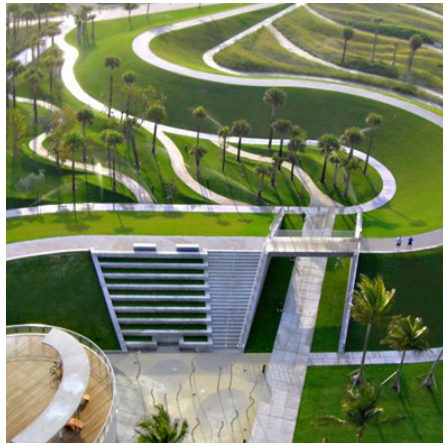
(2) Grassy areas dedicated to sports fields and other recreational activities must be maintained to accommodate the designated activity.

5.4A.6 Screening

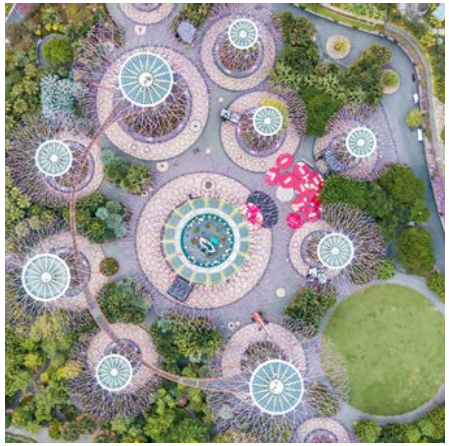
(1) Walls and fences are not recommended for Public Parks, but where they are necessary they should not exceed 2.0 meters in height (except where required for specific sports or recreation activities.



Example of a Public (applied to all) Park.



Example of a Formal Park.



Example of a Formal Park.

5.4B District Park

A District Park is used mainly by the city's local population, and serves multiple neighborhoods offering amenities of a broader scale than those provided in a neighborhood level. It combines daily use and district-wide public function while offering active and passive recreational uses. It also offers a variety of sports, recreation and events infrastructure, playground areas, formal and informal picnic facilities.

5.4B.1 Size, Location and Access Guidelines

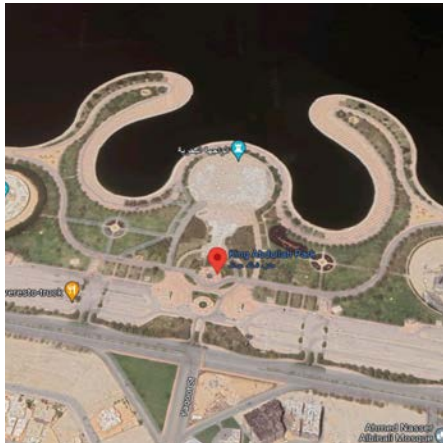
(1) District Parks should generally be between 5 ha and 10 ha in size, although size may vary subject to location and content of district-scale attractions or transit nodes.

(2) Location needs to ensure district and city-wide accessibility.

(3) District Parks should primarily cater to residents within a 2 km walking distance. Some facilities may attract people from beyond the district.

(4) The main entrance to a District park should be located on an Arterial, Collector, or Local Street.

(5) Where practical, entrances should be located close to public transit.



Example of District Park: King Abdullah Park, Dammam.

5.4B.2 Design and Programming Guidelines

(1) District Parks should have the capacity to host large user groups.

(2) District Parks should buffer the impacts of main roads on adjacent land uses, especially housing.

(3) Facilities should emphasize quality, uniqueness, and flexibility for diverse range of uses, accommodating different recreational activities.

(4) Uses should be multi-functional, targeting multiple users and relevant to the character of the context area.

(5) District Parks should include trees and quality landscaping aimed to provide shade.

Example of District Park: Eye-level view.

(6) A water promenade should feature along the coast line to ensure direct access to water views. The promenade should contain walking paths, cycle and mobility lanes, seating places, pocket of resting places, shading elements, and where possible a series of small scale retail kiosks.

(7) Install minimum one bench per 100 meters of linear path.

(8) Incorporate at least two play areas targeted to different age groups.

(9) Parking provision should be made main and secondary entrances.

(10) Ensure all plants are drought-tolerant hardy species, wind resistant, with a preference for native grasses/ground covers/shrubs. Irrigation should be considered for initial establishment purposes only.

(11) Plant at least one tree per 50 square meters of green area.

(12) An 80:20 ratio between active and passive uses should be considered.

Example of District Park: Plan.

5.4B.3 Planting & Vegetation

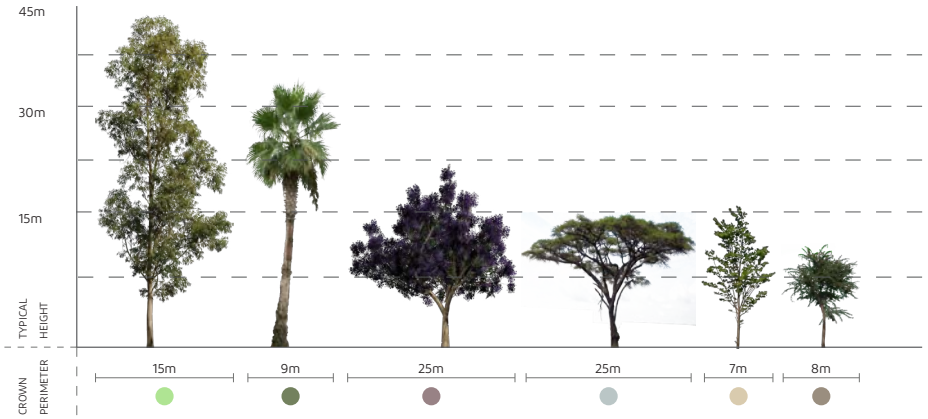
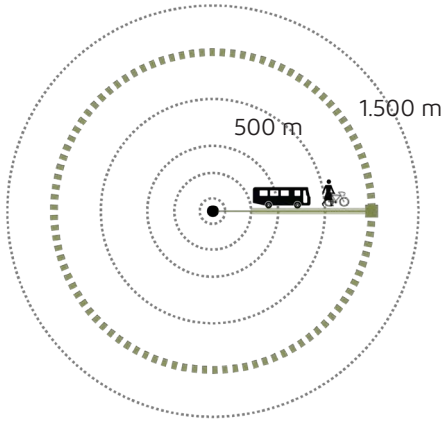


Diagram of typical tree heights.

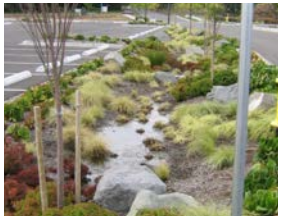


District Park accessibility: average distance from residences.

District Park - Main Activities and uses.

Arid Plants

Reed Beds



Riparian plants

Ground covers

Perennials

Grasses

Shrubs

Sub-shrubs

Lawn

Gravel

Planting (example).

5.4C Neighborhood Parks

Neighborhood Parks within the Coastline area will generally be enclosed parks within residential or mixed use blocks. They may or may not face the waterfront. Generally Neighborhood Parks are located within a short walking distance of home and are large enough to provide at least two activities in the open areas. They should contain playground elements and open seating areas. However they do not necessarily require special facilities such as parking or sanitary facilities.

5.4C.1 Size, Location and Access Guidelines

(1) Neighborhood Parks should generally be 10,000 square meters at most in size although they may vary in size based on location and surrounding urban context.

(2) Location should ensure public accessibility is controlled and regulated including relevant enforcement measures to minimize intrusion.

(3) Safety and security measures are in place including access control and potential health and safety risks.

(4) Consider connectivity into any existing or planned "green" network, including District Parks, trails, types of Water Edge (see Section 6), and expand the overall green network, as well as the pedestrian network.

5.4C.2 Design and Programming Guidelines

(1) Neighborhoods Parks shall provide mainly children's playgrounds, designed to make the neighborhoods where they are located at least somewhat self-contained.

(2) Installations shall include sand pits, slides, trampolines and similar equipment (a selection for each playground in order to offer variety and interaction between neighborhoods), within an ample provision of open-space for open-air games and plays (kickabout spaces and pitches).

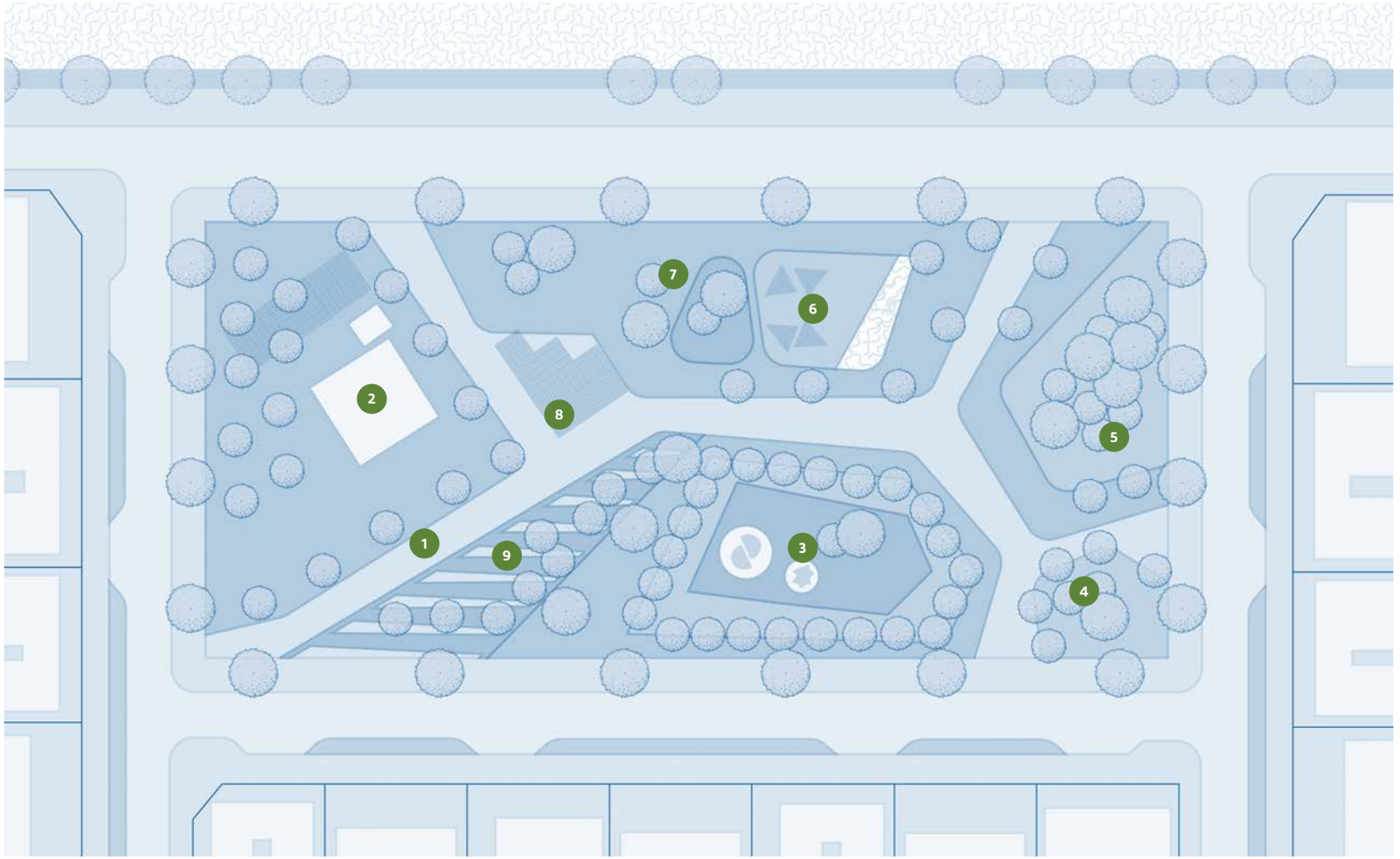
(3) Covered sitting areas with sparing use of vegetation shall also be available, particularly for the sake of the parents who are there for the surveillance of their children.

(4) Neighborhood parks should ideally be annexed to a neighborhood centre (with mosque, kiosks and benches for assembling youth or chatting adults).

(5) Depending on the frequency and on the demand, a kiosk (selling newspapers, cigarettes, beverages, snacks, candies, toys etc.) may also be encouraged to be installed.

Example of Neighborhood Park: Eye-level view.

Example of Neighborhood Park: Eye-level view.



Example of a Neighborhood Park: Plan view.

Map key:

1. Footpath
2. Mosque
3. Playground Elements
4. Sensory Planting
5. Picnic Area
6. Shaded Gathering Area
7. Natural Play
8. Outdoor Shade Structure
9. Shaded Water Feature

5.4C.3 Planting & Vegetation

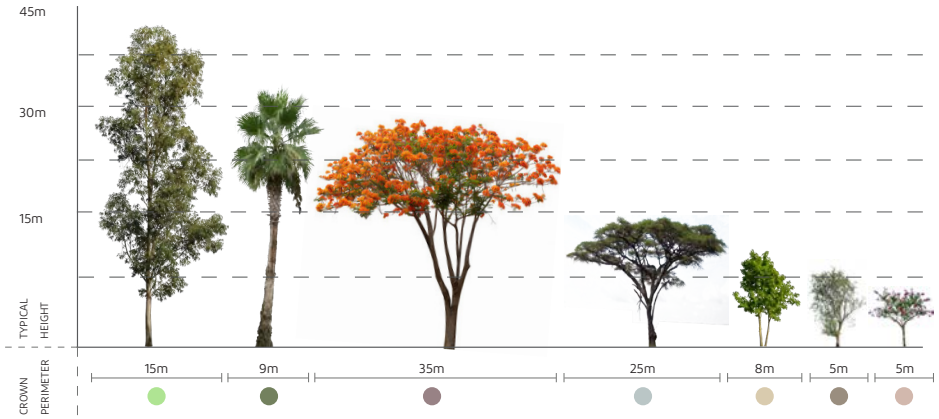
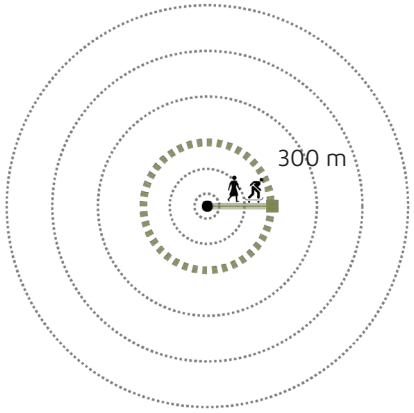


Diagram of typical tree heights.



Neighborhood Park accessibility: average distance from residences.

Neighborhood Park - Main Activities and uses.

Arid Plants

Reed Beds

Riparian plants

Sand

Perennials

Grasses

Shrubs

Sub-shrubs

Lawn

Gravel

Planting diagram of a neighbourhood park (example).

5.5 Parks and Open Spaces Type 3 - Plazas & Squares

Plazas and squares are usually located so that they are incorporated into or adjacent to the built urban environment. They are often primarily hardscaped and surrounded by streets, commercial uses, or other public uses. Ideally, they are between 1,000 and 10,000 square meters in area.

No parking areas or vehicular access is permitted in Plazas. Vehicular access for service or loading vehicles for any businesses located in a Plaza is only permitted, but should be located behind the associated building and hidden from view as much as possible.

Plazas that are large enough should be designed to accommodate event programming. [Guideline 5.5.2 (2)]

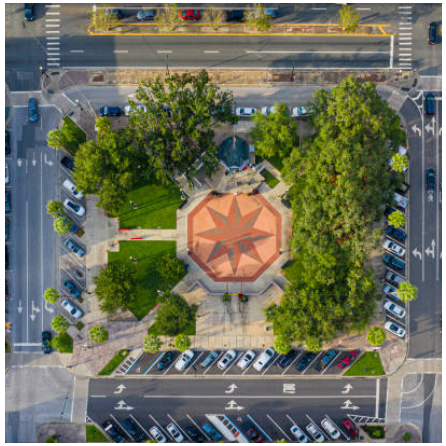
5.5.1 Harmony with Context

(1) Plazas should be oriented to combine with mixed commercial uses, commercial centers, markets, malls, important community facilities or public uses (libraries, mosques, recreation centers, etc.), transit hubs etc.

(2) Of particular importance is the coinage of a plaza with landmark elements of the immediate urban environment, both hard (e.g. buildings, monuments) and soft (e.g. a Public Park).

(3) Where possible, connections to adjacent sidewalks or other pedestrian networks should be made.

(4) Where a plaza is adjacent to the waterfront, it should treat the waterfront as a design feature, and allow easy public access and viewing of the water.



All pathways, both primary and secondary, should be hardscaped. [Guideline 5.5.3 (1)]

5.5.2 Programming

(1) Plazas should be designed primarily for social gathering and secondarily for passive recreation. They must be flexible, allowing for a variety of uses in every space. Spaces designed for specific singular uses should be limited.

(2) Plazas that are large enough - should be designed to accommodate large community gatherings, such as festivals, markets, and other temporary events.

(3) Where possible, plazas and squares should be formed adjacent to the Water's Edge and not be separated by highways from it. As a result the squares will connect directly with water front promenade and benefit from the wider footfall and accessibility.

(4) Plazas and squares should be supported with commercial uses at ground floor level to provide activity and complement active frontages. Small retail units, cafe and F&B can enhance the quality of the space.

5.5.3 Pathways

(1) All pathways, both primary and secondary, should be hardscaped.

5.5.4 Seating

(1) A variety of seating areas (both shaded and unshaded) should be provided for groups and visitors of all ages and abilities to create spaces for both social interaction.

(2) Technological features where possible can be provided.

5.5.5 Planting

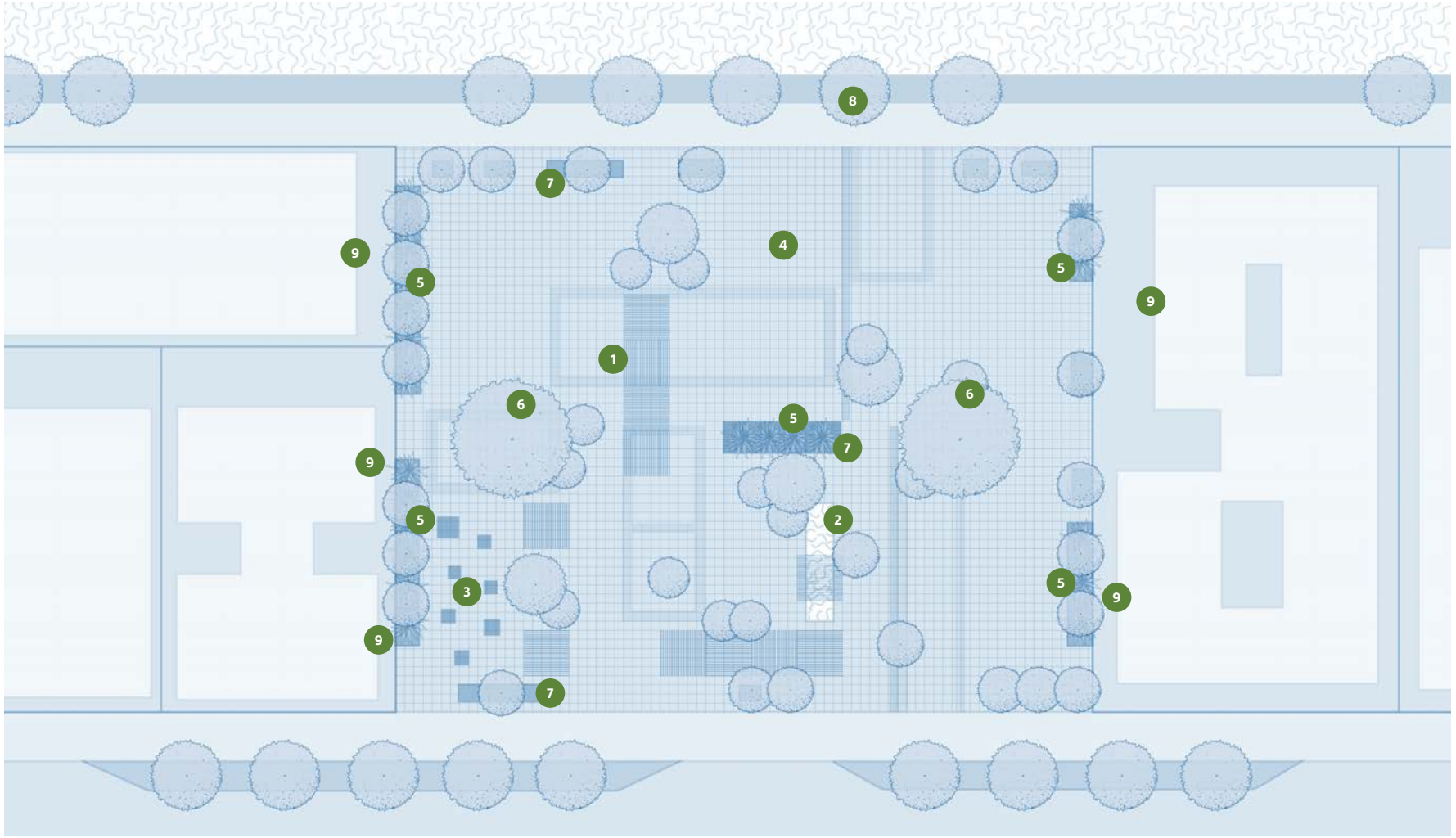
(1) Plants should be highly maintained and manicured.

(2) Trees and landscape should be specifically designed to protect the square from the sea winds as well as defining the wider public spaces from the square.

(3) Facilities should emphasize quality, uniqueness, and flexibility for diverse range of uses, accommodating different recreational activities.

(4) Plazas / Squares should include mature trees and quality landscaping aimed at providing shade.

(5) Thorny plants shall be prohibited in all areas designated as children's playgrounds.



Map key:

1. Shade Structures
2. Water Elements
3. Sitting Area
4. Opportunity for tile patterning
5. Mix of Flowering Shrubs
6. Tall Trees
7. Mix of Grasses
8. Landscape Protective Structure
9. Active Frontages

Example of Plaza: Plan view.

5.5.6 Planting & Vegetation

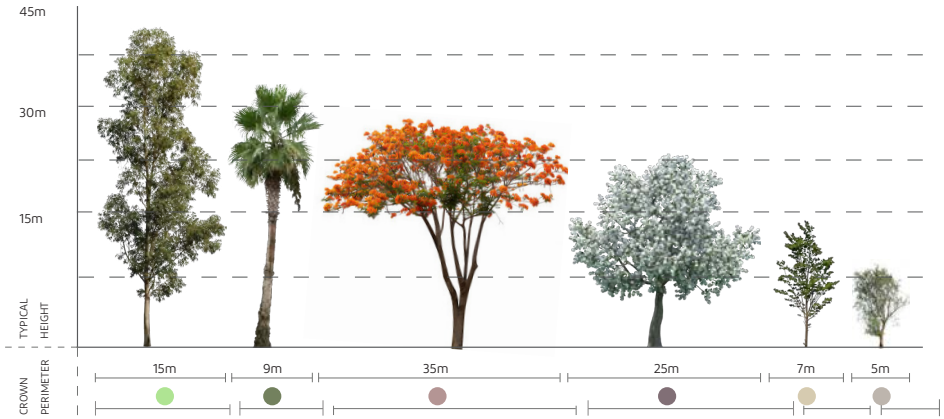
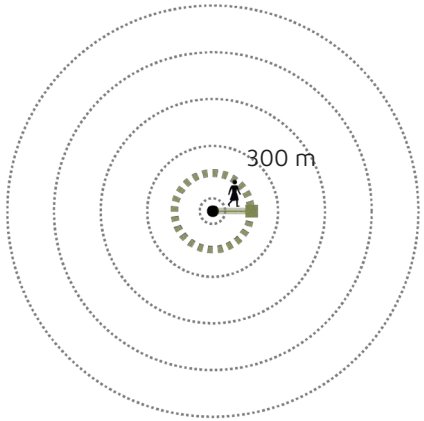


Diagram of typical tree heights.



Plaza and sqaure accessibility - average distance from residences.

Plaza and sqaure - Main activities included.

Perennials

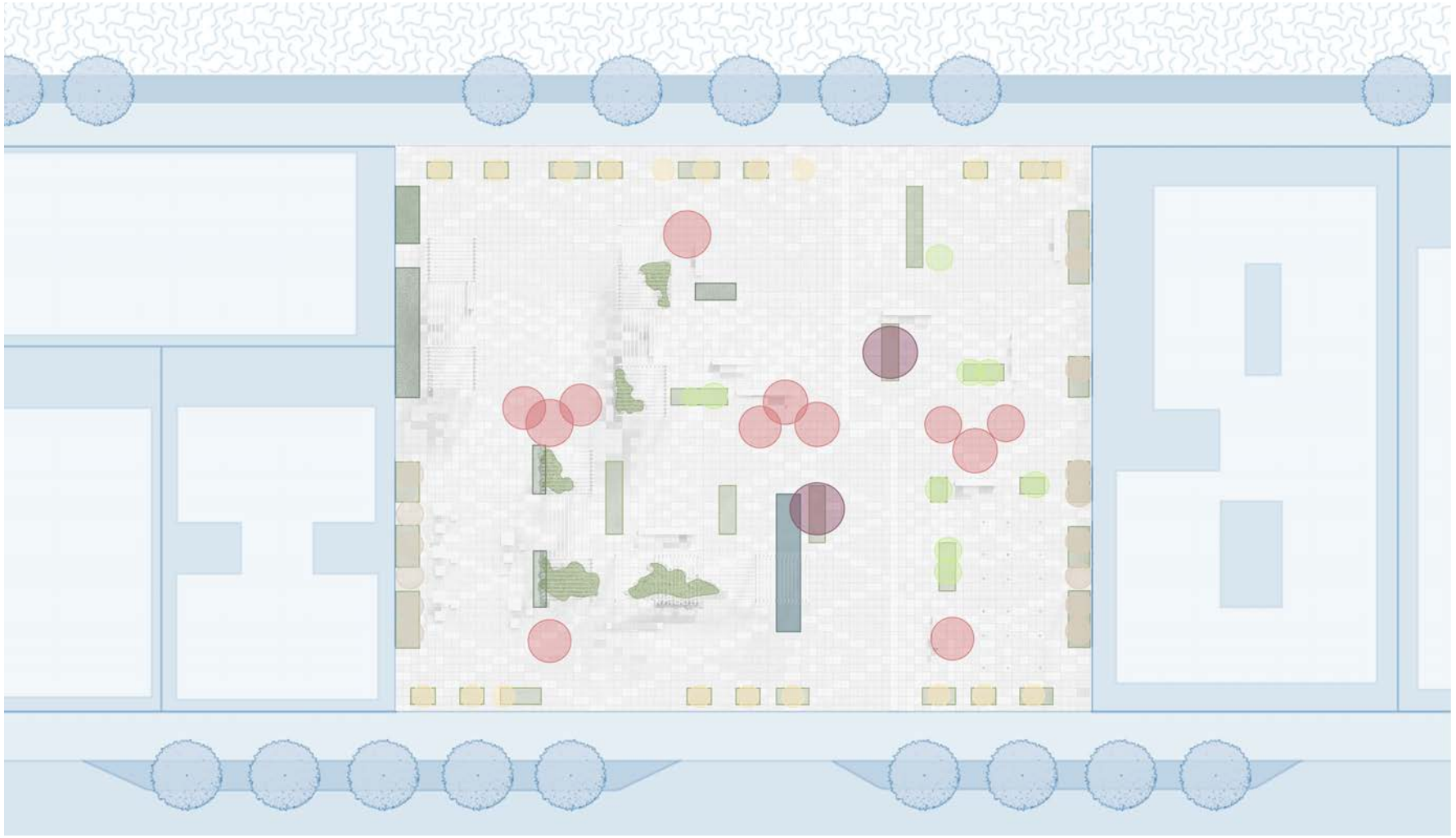
Grasses

Shrubs

Sub-shrubs

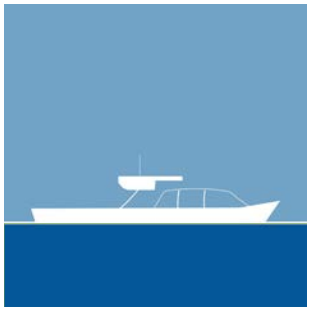
Example of Plaza: Eye-level view.

Examples of Plaza: 3D view.



Planting diagram.


SDA



6 Water Edge

6.1 Types of Water Edge

The Water Edge is the portion of the Coastline including the water itself and the immediately adjacent areas - including Dammam's beaches, mangrove parks, and coastal corniches and promenades. The design guidelines and standards in this Section are intended to guide urban development and natural conservation efforts along the waterfront, to ensure the area is able to continue to grow and thrive without compromising its natural resources.

Throughout this Section, there is an emphasis on the protection and provision of public access to the Coastline's water edge — a priority design element that will improve the overall quality of life for residents and visitors and the economic vitality in DMA by ensuring that one of the region's most valuable resource is able to be enjoyed by all.

Three types of Water Edge are found along the Coastline. Each type has unique characteristics and features that best fit a specific setting. For government agencies, local government, designers, planners, and developers, understanding the applicable type of Water's Edge will help to best apply the design guidelines established in this Section.

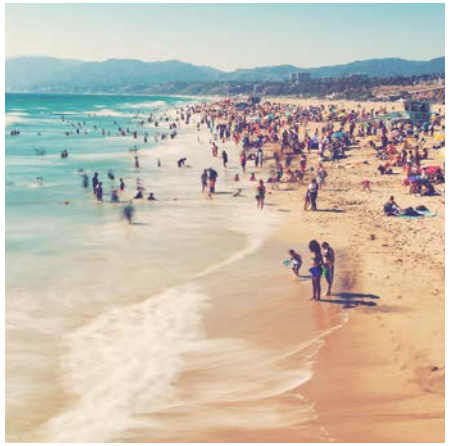
Type 1, Natural Edge

Natural areas, such as mangrove forests found primarily in the northern part of the Coastline, where preservation is priority and development should be extremely limited.

Example of a Natural Edge.

Type 2, Beach Edge

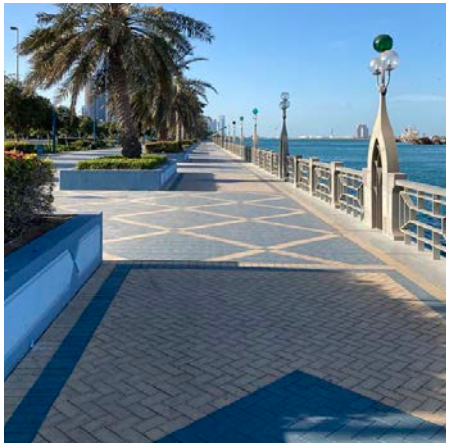
Sandy beaches, either natural or man-made, where public access to the water, in an environmentally responsible manner, is the primary design focus. Beach Edge conditions often allow for direct public interaction with the sea.



Example of a Beach Edge.

Type 3, Structural Edge

Engineered or man-made waterfront conditions, including revetments, corniches, and promenades that protect against storm surges and erosion, while allowing public access to the waterfront. Structural edges are made of concrete, stone, or other durable materials.



Example of a Structural Edge.

6.2 Design Guidelines and Standards (All Types)

The guidelines and standards provided in this section are recommendations for all types of Water Edge, to support the established aspirations for the future of the DMA Coastline. They should be followed wherever possible.

6.2.1 Public access and views

(1) The entire waterfront should be accessible by the general public at all times. Where necessary, the design elements included in the American Disabilities Act (ADA) should be followed.

(2) For the interests of the wider community and observing sound planning criteria, portions of waterfront for the development of private or semi-private areas can be permitted but should be extremely limited.

(3) Public accessways should be provided at the end of major streets leading to the Water's Edge.

(4) Development along the Water's Edge must be oriented to take greatest advantage of sea views. Significant views should be identified and key viewpoints along the waterfront should remain publicly accessible, and key view corridors should be protected.

(5) Pathways should generally follow the design guidelines and standards of Article. 5.2.4.

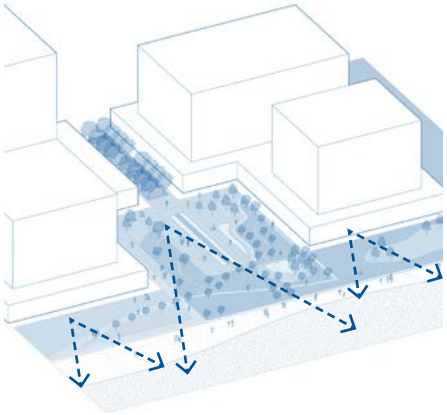
6.2.2 Overall Design

(1) A variety of water's edge types and design treatments should be provided, creating visual interest and establishing opportunities for a range of activities and uses distributed along the Coastline. Uses and structures should meet any applicable regulation and guideline for Built-form Type 6 (Public), see Article 3.6.

(2) The variety of water's edges shall create a successful and engaging public gathering place "**Engaging With The Water**", prioritizing connecting people to the water. Ensure easy access through walkways and piers, and maximize waterfront views through landscaping.

Waterfront should be accessible by general public. [Guideline 6.2.1 (1)]

Private or semi-private areas can be permitted but should be extremely limited. [Guideline 6.2.1 (2)]



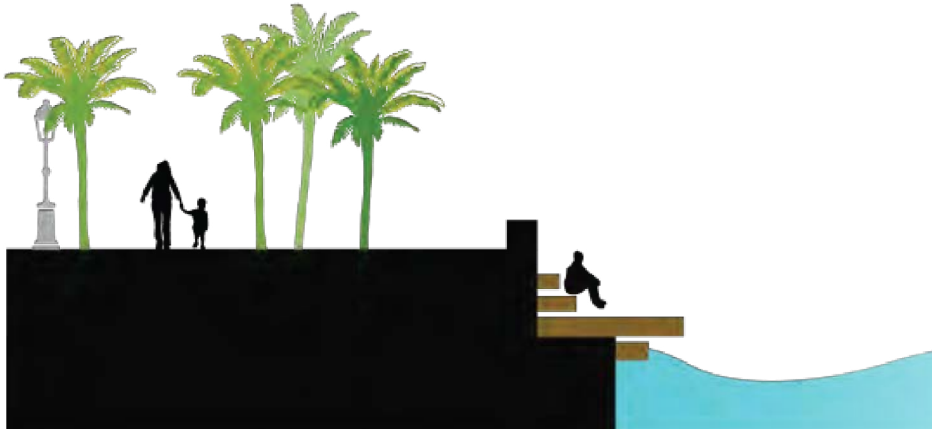
Development along the Water's Edge must be oriented to take greatest advantage of sea views. [Guideline 6.2.1 (4)]

(3) It's recommended to consider integrating one or more of the following strategies for waterfront design;

a. Accessible Water

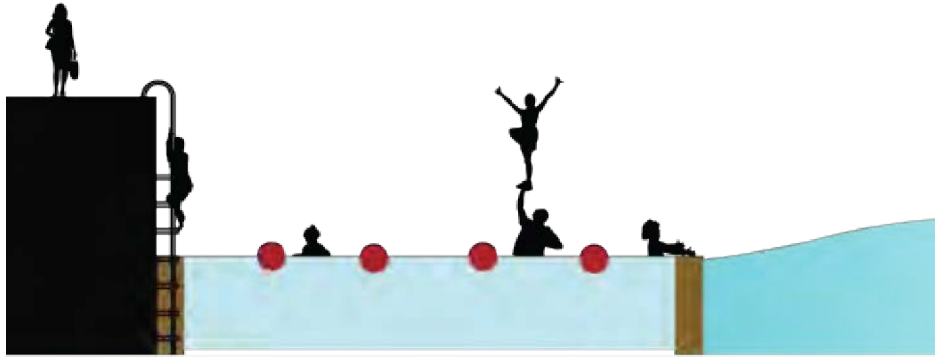
i. Promenade stairs
ii. Waterfront as a wind/wave-breaker
iii. Waterfront as sound-maker

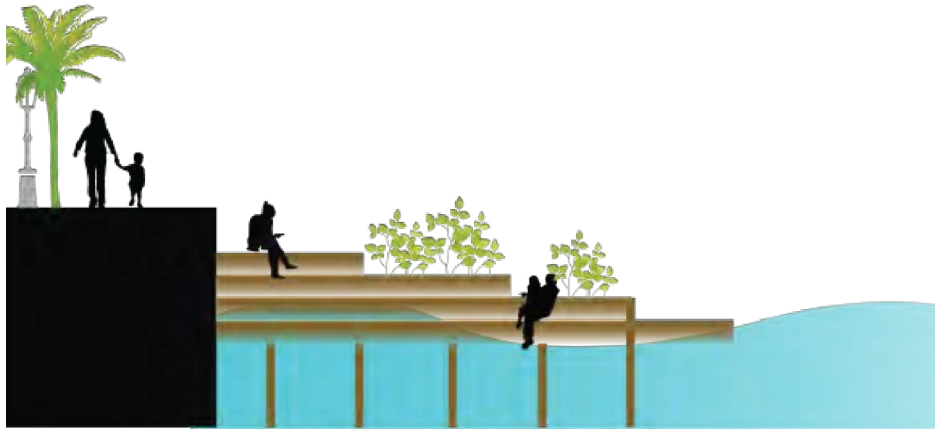
Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]



Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

iv. Wooden wharf
v. Harbour baths
vi. Water activities

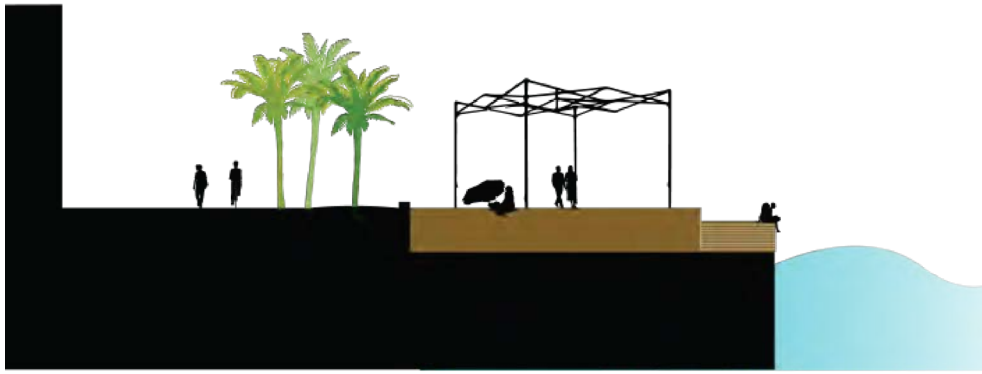




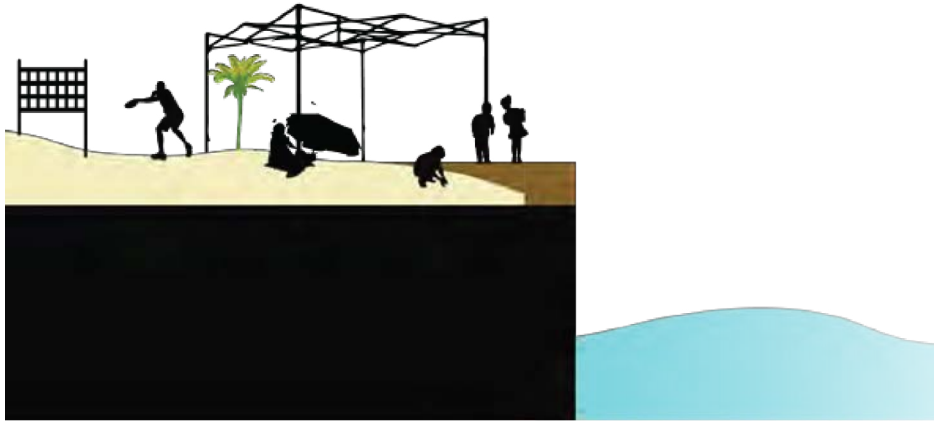
Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

b. Public Waterfront

i. Boardwalk and wooden deck
ii. Beach park
iii. Jogging, cycling activities



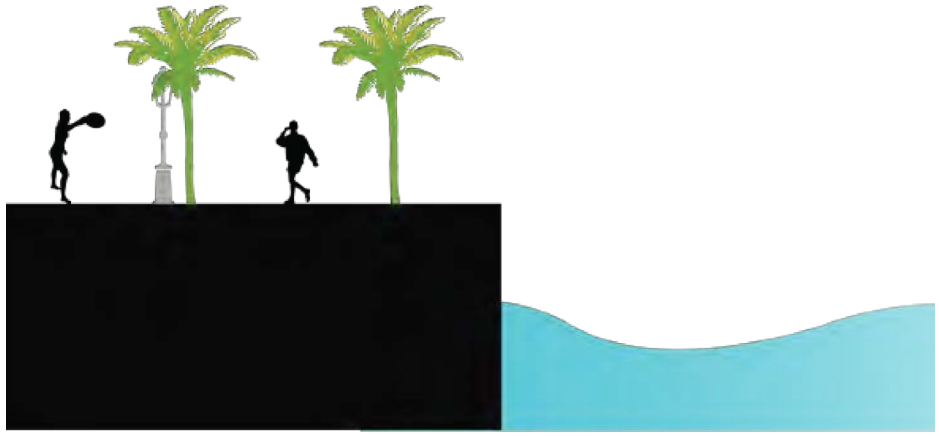
Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]



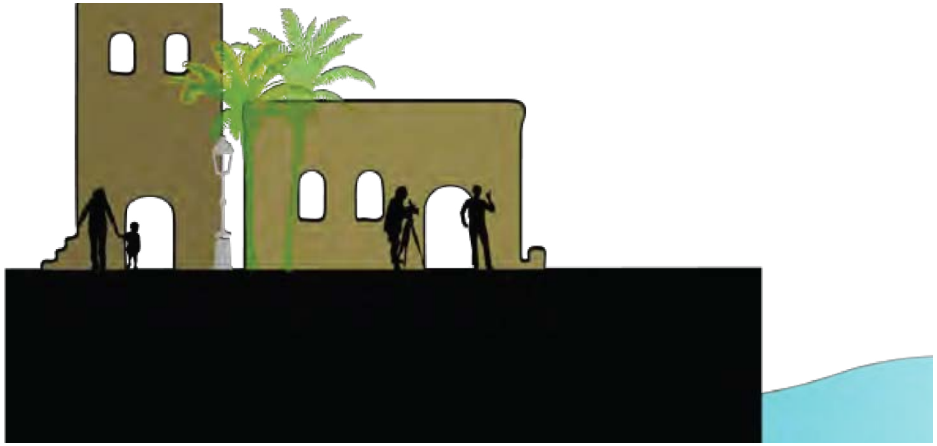
Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

iv. Esplanades and landscape walkways

v. Sheltered areas, cultural venues and gathering spaces



Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

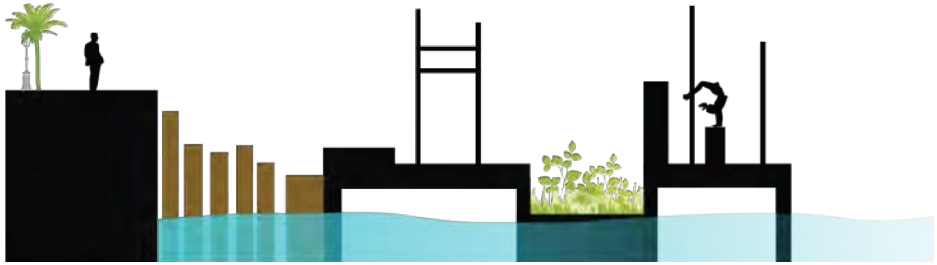


Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

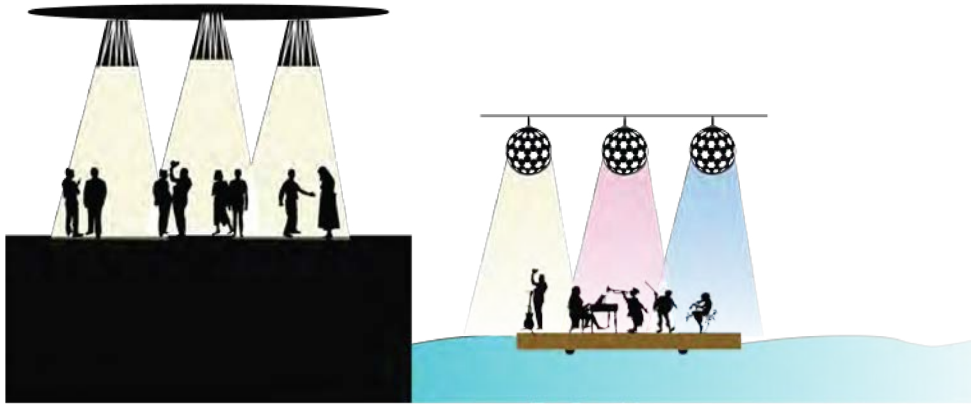
c. Recommended Waterfront Activities

i. Sports

ii. Events and gatherings



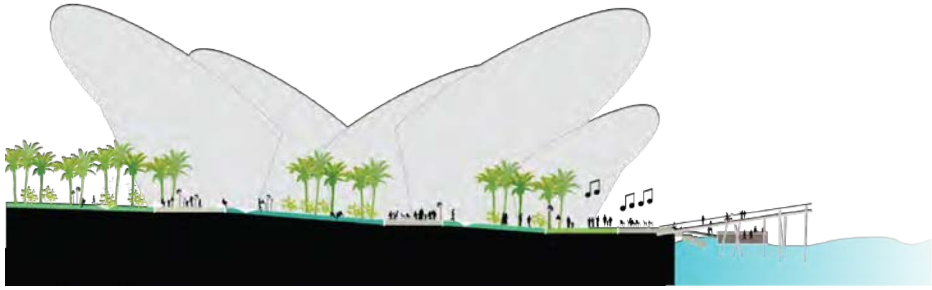
Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

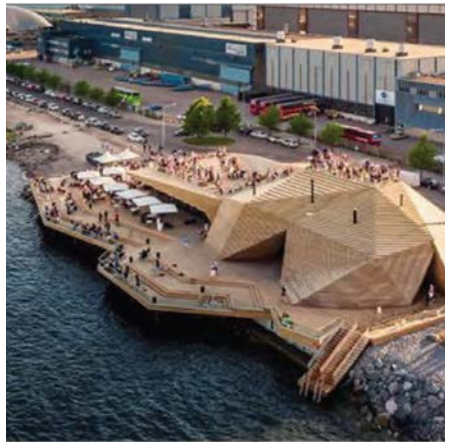


Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

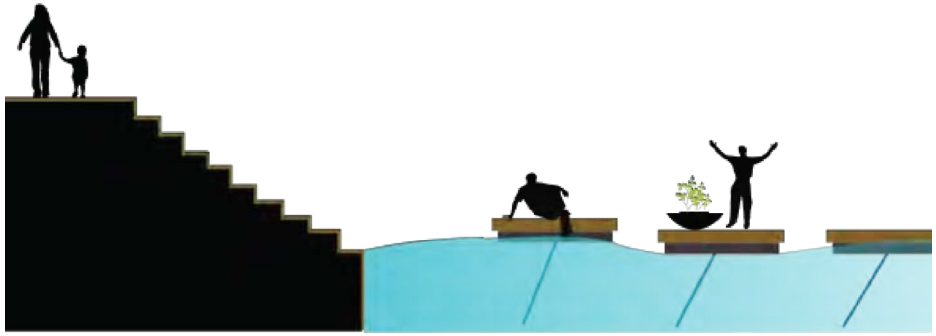
iii. Cultural jetty hosting various events

iv. Permanent structures hosting occasional events and activities





Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

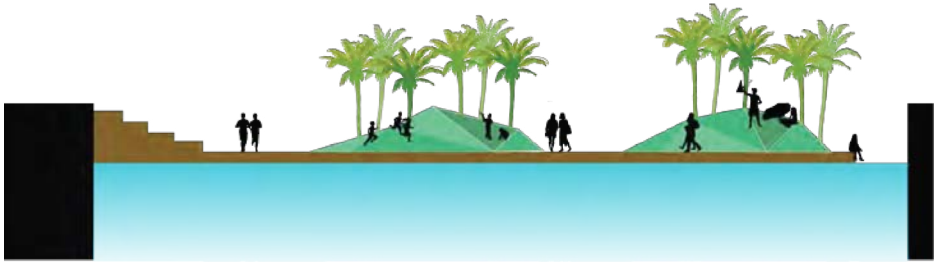


Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

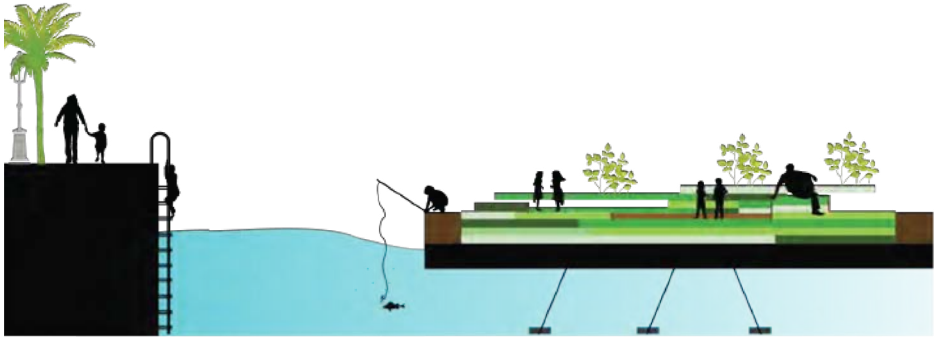
d. Temporary Use

i. Floating park, water landscape and vegetation

ii. Floating island with accessible water for recreation purposes



Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]



Variety of water's edges to create a successful and engaging public gathering place "Engaging With The Water", and integrating one or more of the following strategies for waterfront design [Guideline 6.2.2 (2)] & [Guideline 6.2.2 (3)]

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6.2.3 Uses, activities and structures

(1) Uses and structures should meet any applicable regulation and guideline for Built-form Type 6 (Public), see Article 3.8.

(2) Developments are to add visual character and enhance the amenity value of the area.

(3) Structures should be designed and constructed to be resilient to flooding, without the need to redirect flood water to neighboring structures or uses.

(4) Parking areas provided for water's edge access should be visually screened from view from public areas with landscaping or other screening elements.

(5) The architectural style of all structures in the Water Edge should fit the surrounding functional and aesthetic character and local style.

6.2.4 Private, Semi-Private Areas

(1) Any pathway that exists adjacent to the private beach must be continued through the private beach area.

(2) Private and semi-private beach area may not extend all the way to the water. A continuous public accessway must be provided along the coastline. Consider tidal changes of the water level when establishing this accessway.

(3) Any barriers erected to separate and identify private or semi-private waterfront areas should be temporary and removeable. Private waterfront areas associated with Resorts may erect more permanent barriers.

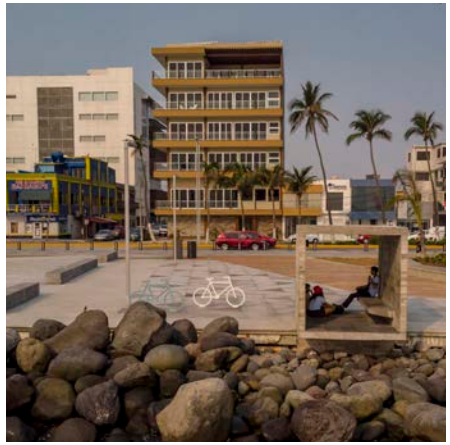
(4) Appropriate materials for barriers may include:
   a. Fabric.
   b. Rope.
   c. Wood.
   d. Plant materials.

(5) Barriers, and any other furnishings or amenities associated with private beach areas, must not interfere with required public accessways or views.

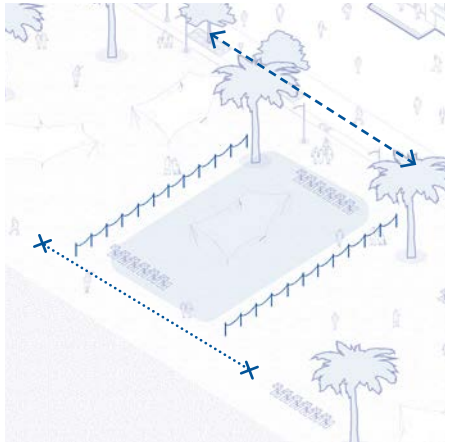
(6) Barriers that create a visual obstruction and prevent public access to the seawater must be prohibited.

(7) The coastal frontage area must be divided to include a beach and a continuous public promenade along the Coastline, ensuring connectivity, integration, and continuity with adjacent areas. A semi-private beach may also be provided, provided that this does not conflict with all the regulations stated in Guideline 6.2.4.

Structures should be designed and constructed to be resilient to flooding. [Guideline 6.2.3 (3)]



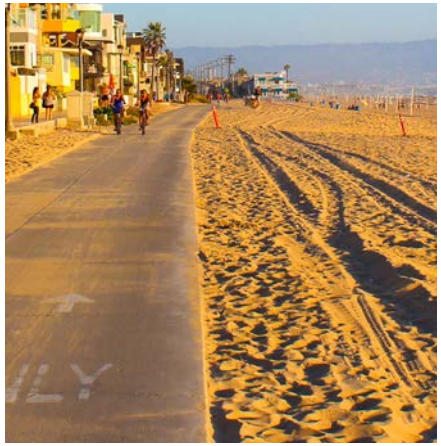
The architectural style of structures and furnishings should fit with the surrounding character. [Guideline 6.2.3 (5)]



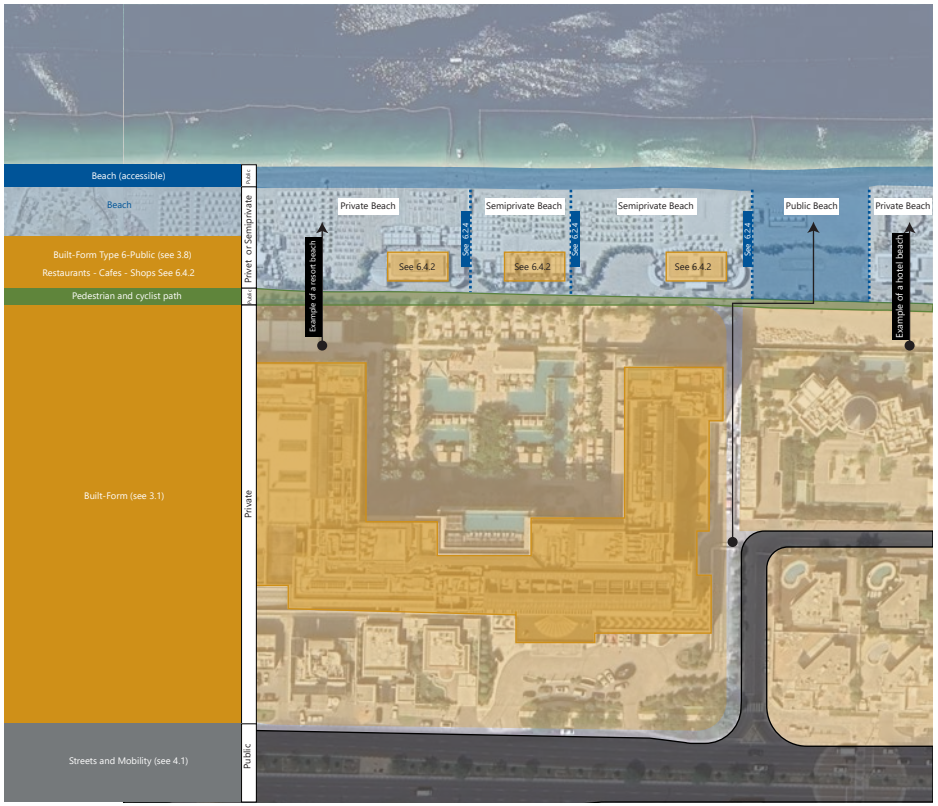
Pathways adjacent to private beach must be continued. May not extend all the way to the water. [Guideline 6.2.4 (1)/(2)]

Example of appropriate private beach area barrier. [Guideline 6.2.4 (3)]

Mandarin Oriental Jumeira, Dubai an example of appropriate realtion between private, semiprivate, and public beach area barrier. [Guideline 6.2.4 (2)]



continuous public accessway must be provided along the coastline. [Guideline 6.2.4 (2)]



Example of Coastal Frontage Area Division [Guideline 6.2.4 (7)]

6.2.5 Floating and Overwater Structures

Floating structures including marinas, docks, piers, swimming platforms, and overwater resort accommodations, should adhere to the following guidelines:

(1) These structures and any associated berthed vessels are not to block key views or accessways to the water for the general public.

(2) These structures should not dominate the water's edge area.

(3) Pathways along floating structures must be at least 2.0 meters wide. Provide hand railings and safety barriers where possible.

(4) Clearly identify the edge of the structure using a colour contrast or a distinctive visual pattern to demarcate that is a minimum of 50 mm. The strip must extend across the entire length of the dock edge except where handrail is provided as a barrier.

(5) The design of any floating ramps or gangways to have the lowest possible slope. Use non-slip materials.

(6) The design of these structures should have minimal impacts on coastal and aquatic habitats and ecosystems. These structures must not be constructed in or immediately adjacent to important marine or upland habitat including, but not limited to, tidal mudflats, mangroves, sea grass or coral reef.

(7) Resilience to sea level rise shall be considered in the design.

(8) Safety equipment such as ladders, ring buoys, and safety hooks should be provided.

(9) Provide shaded areas and seating areas where possible.

(10) Ensure accessibility into boats for all users. Provide swing lifts, transfer benches, or ramps for universal access.

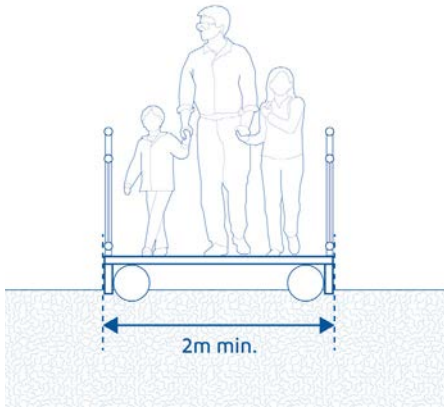
6.2.6 Canoe and Kayak Launches

(1) Provide universally accessible entry points into non-motorized vessels such as canoes and kayaks, for users of all abilities. This may include grab bars, ramps, transfer benches, and adapted canoes and kayaks.

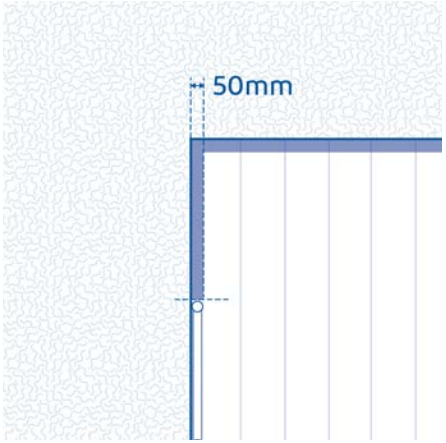
(2) At every project where launch sites are proposed, at least 50% of the total launch sites, but never less than one, must include an accessible launch.

(3) An accessible pathway must connect to the accessible launch point.

(4) Provide colour contrast or a distinctive visual pattern to demarcate the leading edge of the entry point.

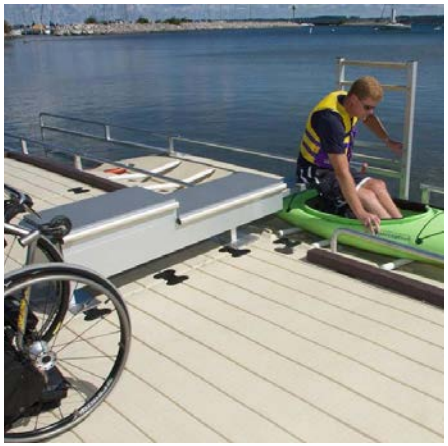


Pathways along floating structures must be at least 2.0 meters wide. [Guideline 6.2.5 (3)]



Continuous contrasting strips of minimum 50mm width to denote edge of floating structures. [Guideline 6.2.5 (4)]

Safety equipment such as ladders, ring buoys, and safety hooks should be provided. [Guideline 6.2.5 (8)]



Provide universally accessible entry points. [Guideline 6.2.6 (1)]

6.2.7 Recreational Fishing

(1) Provide areas for recreational fishing along the water's edge.

(2) Docks, boardwalks, or other floating or overwater structures used for fishing should meet the guidelines of Sec. 6.2.5(6)

(3) Provide an accessible path of travel to the fishing areas.

(4) Provide amenities for the fishing area, such as trash bins, seating, and restrooms.

(5) Provide accesbility fishing equipment, such as rod holders, and sections with lower guard rails.

6.2.8 Bike and Water Taxi

Consider including water taxi drop-off points in or near major developments and attractions, to respond to the plans for a regional network of water taxis connecting major developments, public spaces and attractions along the Coast Line.

(1) Consider including water taxi drop-off points in or near major developments and attractions.

(2) Provide bicycle 'park and ride' facilities in or near major developments and attractions. These facilities should include secure bicycle storage areas.

(3) Bike and water taxi locations should contribute to the greater functional regional taxi, bicycle, and pedestrian network.

6.2.9 Furnishings, amenities and lighting

(1) Provide an adequate number of furnishing and amenities as appropriate to the location and the character of each type of Water Edge.

(2) Consider locating furnishings and amenities near all parking areas, along pedestrian pathways, at key view points, and near areas of high activity.

(3) Appropriate furnishings and amenities may include:

a. Trees, plant beds, and other landscaping.

b. Shading devices, constructed with canvas, concrete, wood, or other aesthetically appropriate and environmentally resilient materials.

c. Bicycle facilities.

d. Public transport stations.

e. Walls, fences and railings along pedestrian pathways.

f. Wayfinding and educational signage.

g. Benches and other seating.

h. Trash bins.

i. Civic and public art features such as clocks, flags, banners, tents, commemorative monuments, sculptures, murals, wall mosaics, street art, water features, fountains and similar items.

(4) Provide consistency in the design character of furnishings and amenities, to create a consistent visual style.

(5) Incorprate design features, elements, and materials that provide shade and help maintain a comfortable temperature for users. See Sec. 7.18 Outdoor Thermal Comfort for detailed guidelines.

(6) Steps and steep grade changes should be limited. Where they are necessary, ensure they are clearly lit and identifiable.

(7) The pedestrian scaled lighting should be provided along any stairs, ramps, or raised pathways.

(8) Lighting should be used to illuminate pathways, wayfinding signage, design focal points, public structures and facilities, and key gathering or activity spaces.

(9) Lighting should be limited in natural areas, to prevent any negative effects on natural wildlife systems.

Consider locating furnishings and amenities near areas of high activity, such as pedestrian paths. [Guideline 6.2.10 (2)]

Incorprate design features, that provide shade and maintain a comfortable temperature for users. [Guideline 6.2.10 (5)]

Pedestrian scaled lighting should be provided along any stairs, ramps, or raised pathways. [Guideline 6.2.10 (7)]

6.2.10 Parks and Open Spaces

In addition to the standards and guidelines of Sec. 5, parks and open spaces that are directly located along the water's edge should adhere to the following additional guidelines.

(1) Natural places and landscapes in the Water Edge:

a. Re-naturalize areas under risk of erosion and where ecological habitat is lost or reduced when appropriate, by minimizing concrete or other human-created features on the coast unless necessary to protect land from erosion or flooding, replacing them with natural structures, to enhance bank stabilization, and to restore biodiversity.

b. Bank stabilization can be integrated with plant engineering techniques, combining the principles of ecology and engineering, using plants as structural materials.

c. Consider locating primary pathways adjacent to the water edge, to enhance opportunities for water access and views for the public.

(2) Public Parks and Plazas in the Water Edge:

a. Protect and enhance amenities where possible along the water's edge by removing debris and waste and by providing landscaping and structures to enable access to the waterfront for pedestrians.

b. Consider flooding, wind and accessibility related safety aspects in the design process.

c. Consider locating primary pathways adjacent to the water edge, to enhance opportunities for water access and views for the public. 6.2.5 Floating and Overwater Structures

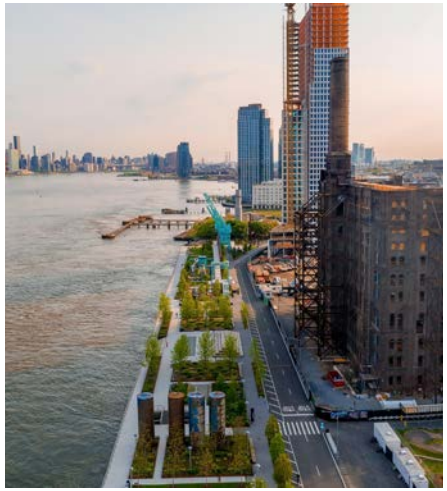
Provide an adequate number of furnishing and amenities as appropriate to location and character. [Guideline 6.2.10 (1)]

Examples of Natural Places along the water edge.

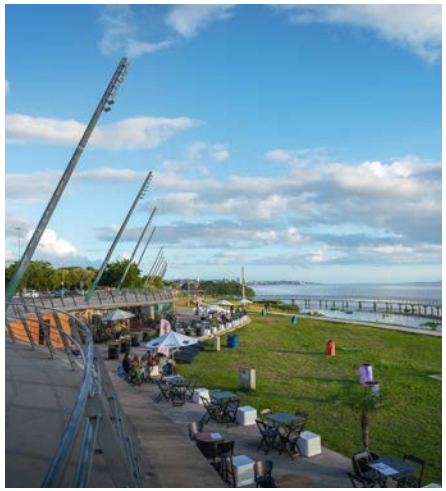
Examples of Public Parks along the water edge.



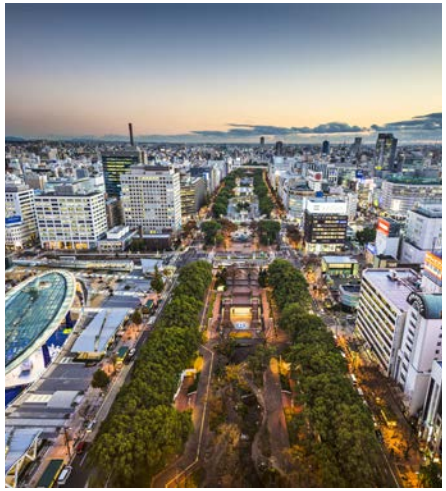

Waterfront Park - Palm Coast City, Natural Places along the water edge, Limited structure elements, natural and sustainable materials that suit and preserve the nature of the place, enhance accessibility, and safety



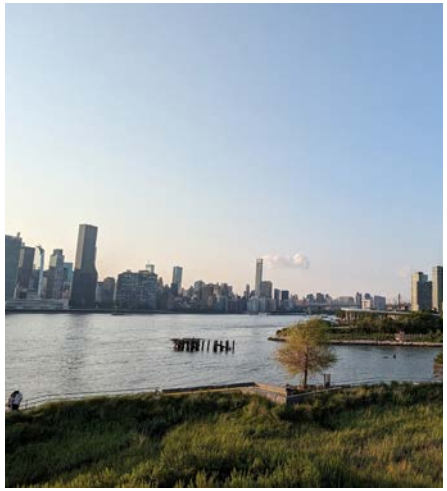
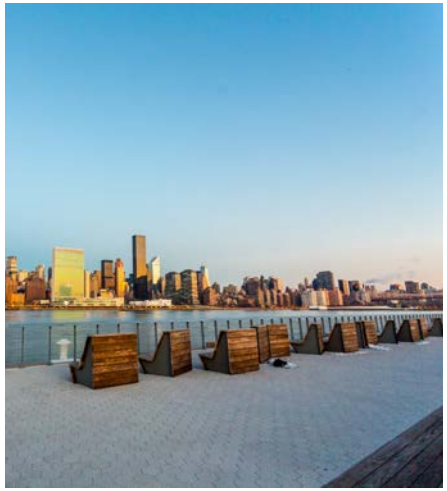

Domino Park - New York City, Public Parks along the water edge, Ideal use of space, creating spaces for multiple activities, suitable for all ages, with a unique and harmonious design identity tailored to the place.

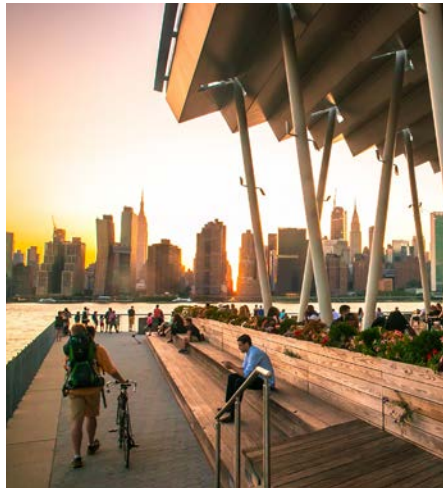



Guaíba Orla Park - Rio Grande do Sul City, Public Parks along the water edge, variety of public spaces along the waterfront creates spaces suitable for various activities

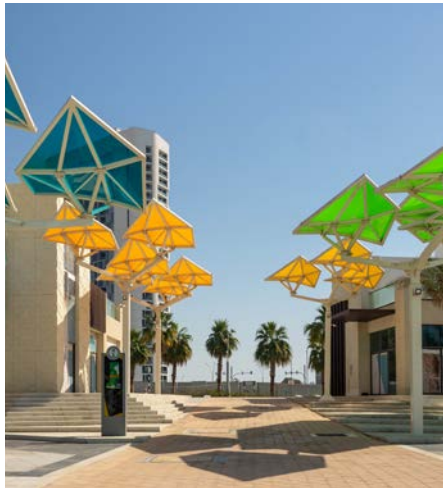


Hisaya Odori Park - Nagoya City, Public Parks along the water elements, Maximizing the role of the water elements in public parks, creates an identity for the place and achieves rich and diverse movement paths.



Hunters point south waterfront park - New York City, Natural Places along the water edge, Multiple uses provide a panoramic view of the city and also protect the city from floods




Reem Central Park - Abu Dhabi, Public Parks along the water edge, Overlooking the mangroves on Al Reem Island, various spaces for multiple uses suitable for different ages, unique shading elements that enhance the architectural style of the place, providing screening walls with aesthetic element.

6.2.11 Sustainable, Ecological and Inclusive Design

(1) Removal of existing trees and vegetation should be limited. Any vegetation disturbed during construction should be replaced as quickly and as close to its original location as possible.

(2) The creation of sea walls, revetments, and other hard structures that interfere with natural ecosystems and processes is not recommended.

(3) In general, incorporate local and green-certified materials wherever possible, and design for resiliency to sea-level rise.

(4) Sea water quality is not to be degraded, and is to be enhanced wherever possible.

(5) Responsible waste management practices and measures to prevent illegal waste disposal must be implemented along the waterfront to safeguard marine ecosystems.

(6) Pathways, buildings, and other structures along the waterfront should be designed with flooding and stormwater resiliency in mind.

(7) Retention of stormwater on-site should be pursued, with "green and blue infrastructure" such as rain gardens, green roofs, cisterns, pervious surface materials, and natural open spaces.

(8) Use should be made of construction and finishing materials that are resilient to water, sun exposure, vandalism, and other elements and events.

(9) Stairs should be avoided, and where they are necessary a ramp should be provided.

(10) Incorporate handrails and other safety features as needed along pedestrian pathways for all users (including the elderly, disabled, and children).

(11) Consider users of all ages and abilities when designing signage, pathways, art, furnishings, and amenities.

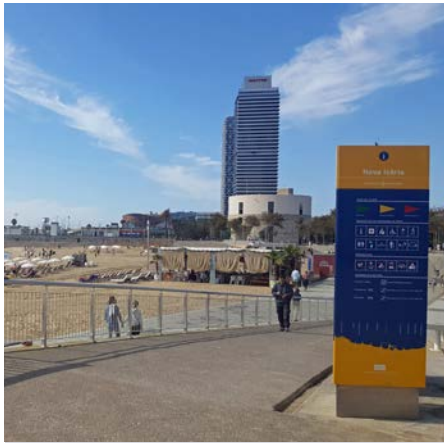
6.2.12 Materials

(1) The use of durable, natural, and permanent materials that reflect the marine climate and the local character and architectural style is highly encouraged.

(2) The use of locally sourced and green-certifed materials is highly encouraged.

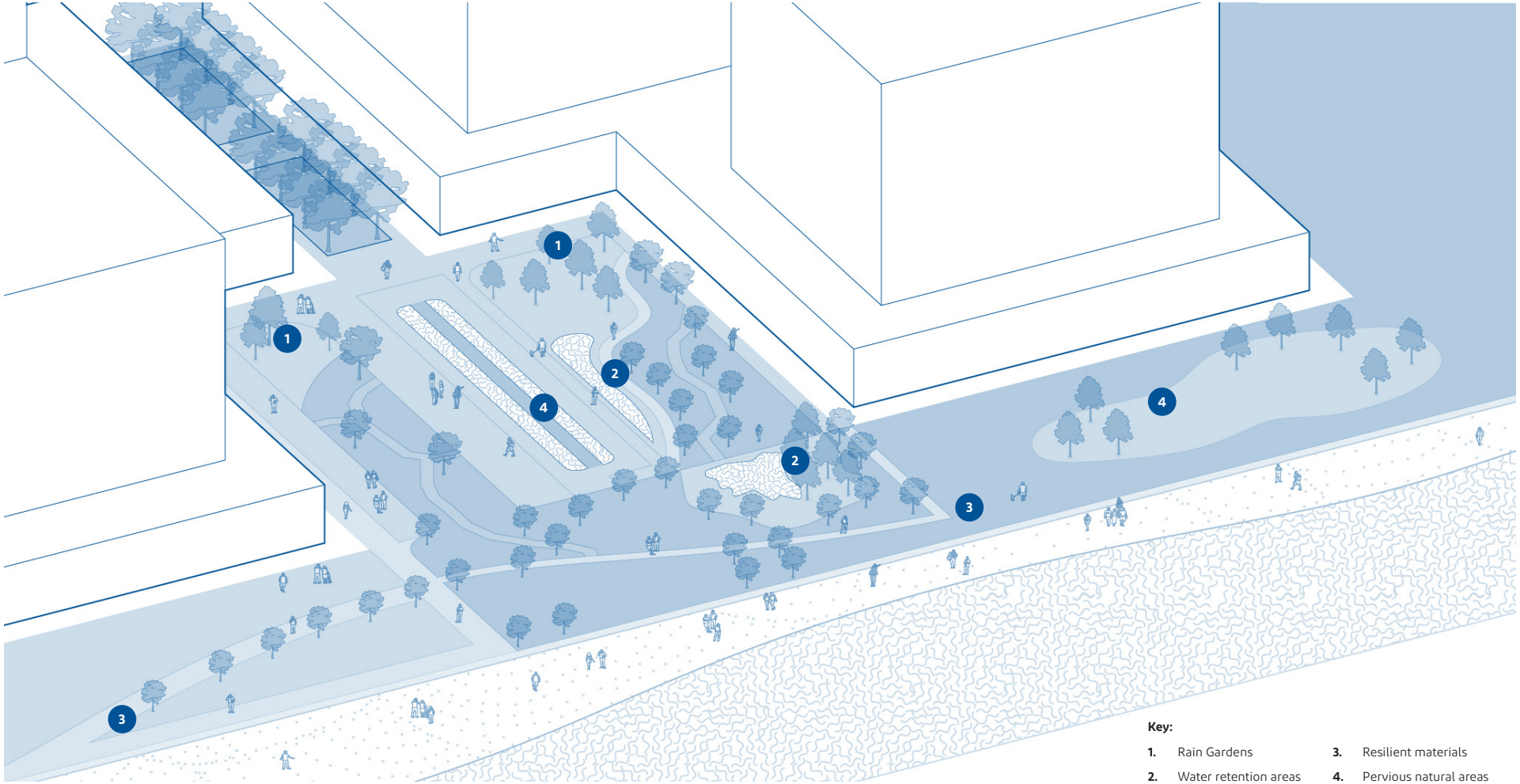
(3) Use materials that are resistent to sun and water exposure, and are easily maintained or repaired.

Design waterfront areas to be resilient to flooding. [Guideline 6.2.11 (3)]



Ramps, handrails, and wayfinding signage increase safety for waterfront visitors. [Guideline 6.2.11 (9)]

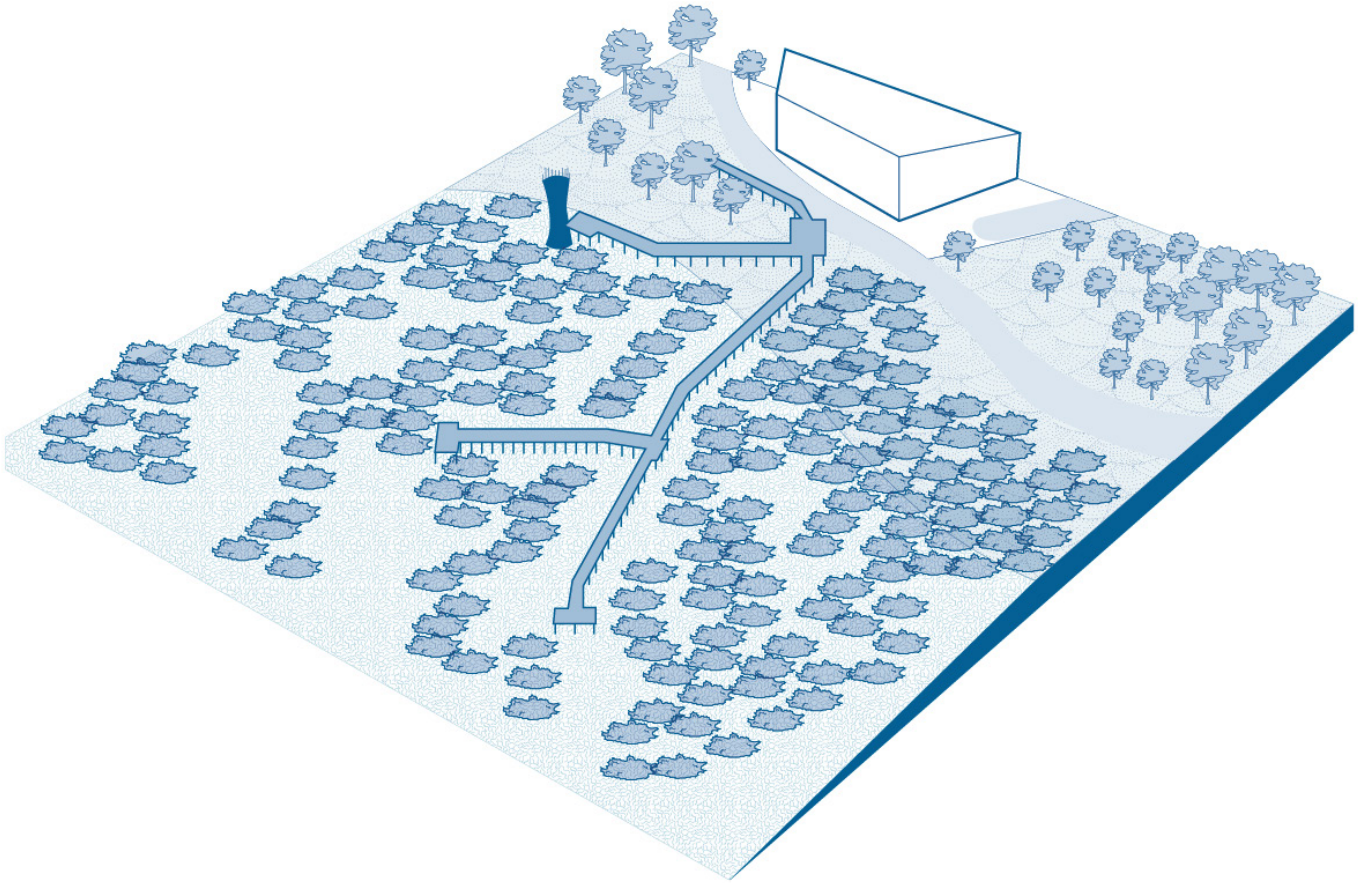
Use durable, natural, and permanent materials that reflect the marine climate and local character [Guideline 6.2.12 (1)]



Examples of design features that help manage stormwater

6.3 Water Edge Type 1 - Natural Edge

The Natural Edge type of Water Edge refers to the naturally landscaped parts of the Coastline, with limited human influence and interaction, often providing scientific and educational opportunities.



Example of a Natural Edge

6.3.1 Public access and views

(1) Pathways within Natural Edge should be limited, with a reduced overall width of 2.0 meters at minimum.

(2) The network of pathways within Natural Edge should include access to parking areas, information centers, restrooms and facilities and sites of interest.

6.3.2 Uses, activities and structures

(1) Buildings and other structures in Natural Edge areas should be extremely limited, to preserve the natural environmental conditions. Only in case of necessity. public buildings are allowed.

(2) Educational kiosks, plaques and other elements are permitted and encouraged along pedestrian pathways.

6.3.3 Furnishings, amenities and lighting

(1) A unifying design character or style for all furnishings and amenities listed under Article 6.2.10. should be considered.

6.3.4 Sustainable, ecological and inclusive design

(1) Where a Natural Edge condition exists, it must be maintained. A Beach Edge or Structural Edge type may not be developed.

(2) Existing mangrove areas may not be removed. On the contrary, expansion of mangroves and other natural areas along the water edge is encouraged.

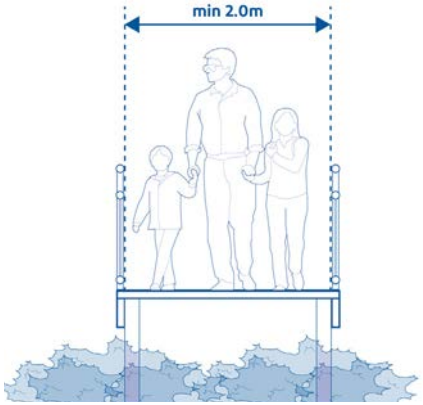
(3) The creation of sea walls, revetments, and other hard structures that interfere with natural ecosystems and processes is not recommended.

(4) "Nature-based" design solutions that use or mimic natural systems and processes should be followed wherever possible, as opposed to creating new man-made infrastructure. Use shall be made of green-certified and local materials where possible.

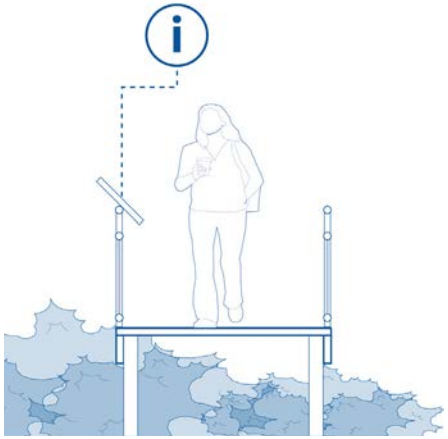
(5) The conservation and restoration of natural areas should be given priority. The use of water management infrastructure as a natural design feature is recommended.

(6) Work with experts in the field is advised to determine the best design for Natural Edge to limit any effects on the surrounding natural ecosystems.

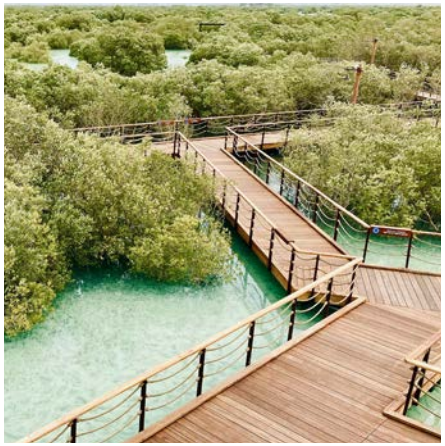
(7) Incorporate handrails and other safety features for all users (including the elderly, disabled, and children).



Pathways with reduced overall width of 2.0 meters minimum. [Guideline 6.3.1 (1)]



Educational kiosks, plaques, etc. are permitted and encouraged along pedestrian pathways. [Guideline 6.3.2 (2)]

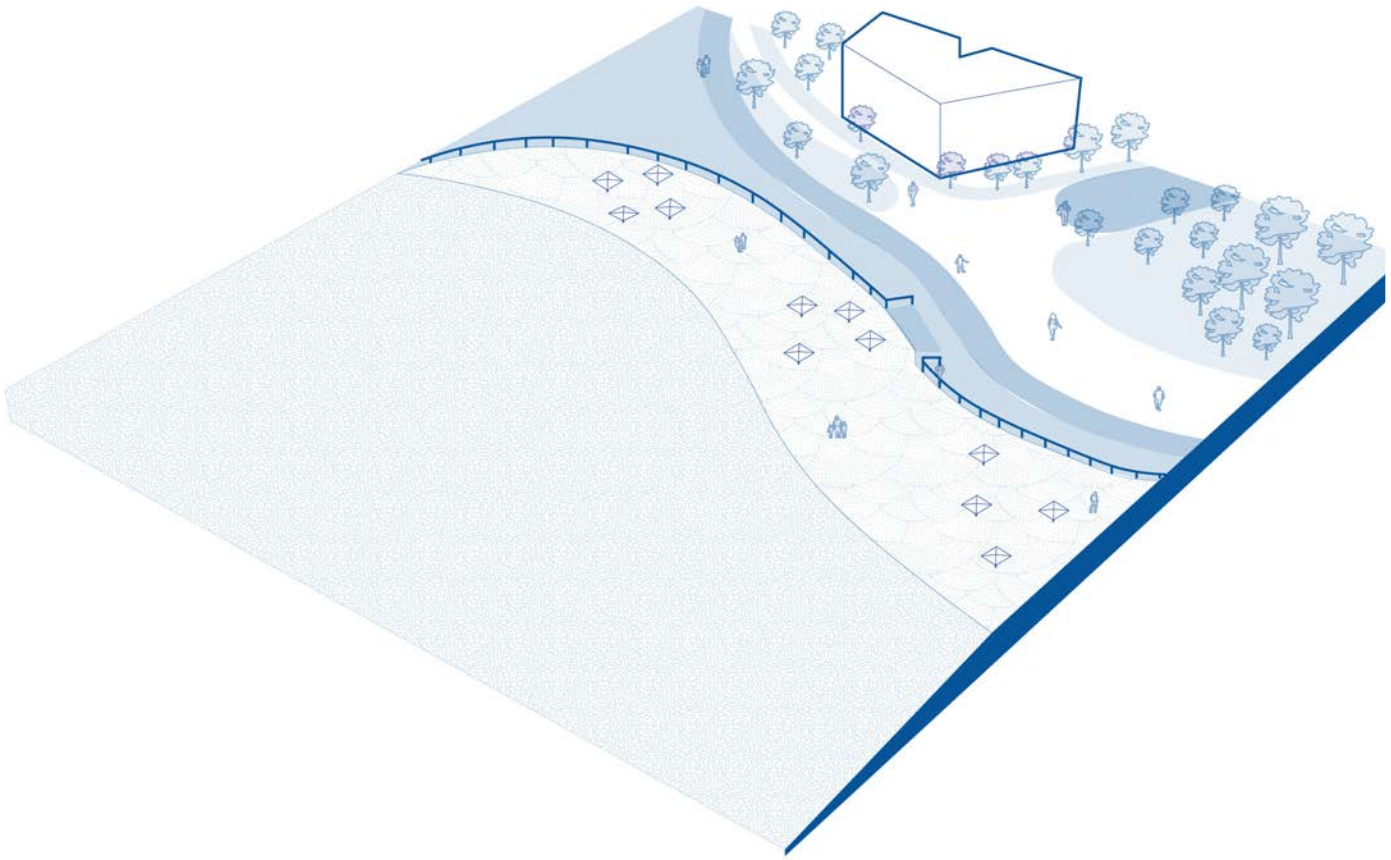


Mangrove Eco Park in Ras Tanurah is an important natural ecosystem that must be protected. [Guideline 6.3.4 (2)]

Existing mangrove areas may not be removed. [Guideline 6.3.4 (2)]

6.4 Water Edge Type 2 - Beach Edge

The Beach Edge type of Water Edge refers to the sandy beaches and other undeveloped land in natural state (but not qualifying to be Natural Edge) where there are opportunities and potential for water-related sports and public recreational activities (beach volley, boating, sailing, barbecue)



Typical look of a Beach Edge.

6.4.1 Public access and views

(1) All beaches should be open to the public. Private beaches are discouraged and should be extremely limited. Private and semi-private beaches may be permitted on a limited basis when associated with a Resort type.

(2) Where private and semi-private beaches occur, the guidelines of Sec. 6.2.3 should be followed.

(3) Provide accessible paths of travel into the water at low and high tide where feasible. These paths should meet the following guidelines where possible:

a. Be permanent, firm, level and stable.
b. Be constructed with non-slip surface materials.
c. Be at least 2 meters wide.

(4) Trees (including their canopies) along the beaches must be arranged in a way not blocking the view to the sea.

6.4.2 Uses, activities and structures

(1) Uses and activities, and the erection of structures, other than for beach recreational activities (e.g. commercial uses) should be extremely limited, to ensure the preservation of the natural conditions.

(2) Appropriate activities on beach edges may include

a. Swimming.
b. Resting.
c. Recreational sports.
d. Buggy riding.
e. Fishing.
f. Boating.
g. Kayaking or canoeing.

(3) Swimming is encouraged where it is deemed safe for both the swimmer and the environment.

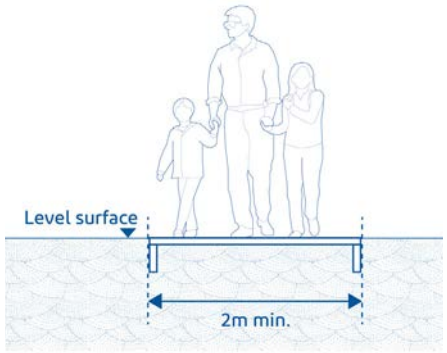
(4) In addition to structures permitted under Article 3.8.1(1), structures that may be permitted on beaches include, but are not limited to:

a. Covered seating and gathering areas.
b. Restroom and shower facilities.
c. Coastguard, lifeguard and first-aid stations.
d. Changing cabins, cloakrooms and similar facilities.
e. Ticket booths, small administrative kiosks.
f. Marinas and other boating structures, including docks, mooring stations, and fueling stations.
g. Facilities for storage of water sport equipment.
h. Floating or overwater resort accommodations.

(5) Any structures associated with specific recreational activities should be temporary and removable.

(6) Blank walls along building facades adjacent to the beach should limited.

(7) Floating and overwater structures extending from the coastline into the water, including docks, marinas, swimming platforms and overwater resort accommodations, are permitted, should meet the guidelines of Sec. 6.2.5.(6).



Accessible paths must be level, stable, non-slip, and at least 2 meters wide. [Guideline 6.4.1 (3)]

Swimming is encouraged where it is deemed safe. [Guideline 6.4.2 (3)]

Open air showers. [Guideline 6.4.2(4)(b)]

Floating structures including docks are permitted. [Guideline 6.4.2 (7)]

(8) Beach buggy parking areas should:

a. Be located as far from the water as possible.
b. Be visibly screened from view from public beach areas.
c. Include a supported surface material such as terf blocks or concrete grid pavers.
d. Be identifiable with design elements such as signage and barrier fencing.

(9) Consider limiting the areas and routes where buggys are permitted to drive on beaches to minimize any negative effects on beach visitors and the natural environment.

(10) Lifeguard stations should be located as needed, depending on levels of activity in and around the water.

Lifeguard stations are among the permitted structures on beaches. [Guideline 6.4.2 (10)]

6.4.3 Furnishings, amenities and lighting

(1) The following minimal requirements are essential for ensuring a safe, clean, and enjoyable experience for beach visitors while promoting environmental sustainability and responsible beach management.

a. Lifeguard Stations strategically placed
b. Open-Air Showers located at convenient points along the beach
c. Adequate restrooms, equipped with handwashing stations
d. Waste bins.
e. shaded areas to provide relief from the sun and shelter during inclement weather.

shaded areas. [Guideline 6.4.3 (1) (e)]

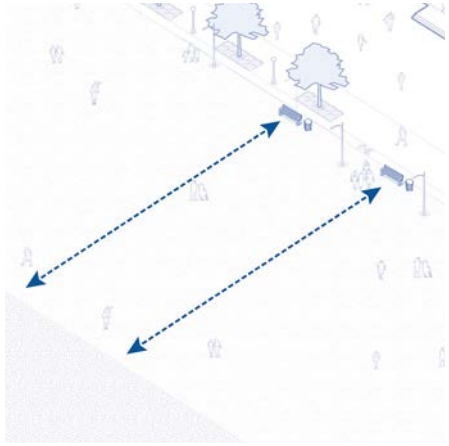
(2) Additional amenities and services may be considered based on the beach's size, location, and visitor demographics.

(3) Furnishings and amenities should be located as far from the water as possible, to allow the majority of the beach to remain open, and near areas with high activity levels or development.

(4) Consider tides, wind, and sun patterns when locating and designing furnishings and amenities.

(5) Trash bins should be provided at regular intervals along the beach.

(6) Consider providing shower stations, restrooms, and drinking fountains near popular areas.



Furnishings and amenities should be located as far from the water as possible. [Guideline 6.4.3 (1)]

6.4.4 Sustainable, ecological and inclusive design

(1) Where a Beach Edge condition exists, It must be maintained. A Structural Edge condition may not be developed. No permanent change to the beach may be made for any reason.

(2) Beach renourishment, protection of dunes, grasslands and natural edges must be taken into consideration for sustainability and maintenance.

(3) Infrastructure should be created to aid wheelchair user's access to the waterfront, as well as to the water itself where possible.

Infrastructure should be created to aid wheelchair user's access to the waterfront. [Guideline 6.4.4 (3)]

6.4.5 Additional general provisions for the design of swimming beaches

(1) Compliance with all regulations, controls and standards issued by the Ministry of Municipalities and Housing and Environment Regulations.

(2) Adherence to all provisions of the arrangements for leasing coastal and beach lands issued by Council of Ministers Resolution No. 433 dated 10/18/1436 AH and the amendments issued thereto by Council of Ministers Resolution No. 262 dated 05/16/1440 AH.

(3) Preparing all studies necessary for issuing licenses, including environmental studies and others, in accordance with laws and regulations.

(4) Compliance with the regulations, standards, design guidelines and guidelines issued by SDA, for example: (Coastline Urban Design Manual for Greater Dammam Metropolitan Area - Sharqia Landscape Manual)

6.4.6 Additional criteria for designing swimming beaches

The following criteria must be taken into account when preparing the beach design:

(1) Conduct an assessment and inventory of the site's natural resource areas prior to preparing design and planning studies for the development process.

(2) Providing continuous access to the public and all standard beachgoers to ensure connectivity and accessibility along the beach and avoid disrupting the continuity of the promenade between the various activities overlooking the beach, taking into account the implementation of the royal orders and relevant decisions in this regard (such as Cabinet Resolution No. 433, specifically paragraph 4 of Article 1).

(3) Working according to Saudi Architecture (modern style)

(4) The project buildings should not be tall (according to the regulatory requirements for beaches) in order to provide a wider field of vision and sufficient ventilation between the buildings within the site and between the neighboring sites.

(5) Designing spaces with a graded hierarchy of privacy levels (public, semi-public, semi-private, and private).

(6) Designs must be of a high quality and durability to withstand the harsh climatic conditions of the Kingdom, such as wind, rain, temperatures, sunlight, humidity, and dust, and considering energy conservation.

(7) Children's playgrounds should feature modern, innovative equipment with clean, safe play areas and flooring.

(8) Buildings should be relatively spaced apart and not obstruct natural paths on the site (rainwater drainage, animals, etc.)

(9) Designate planting areas and urban furniture, such as benches, waste containers, and lighting, on a fixed zones on both sides of the walkway, so as not to obstruct pedestrian movement.

(10) Harmonize site furniture with buildings, plazas, and other project elements, etc.

(11) Metals used in site furniture must have rust- and weather-resistant finishes.

(12) Providing seats with modern and innovative designs and in various sizes to serve individuals and groups and enhance community interaction.

(13) Seats should be located in designated furniture areas so as not to impede the movement of pedestrians and cyclists.

(14) Seats should be made of materials that do not absorb heat or cold.

(15) Provide landscaping and planting elements along the walkway that suit the site's nature, preferably using native plants and shade-providing trees.

(16) Providing pedestrian lighting with modern and simple designs that suit the nature of the site.

(17) High-quality lighting, aligned with the architectural context and public realm, enhances and unifies the site.

(18) Using various types of lighting to highlight design features and create aesthetic touches at night.

(19) Provide adequate facade lighting, distributed according to project activities, to minimize light pollution.

(20) Globally recognized symbols and icons should be used to convey the message to all audiences and languages (example: restroom icons).

(21) Signs should be made of high-quality materials that are resistant to waterfront weather and rust, and should avoid reflective and glare-prone materials.

6.4.7 Design and planning considerations for designing swimming beaches

(1) Study all spatial design considerations and Saudi code requirements.

(2) Ensure development preserves natural features (sandy beach, vegetation, wildlife) without disturbing the site's character.

(3) Design should ensure flexibility of use and diverse functions, maximizing economic return without compromising the site's character.

(4) Use environmentally friendly materials compatible with the site's nature.

(5) Analysis of areas of visual attraction such as hills, valleys, and beaches.

(6) Study connectivity and accessibility between the beach and surrounding areas.

6.4.8 Urban and architectural elements for designing swimming beaches

(1) Provide an administrative building to manage the beach and serve visitors, including a first aid center or room. Administration and first aid may be in separate buildings.

(2) Equip the first aid center with essential supplies (bandages, gloves, disinfectants, hot/cold water, bed, oxygen cylinder, Immobilization Trauma Board, etc.). The center must be clearly marked for easy access by beachgoers.

(3) Provide a seaside promenade as the main pedestrian axis beside the sandy beach, with ample seating overlooking the shore.

(4) Allocate parking spaces proportional to project size and expected visitors, in line with Ministry of Municipalities and Housing requirements, ensuring comprehensive accessibility throughout the project.

(5) Provide bicycle parking spaces appropriate to the size of the project.

(6) Provide wayfinding signs for the site.

(7) Provide men's and women's restrooms in compliance with Ministry of Municipalities and Housing requirements.

(8) Provide restrooms for men and women, including baby changing areas, and ensure universal accessibility.

(9) Provide restrooms at the swimming beach site, including showers, changing rooms, lockers, and baby changing areas, ensuring universal access for both men and women.

(10) Ensure periodic maintenance of all project components

(11) The maintenance team should be available during working hours to maintain the facilities.

(12) Provide modern, coastal-style kiosks on the beach for food, drinks, and beachgoer needs.

(13) Beach entry must be free and charges may apply for services.

(14) Coordinate with the Border Guard and obtain all necessary approvals for security and safety requirements.

(15) Installing modern lighting suitable for the project.

(16) Provide lifeguard watchtowers equipped with rescue tools and equipment if a swimming area is designated.

(17) Increase afforestation and shading along pedestrian walkways and public squares.

(18) Temporary programs or festivals on the beach must be held outside the main swimming areas.

(19) Display a code of conduct on an information board reflecting the laws and regulations governing the use of the beach and surrounding areas. It should cover rules on pets, fishing, waste management, vehicle use, camping, campfires, scuba diving, and other relevant activities, and be accessible to the public.

(20) Display a dashboard that includes:

a. Place information boards at main entrances, visitor and tourist information areas, lifeguard towers or other beach facilities, and parking areas.

b. Clearly indicate the hours rescue personnel, equipment, and first aid are available on information boards and at rescue towers.

c. Provide at least one sign for beaches up to 500 m; for longer beaches, multiple signs are required.

d. Include telephone numbers for police, first aid, and other relevant emergencies, along with emergency service contacts.

e. Information must be in Arabic and English.

f. Display a map on the information panel showing the beach's length, boundaries, and locations of major facilities and services.

g. Clearly identify lifeguard-patrolled swimming areas on the map, and mark them with visible signs and boundaries on the beach.

h. The map should be of high quality, easy to read, and correctly oriented.

i. The map should contain explanatory symbols.

j. The map should feature a "You are here" icon indicating all facility locations.

(21) Zoning different uses for the safety of swimmers and separating them from marine activities, facilities and other activities, and clarifying this on the map.

(22) Providing educational tools.

6.4.9 Architectural requirements for swimming beach design:

The following criteria should be considered when preparing the beach design:

(1) The architectural design should be distinctive and modern, serving as a cultural landmark that reflects the development and urban character of the coastal area.

(2) The architectural design should fulfill both the functional and aesthetic needs of the project users.

(3) Select building materials suitable for the region's climate, while considering the aesthetic aspects of facades and the overall site.

(4) The project's architectural design should maximize flexibility by allowing spaces and activities to be combined or modified to respond to changing supply and demand.

(5) Buildings should be tallest farthest from the water and step down toward the promenade and beach to preserve sea views and avoid visual obstruction.

(6) The architectural design should maximize adaptation to prevailing climatic conditions and ensure protection for all visitors.

(7) Architectural design must comply with municipal accessibility requirements issued by the Ministry of Municipalities and Housing, covering ramps, parking, pedestrian paths, elevators, and public facilities.

(8) Providing an adequate number of emergency exits according to the requirements of the Saudi Building Code.

(9) Ensure all building safety and security standards are met in accordance with the Saudi Building Code requirements.

(10) Select building materials suitable for the region's climate, considering the aesthetics of facades and the overall site.

(11) Locate service areas and mechanical equipment away from the main promenade and waterfront to avoid visual disruption.

(12) Design buildings and blocks in varied shapes and sizes that harmonize with the public realm.

(13) Arrange building blocks and orientations to enhance, not obstruct, visual connections between streets, public squares, and the waterfront.

(14) Buildings must respond to the public realm and open spaces of the project.

(15) Arrange buildings to create public and visually appealing spaces between them.

(16) Pedestrian paths between building clusters must be short and comfortable to maintain connectivity between entrances, the promenade, and the beach.

(17) Pedestrian walkways must ensure continuous vertical and horizontal visual connections between the street and waterfront, acting as the backbone of the project's corridors.

(18) Pedestrian walkways must be continuous, connected, and wide enough to accommodate expected visitors along the waterfront, enhancing connectivity and accessibility throughout the project (Active Waterfront Promenade).

(19) Pedestrian walkways must connect smoothly with entrances, ensuring continuous flow without obstacles from street furniture or restaurant and café seating within the project.

(20) Provide a section showing the relationship of buildings to the division of public realm components, including pedestrian walkways.

(21) Buildings must be oriented toward the seafront promenade and public squares.

(22) Buildings must maintain a strong connection with pedestrian traffic.

(23) The main project entrances should be welcoming and attractive to visitors.

(24) Buildings and facades to be designed in a modern, diverse manner consistent with the overall project.

(25) Building entrances must be attractive to pedestrians and easily accessible from all walkways.

(26) Building facades must be transparent or feature large windows to enhance visual interaction and connectivity with the waterfront promenade and activities.

(27) External facades must extend along the waterfront promenade to enhance user interaction with the public realm and create a distinctive visitor experience.

(28) Buildings must orient activities—such as sales and outdoor seating for restaurants and cafés—toward the waterfront promenade to create an active pedestrian realm (Active Waterfront Promenade).

(29) Avoid blank Frontage by activating them with innovative architectural or urban features or art to create attractive spaces.

(30) Differentiate ground floor facades from upper floors using distinct design styles, materials, etc., to draw visitors.

(31) Design engaging display windows for commercial building facades.

(32) Providing a tourist attraction to give a visual identity to the project (public art).

(33) Select suitable ground-floor activities and diversify uses to fit the tourism project's identity (pedestrian-oriented uses).

(34) Provide shading for shop, restaurant, café, and other facades to ensure user comfort. The design must respond to the local climate without obstructing waterfront views.

(35) Implementing building facades using the latest methods and modern, high-quality materials.

(36) Building signs should be modern, harmonious and consistent with the building facades and architectural character of the building.

(37) Building signs should be consistent across a single building and avoid randomly changing and varying signs.

(38) Design and implementation of building signs using the latest methods and high-quality materials.

(39) Compliance with the "Commercial Signboard Requirements" approved by the Ministry of Municipal and Rural Affairs and Housing.

(40) All mechanical equipment and waste and recycling areas must be concealed using fences, plant barriers, or integrated designs that blend with surrounding buildings. Stored materials must not exceed the height of adjacent walls.

(41) Study of the service area for loading and unloading goods and managing waste away from the pedestrian area and waterfronts (servicing and loading)

(42) Isolate odors in the design of waste collection areas.

6.4.10 Standards for Universal Accessibility in Swimming Beach Design

The following criteria must be taken into account when preparing the design:

(1) Ensure full accessibility to the beach, nearby buildings, facilities, and restrooms.

(2) Provide universal access ramps to the beach, ensuring their design and materials are environmentally friendly and sustainable.

(3) Ensure all beach facilities are universally accessible.

6.4.11 Landscaping standards for swimming beach design

The following criteria must be taken into account when preparing the design:

(1) Sharqia Landscape Manual and the (Parks and Open Spaces) section of this guide.

(2) It is preferable to use local seedlings, provided that they have passed through a transitional nursery stage during which they acquire the ability to withstand environmental conditions. If necessary, a nursery must be established within the project.

(3) Choose plants that are native or adapted to the local climate to look natural, reduce maintenance, and conserve water.

(4) Selection of appropriate plants and planting materials given the location adjacent to seawater and the potential influence of humidity.

(5) Use trees for shade on pedestrian paths, sidewalks, benches, gathering areas, and parking lots.

(6) lifespan tree species .

(7) Choose tree species that do not damage sidewalks and utilities.

(8) Adequate spaces must be provided between trees to facilitate air and water access to the roots.

(9) Using plants and landscaping to enhance aesthetics and sense of place .

(10) Ensure that landscaping does not obstruct the view of the beach.

(11) tree grates when planting trees on the sidewalk to allow water and air to pass through.

(12) Use a structural soil system in paved areas to allow roots to grow properly and direct their growth towards the adjacent agricultural areas.

(13) Use highly efficient, fully automatic irrigation equipment that shuts off automatically and is designed with humidity sensors.

(14) Shade trees should be used in parking lots to reduce the effect of the urban heat island phenomenon , with a ratio of no less than one tree for every 6 parking spaces.

(15) Use shrubs instead of trees in areas with good viewing angles.

(16) Avoid planting plants that are harmful to touch, such as cactus, near pedestrian paths.

(17) It is preferable to use plant species that have an effect on repelling some unwanted animal species from entering the project.

(18) The grass areas should be distributed so that they are optimally used as seating areas instead of dry land.

(19) Use climbing plants when you need to cover large areas of land, as they only need to be watered at the roots and cover the required area.

(20) Avoid planting deciduous trees around the swimming area.

(21) Seaweeds or other natural vegetation should be left on the beach, as they are natural components of both the water and marine ecosystems. These ecosystems should be considered living, natural environments, not merely aesthetic or natural features.

(22) Prevent algae and vegetation from accumulating to the point where it becomes a hazard; however, vegetation should only be removed if absolutely necessary in areas where the buildup is causing problems, to avoid producing odors that attract insects. Rotting seaweed is also slippery, poses a hazard to beach walkers, and makes overall beach access difficult.

(23) If vegetation continues to accumulate on the beach, a seagrass management strategy is recommended as part of the beach management plan.

6.4.12 Blue Flag Beach Criteria

The Blue Flag program supports sustainable development in freshwater and marine areas by motivating local authorities and beach operators to meet high standards in water quality, environmental management, environmental education, and safety. Over time, it has become a respected and recognized award, uniting the tourism and environmental sectors at local, regional, and national levels.

(1) The explanatory notes in this document establish a common understanding of the Blue Flag beach standards and their implementation requirements. The explanatory notes provide details on assessing and managing compliance with the Blue Flag beach standards.

(2) The criteria are either mandatory or prescriptive: mandatory criteria must be met for Blue Flag accreditation, while prescriptive criteria are recommended but not mandatory.

BLUE FLAG

For the latest official updates on Blue Flag beaches, please refer to the official website.

www.blueflag.global

(3) The international Blue Flag beach standards outlined in this document represent minimum requirements. National operators may adopt more stringent standards, provided they align with the philosophy of the international Blue Flag program.

(4) These stricter standards must be approved by the National Jury and communicated to the International Jury. Furthermore, the beach manager must be informed of the stricter standards before the start of the next Blue Flag season.

(5) The beach criteria and explanatory notes in the document should be used by all Blue Flag applicants to understand the requirements that must be met before a beach can be awarded the Blue Flag.

This document also serves as a reference for managing beaches already accredited with Blue Flag status. The criteria and explanatory notes provide guidance for national, regional, and international Blue Flag Jury members in evaluating beach candidates.

(6) During the Blue Flag season, the flag must be flying at the beach.

(7) The flag is a symbol of the beach's participation in the program but also an indicator of compliance with the standards.

(8) The flag may be flown 24 hours a day during the Blue Flag season or only during the hours when the beach meets all Blue Flag criteria.

In the former case, there must be adequate signage indicating when services (such as lifeguards) and facilities (such as toilets) are operating.

If a Blue Flag beach does not meet the Blue Flag standards, the flag may be permanently or temporarily withdrawn from the beach. There are several degrees of non-compliance:

(9) Minor non-compliance occurs when there is a problem with only one mandatory standard, which has little or no consequences for visitor health and safety and the beach environment.

(10) If non-compliance would harm the health and safety of the visitor or the beach environment, it should be treated as a major non-compliance.

(11) When a minor non-compliance occurs and can be corrected immediately, the sign is not withdrawn, and only the non-compliance is recorded in the inspection visit report. However, if a minor non-compliance cannot be corrected immediately, the beach is given ten days to fully comply with all standards.

(12) The flag is withdrawn until all problems are corrected, and this is noted on national and international Blue Flag websites.

(13) Multiple non-compliance is defined as failure to meet two to three unavoidable standards with minimal or no impact on visitor health and safety or the beach environment.

If any of the non-compliances are detrimental to visitor health and safety or the beach environment, it should be treated as major non-compliance.

When multiple non-compliances occur, the beach is given ten days to fully comply with all standards, the flag is withdrawn until all issues are corrected, and national and international websites are updated accordingly.

(14) Significant non-compliance occurs when a beach does not comply with one or more standards, resulting in a health and safety risk to the beach user or the environment, as well as the public perception of the beach and therefore the program.

(15) When significant non-compliance is detected, the flag is immediately withdrawn for the remainder of the season. The Beach Information Board must clearly indicate that the Blue Flag award has been withdrawn. National and international websites are updated accordingly.

(16) In all cases of non-compliance, the national operator must immediately notify the local authority/beach operator of the observed areas of non-compliance.

(17) Information about the reason for the flag removal must be clearly posted on the beach. The local authority/beach operator must inform the national operator of the re-compliance and provide the appropriate documentation required.

(18) The flag can then be raised on the beach again.

(19) The national operator should also consider a follow-up monitoring visit to verify beach compliance.

(20) If the local authority/beach operator fails to ensure and document compliance with the standards within ten days, the national operator must ensure the Blue Flag is withdrawn for the remainder of the season at the beach.

(21) If conditions on a beach change and the Blue Flag is temporarily withdrawn, for example when weather events cause damage to the beach or an emergency arises, the beach management must inform the national operator that the Blue Flag has been temporarily withdrawn and national and international websites must be updated accordingly.

(22) In addition to updating national and international Blue Flag sites with beach conditions, the national operator must report any non-compliance to Blue Flag International 's head office. If non-compliance is observed by an international observer, the national operator must submit comments to Blue Flag International 's head office within 30 days.

(23) The applicant for the Blue Flag award is the authority responsible for the beach. This may be a local municipality, a private hotel, a national park, or a private beach operator. A beach may qualify for the Blue Flag award if it is legally designated as a bathing area and has the necessary facilities and services to comply with Blue Flag standards.

(24) A beach must be accessible to everyone (regardless of age, gender, political views, or religion) to be eligible for the Blue Flag award.

(25) It is preferable to grant beach users free access to a Blue Flag beach, meaning they can use the beach and its facilities without paying fees. However, Blue Flag recognizes that at some beaches, such as private beaches, members of the public are charged a small and reasonable fee for access.

(26) Other payments may be made for services in the area, for example for parking or equipment rental, but these must remain within reasonable limits.

(27) If a beach wishes to charge an entry fee higher than the equivalent of $30, it must apply for an exemption to the International Jury.

(28) FEE and the national operator in a country reserve the right to refuse or withdraw a Blue Flag award from any beach where the local authority/beach operator is responsible for violations of national environmental regulations or otherwise acts inconsistently with the aims and spirit of the Blue Flag Programme. Blue Flag beaches are subject to announced and unannounced monitoring visits by the national operator and FEE International . The primary source and most up-to-date information

Regarding Blue Flag beach criteria should be consulted and obtained from the organization's official website:

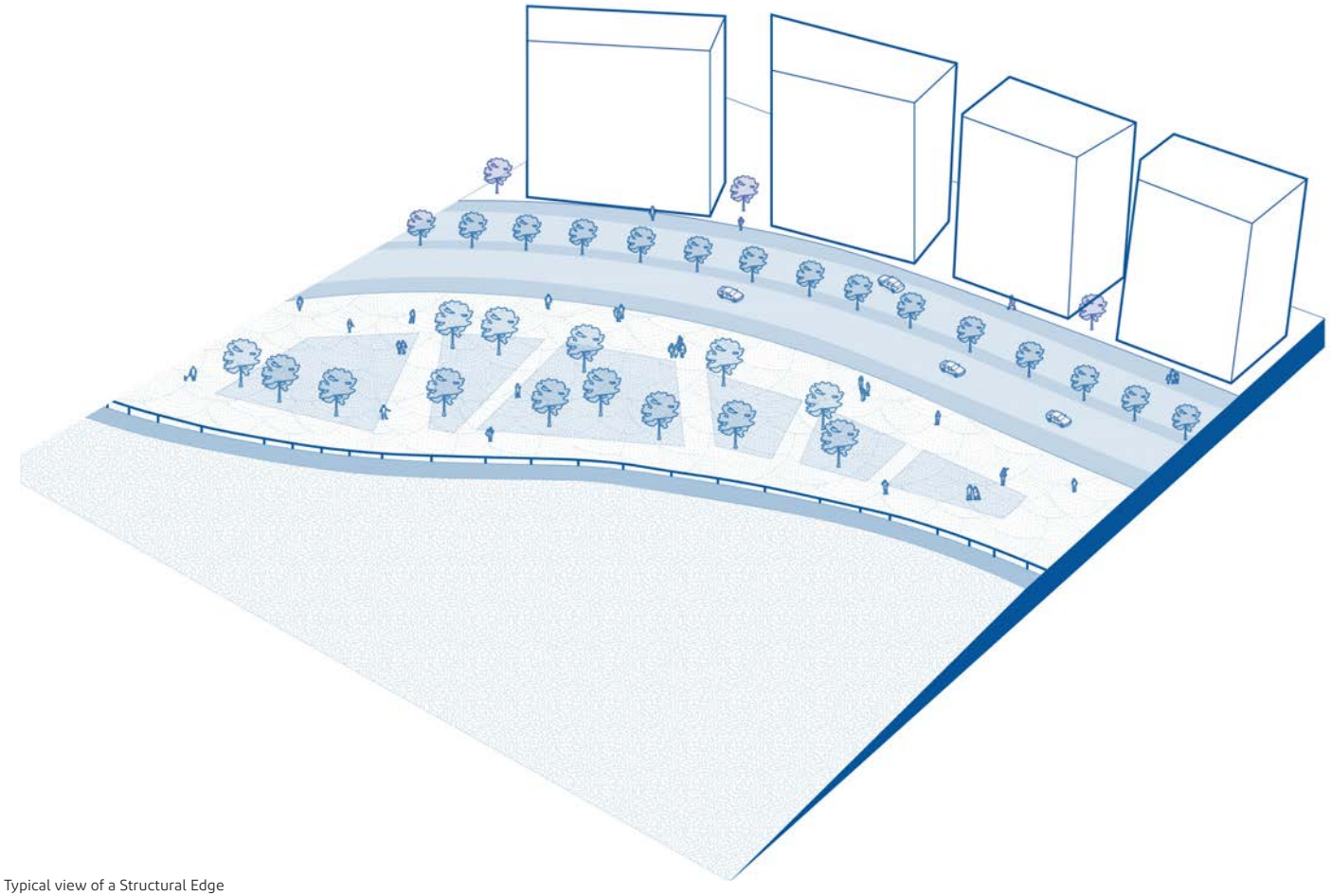
www.blueflag.global/criteria

6.5 Water Edge Type 3 - Structural Edge

The Structural Edge type of Water Edge refers to man-made construction works and structures between the coastline and the land. It often includes raised pathways and structures along the waterfront, normally constructed with hard or manufactured materials. Structural Edge such as corniches, piers, floating platforms, quays, docks and marinas.

The following guidelines and standards in this Section apply only to Structural Edge conditions, in addition to the general design guidelines and standards that apply to all Waters Edge types (see Sec. 6.2)

Where a beach edge is present in combination with a revetment or another structural edge condition, the guidelines and standards for beach edges (Sec. 6.4) must also be considered.



Typical view of a Structural Edge

6.5.1 Public access and views

(1) Pedestrian pathways, including corniches, promenades, and boardwalks should be fully accessible by the general public.

(2) A continuous hardscaped pedestrian pathway at least 3 meters wide should be provided along the water's edge. An existing adjacent park pathway or sidewalk may satisfy this requirement.

(3) Where the structural edge ends, pedestrian pathways should continue and connect to existing or planned pedestrian networks.

6.5.2 Overall Design

(1) A variety of structural edge types and design treatments should be provided, creating visual interest and establishing opportunities for a range of activities and uses distributed along the Coastline.

(2) Examples of structural edge types that can be applied include:

a. Corniche, promenade or boardwalk.
b. Swimming platform.
c. Marina.
d. Fishing pier.
e. Pedestrian bridge.

6.5.3 Uses, activities and structures

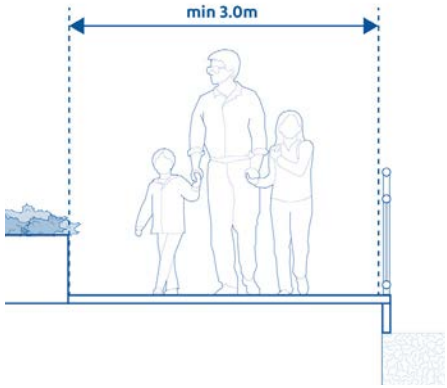
(1) There is no limit in the uses and activities of Structural Edge by the public, provided that such use or activity is compatible with the waterfront character of the Structural Edge and is not noxious to other people.

(2) Some appropriate activities along a Structural Edge include:

a. strolling,
b. hiking,
c. cycling,
d. relaxing,
e. fishing,
f. boating,
g. swimming.

(3) Where possible, create resting and gathering areas along pedestrian pathways. Consider locating these areas near key view points.

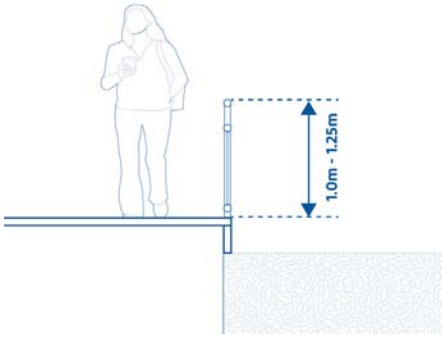
(4) Floating and overwater structures extending from the coastline into the water, including docks, marinas, swimming platforms and overwater resort accommodations, are permitted, and should meet the guidelines of Sec. 6.2.5.



Pathways at least 3 meters wide should be provided along the water's edge. [Guideline 6.5.1 (2)]

An example of a structural edge providing direct water access.

Create resting and gathering areas along pedestrian pathways. [Guideline 6.5.3 (3)]



Wall or railing between 1 and 1.25 meters in height should be provided for safety. [Guideline 6.5.4 (1)]

6.5.4 Furnishings, amenities and lighting

(1) Where the structural edge is raised above the water level, a wall or railing between 1 and 1.25 meters in height should be provided for safety.

(2) Provide adequate shade and respite from the sun, with physical shading structures or landscaping.

(3) Lighting must be provided to illuminate where the Structural Edge ends along the water's edge for safety.

(4) Use low-reflection and low-energy use or solar lighting where appropriate.

6.5.5 Sustainable, and inclusive design

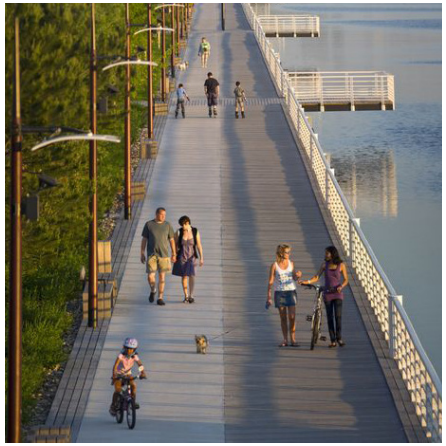
(1) The design of structural edges should minimize impacts on coastal and aquatic habitats and ecosystems.

(2) Design for resiliency to sea level rise.

(3) Incorporate handrails and other safety features for all users (including the elderly, disabled, and children).

(4) Where railing or other guards are not provided along the water edge, clearly identify the edge of the structure with contrasting color, materials, and lighting.

(5) Provide safety equipment along the water, including ring buoys, ladders, and emergency call boxes.



Provide lighting, seating, handrails and other amenities along the structural edge. [Guideline 6.5.4 (3)]

Clearly identify the edge of the structure with contrasting color, materials, and lighting. [Guideline 6.5.4 (4)]

7 Supplementary Regulations and Guidelines

7.1 Plot Subdivision

For the purposes of this Manual, "Plot Subdivision" is a process and a plan prepared by a real estate developer or an individual, with an interest in subdivision of a large tract of land into smaller plots for residential, commercial or other uses, taking into consideration the 10th Report and this Manual.

"A Plot Subdivision is prepared for land in excess of 10,000 square metres and, provided that sound planning principles are observed and clearly demonstrated, as well as public interest is safeguarded, it must adequately conform with the policies and objectives of SDA for the Coastline."

"A Plot Subdivision Plan shall include an overall master plan with allocation of land uses; block and plot layout; road network; basic networks of utility infrastructures; and land use, plot and bulk regulations and design guidelines which may not be absolutely in conformity with either the 10th Report or this Manual, subject to their evaluation and approval by SDA on their merits.

In accordance with Article 21 of the Cabinet Resolution No. 1270, dated 11.12.1392, a Plot Subdivision Plan must allow for a minimum of 33% of the total area of land to be allocated for roads, community facilities and utility infrastructures.

If a land is less than 10,000 square meters, it can be subdivided and by observing the regulations concerning land use, plot area, building area and building frontage, setbacks, height of buildings, building massing, placement and orientation, architectural details and parking, as per Art. 4 of the 10th Report and the present Manual.

If more than 100,000 square meters, Plot Subdivision projects shall also fall under the category of Major Distinguished Projects (Art. 10 of the 10th Report) and as such shall observe all relevant controls and requirements

7.1.1 Site Width and Depth

(1) Narrow and Wide Sites:

a. Development sites along the DMA coastline vary in width along the edge of the sea or along a major street.

b. Wide development sites allow more access options from the major street to the sea. Individual blocks are possible on wide development sites. Multiple building types, land uses and intensities are possible on wide development sites, and are encouraged.

c. Narrow development sites have limited access to the major street and to the sea. These sites typically have only one long development area that extends from the first major street to the sea.

(2) Shallow and Deep Sites:

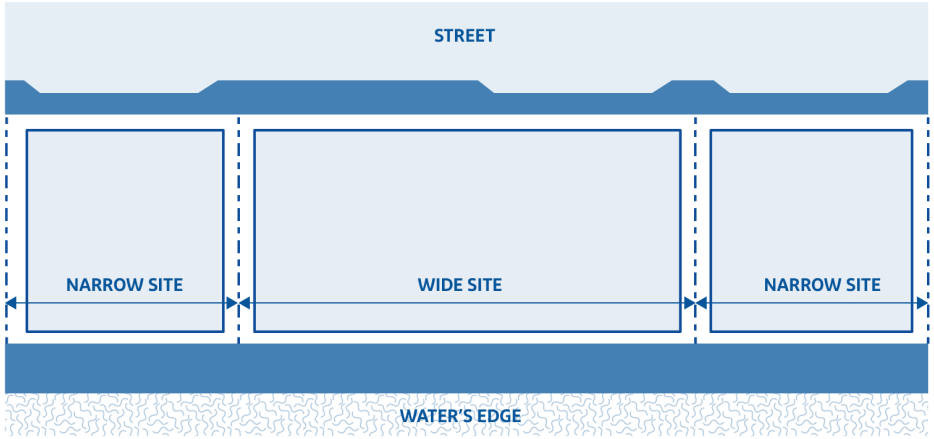
a. Development sites along the DMA coastline vary in depth (extending from the sea inland to the first major street).

b. Deep development sites allow options for multiple building types, land uses and patterns of development.

c. A deep development site allows for new streets and multiple blocks to be constructed between the sea and the first major street located further inland.

d. A deep development site is encouraged to create a park or open space between the sea and the first street located further inland. Built-Form should start behind this park.

e. Shallow development sites that only allow for one or two plots between the major road and the sea have reduced options for development.



Narrow and wide sites.

7.1.2 Streets and Blocks

(1) General:

a. On plots that are large enough to accommodate multiple blocks, a network of streets and blocks is required. For more details on the different street types, see Sec. 4, Streets and Mobility.

b. Streets and blocks should provide a variety of routes that create a logical network of easy to navigate connections.

c. Views of the coastline are important to the alignment of streets and blocks. Visual access to the coast should be provided to as much of the site as possible.

d. The minimum width of each street right-of-way is established by the street type (see Sec. 4, Streets and Mobility).

e. Streets must provide options for all modes of travel (drive, bike, walk) to operate safely within the right-of-way. Parallel paths for bicycle and pedestrian use are permitted, provided they create a direct connection similar to the streets.

f. Easy, direct access must be provided from the largest inland street to the coastline, and from transit stops, shopping areas, schools, employment areas, parks, and other amenities on the site or adjacent to it.

(2) Creating a Street Network:

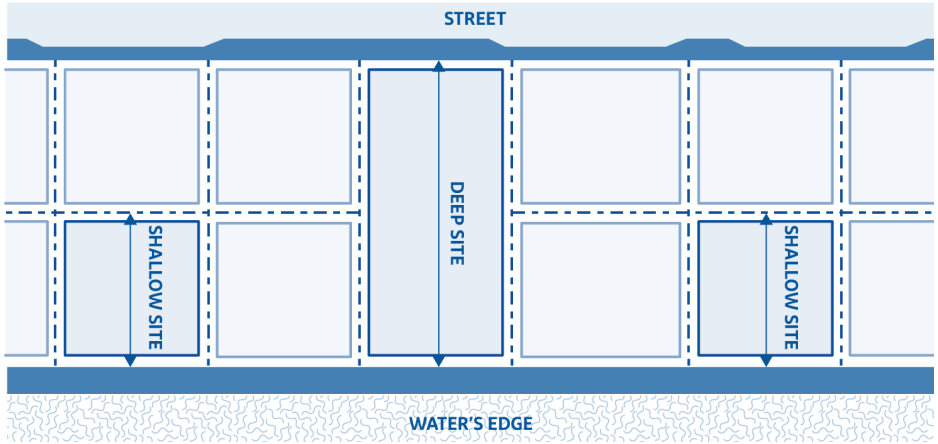
a. A connected network of streets creates functional options that reduce congestion within the site and is critical to project access.

b. Direct connections create reduced travel distances and must be provided within the site.

c. Adjacent streets must be extended to and through the project site. Where existing adjacent development or adjacent vacant sites do not provide street connections to the property line, a stub street must be provided for future access to adjacent land.

d. No streets may be gated. Individual properties may provide gated parking areas on private property.

e. Streets should not dominate the land area along the coastline.



Shallow and deep sites.

7.1.2 Streets and Blocks (Cont.)

(3) Hierarchy of Streets:

A hierarchy of street types ranging from large Arterial Streets down to Pedestrian-Only Streets is an important element of subdivision and site plan layout.

a. Arterial Streets are the largest street type and should occur only on the edge of the site.

b. Collector Streets are the next largest street type and should occur only in parcels that are deep enough to contain 4 or more blocks of development. Collector Streets should not occur within blocks of low-rise development, but may be adjacent to low-rise development.

c. Local Streets should be the most common street type and should separate blockson the interior of a site. Local Streets may serve development at any scale.

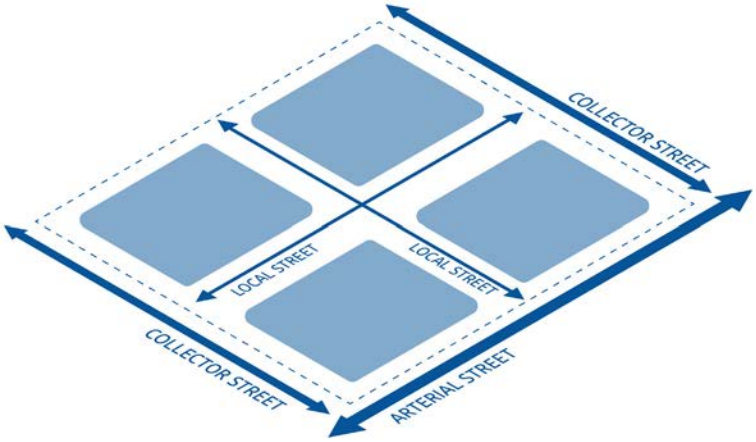
d. Pedestrian-Only Streets, pathways and trails may serve development at any scale and provide alternate safe off-street routes for bicycles and pedestrians.

(4) Block Size:

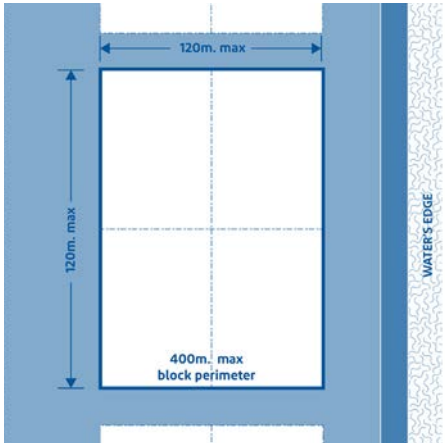
a. Platted blocks within the site must not exceed 400 meters around the block perimeter and 120 meters along any block face.

b. Ensure public access to the waterfront (one access point per 300-500 m of the waterfront) either through streets or public easements and walkways.

(5) To encourage diversity in the use of transportation on the coast (for cars, bicycles, scooters) and contribute to improving and sustaining environmental quality, charging spaces for electric vehicles shall be provided in selected spaces in off-street parking. Relevant standards recommended by MOMAH must apply



General street hierarchy.



Block size dimensions.

7.2 Master Plan

For the purposes of this Manual, "Master Plan" is a process and a plan prepared by a real estate developer or an individual, with an interest in undertaking construction works or activities for the use of land, with or without plot subdivision, for comprehensive residential, commercial, recreational, tourism or other purposes, taking into consideration the 10th Report and this Manual.

A Master Plan must be prepared only for land in excess of 5,000 square meters and, in accordance with Article 21 of the Cabinet Resolution No. 1270, dated 11.12.1392, the Master Plan must allow for a minimum of 33% of the total area of land to be allocated for streets (Section 4), community facilities and utilities.

Provided that sound planning purposes are observed and clearly demonstrated, as well as public interest is safeguarded, a Master Plan may not absolutely be in conformity with either the 10th Report or this Manual, and the developer or the individual may prepare a Master Plan to be evaluated and approved on its merits.

7.3 Utilities

(1) For the purposes of this Manual, utilities refer to the infrastructure networks of:

a. water supply;
b. sewerage (wastewater);
c. stormwater (drainage)
d. power supply;
e. district cooling;
f. telephones and wireless;
g. Irrigation

(2) In planning and engineering design of utility services, the standards as recommended by MOMAH must apply

(3) To ensure the efficient provision of utility services, the following standards and guidelines must apply to new developments, as well as to any utility upgrades.

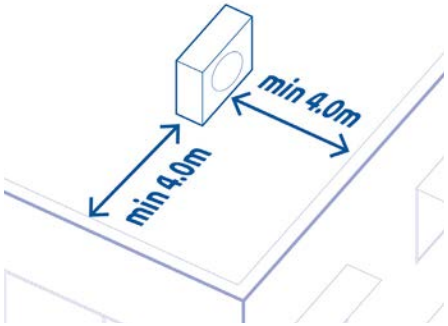
a. Plot Subdivision or Master Planning of vacant land must take into account the utility demands of the proposed development, along with the availability of service. This is especially important in the consideration of changes to a more intense land use designation.
b. To ensure flexibility, resiliency and efficiency, utilities must interconnect with existing or planned utility connections on adjacent sites.
c. Liaison with local utility providers should occur early in the planning process, in order to ensure adequate utility capacity will be available to build out the site.
d. Development intensity should match utility capacity available to the site, unless expanded utility is both planned and funded.

(4) Where possible, utility equipment should be located underground.

(5) Utility equipment (i.e. utility box transformers and standpipes) should be screened from view along the public realm with buildings, landscaping or other screening elements.

(6) Rooftop mechanical equipment and roof-vent penetrations must be set back at least 4m from the edge of the building's primary and secondary frontage and properly screened behind a parapet, or in an enclosure, to avoid visibility from the main road and other public streets or from other taller buildings.

(7) Maintain and clean all equipment and vents to preserve air quality and prevent external dirt and staining.



Setback of roof mechanical equipment.
[Guideline 7.3. (5)]

7.4 Community Facilities

(1) Community facilities must be provided throughout the Coastline to effectively serve the residing population, the users, the visitors, as well as the surrounding neighborhoods.

(2) The buildings that shall be deemed to fall under the Built-form type "Community Facility" are given in the following Table with the explanations as follows:

a. "Population served" refers to permanent population being served by the particular type of facility, extending as the case may be beyond the boundaries of the Coastline.

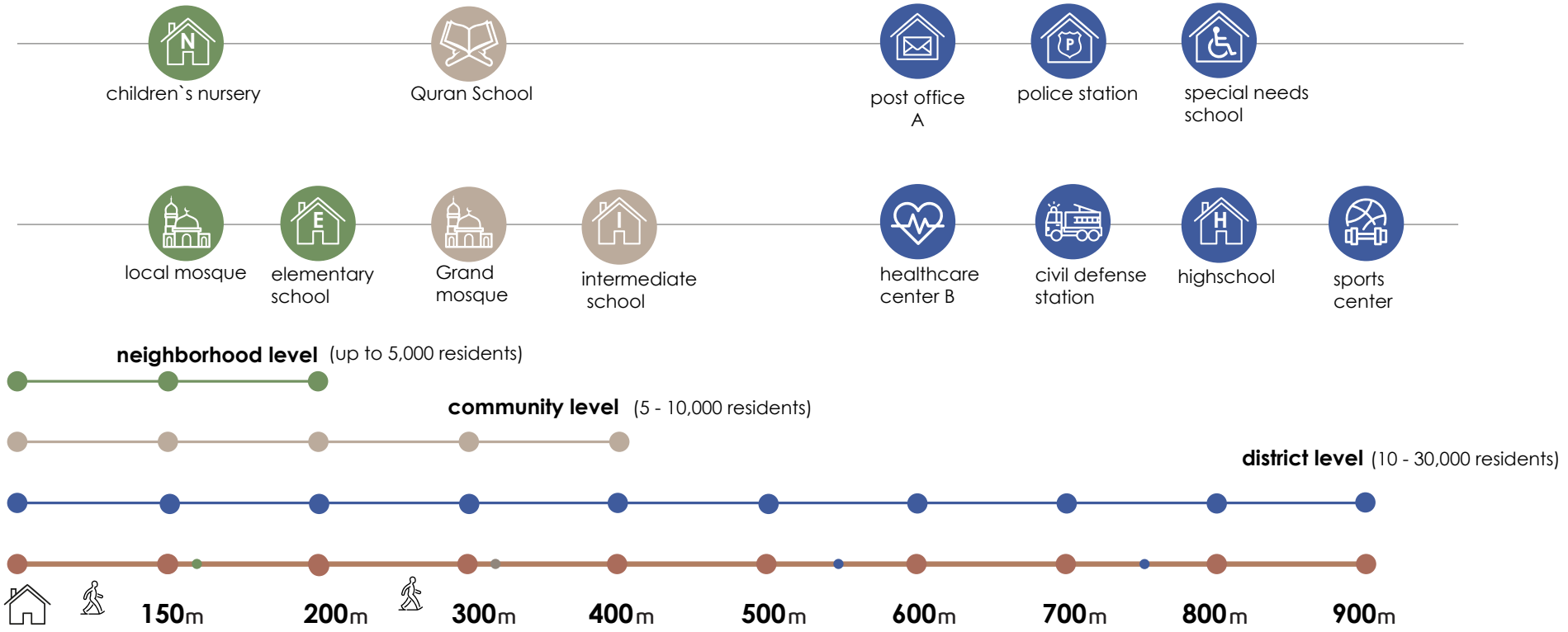
b. "Plot area per facility" should not be taken as one single community facility. If the overall plot area for a community facility is too excessive, additional locations for the same community facility may be required to serve better the area ("catchment distance").

(3) Take advantage of strategic locations adjacent to collector roads and intersections to develop local centers containing retail, service, employment, education, and community facilities.

(4) If the overall size of the project site is over 4 hectares, multiple locations for community facilities are required to better serve the area.

Community Facilities as per the Planning Standards for Regional and Local Public Services and their Different Levels

Type of Facility	Population Served	Catchment Distance (m)	Minimum Area/Person (m2)	Plot Area per Facility (m2)
Local Mosque	1500 to	300	0.5 to 0.7	750 to 2,800
Grand Mosque	5,000 to 20,000	600	0.3 to 0.4	2,000 to 6,000
Quran School	8,000 to 12,000	600	0.09 to 0.16	7,50 to 2,000
Children's Nursery	2,000 to 3,000	300	15 to 20	900 to 3,600
Elementary School	3,200 to 4,000	400	15 to 20	3,600 to 6800
Intermediate School	6,000 to 8,000	800	20 to 25	4,000 to 9,000
High School	11,000 to 13,000	1,600	25 to 30	7,000 to 1,4000
Special Needs School		1,600	varies	
Hospital	10,000 to 25,000	1,200	0.12 to 0.2	2,000 to 3,000
Civil Defense Station	5,000 to 25,000	1,500	0.3 to 0.9	4,500 to 6,500
Police Station	10,000 to 30,000	1,500	0.23 to 0.5	5,000 to 7,000
Post Office A	10,000 to 20,000	1,200	0.03 to 0.04	400 to 600
Sports Center	20,000 to 50,000	1,800	1 to 1.5	30,000 to 50,000



Allowed distance for the Community facility areas across different levels, (Ministry of Municipal and Housing, Planning Standards for Public, Regional, and Local Services and Their Various Levels, 2015)

7.5 Architectural Details

Notwithstanding any other provision included in Section 3, Built-Form, and Al Qatif Oasis Architecture Guidelines and East Coast Architecture Guidelines, the following regulations and guidelines shall apply for any development in the Coastline concerning architectural details.

7.5.1 Façades

(1) Any primary-street-facing and waterfront-facing façade must be activated with entrances, windows and other architectural elements. See the applicable built-form standards and guidelines for specific requirements (Section 3).

(2) Facades typically should have projecting elements, such as overhangs and awnings. Portions of a façade may be recessed to create articulation and shade.

(3) Entrances should be designed to reflect their significance. Primary entrances should appear as the most important entrance and be highly visible. They should be located facing the primary street frontage and, if applicable, the waterfront or other adjacent public space.

(4) Awnings, overhangs, or other shading elements should be provided over entrances.

(5) Facades must be detailed to mitigate the sun's impact on the building interior with use of the following methods (the list is not exhaustive):

a. Place more windows on the lower floors to increase ventilation,

b. Provide smaller windows on south, east and west-facing facades,

c. Provide shading structures, such as awnings, above windows.

(6) Windows and architectural ornamentation should use repetitive and alternating elements to generally create vertical groups that are complementary to the region's vernacular.

7.5.2 Roofs

(1) Roofs should generally be flat with no sloping.

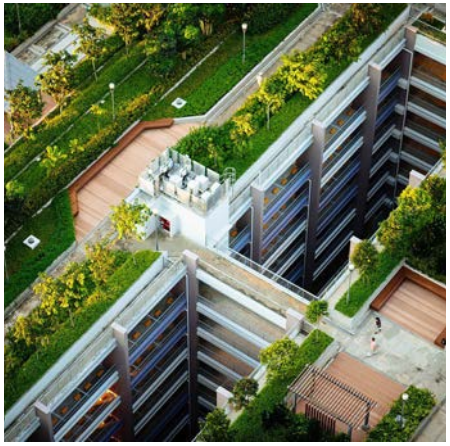
(2) In order to enhance the climatic control of the building, rooftops should be at least partially shaded, that will provide an additional room to the inhabitant without increasing the GFA.

(3) The surrounding wall on the rooftop should not be totally opaque. Different design solutions can be provided to have at least 30% of transparency on the wall portion higher than 1.10m. The surrounding wall on the rooftop should not be greater than 1.75m in height.

(4) Green roofs are encouraged to enhance the climactic control of the building, aid in the collection and reuse of rainwater, and reduce the overall heat effects on the area.

(5) Avoid directing exhaust air from F&B and ventilation units toward walkways, arcades, or walkable public areas.

Rooftops should be at least partially shaded. [Guideline 7.5.2 (2)]



Green roofs are encouraged to enhance the climactic controlof the building. [Guideline 7.5.2 (4)]

7.5.3 Building Materials and Colors

(1) High-quality durable building materials should be used. Building materials should convey a sense of quality and durability and be able to retain their appearance over time.

(2) Since the lower portions of a building, typically the first 4 levels, have the greatest visibility at ground level and are directly part of the pedestrian experience, its materials should be of enhanced quality and durability.

(3) Unfinished or unpainted concrete block work and aluminum sheeting are prohibited.

(4) All material used should be environmentally sustainable.

(5) The use of local materials is encouraged.

(6) A minimum of 50% of a facade treatment must be with one consistent material.

(7) The following are examples of building materials and colors that are consistent with the region's architectural style and are appropriate for development along the Coastline:

(8) When considering the exterior color(s) for buildings or boundary walls, the following guiding principles should be considered:

a. Sandy desert, earthy tones and subtle colors are more acceptable as they complement the natural environment.

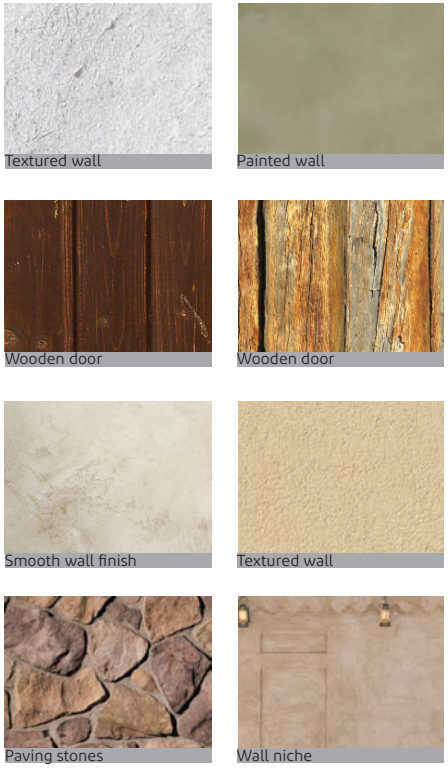
b. Intense bright colors should be limited in use.

c. Where more than one color is used, they should be in harmony.

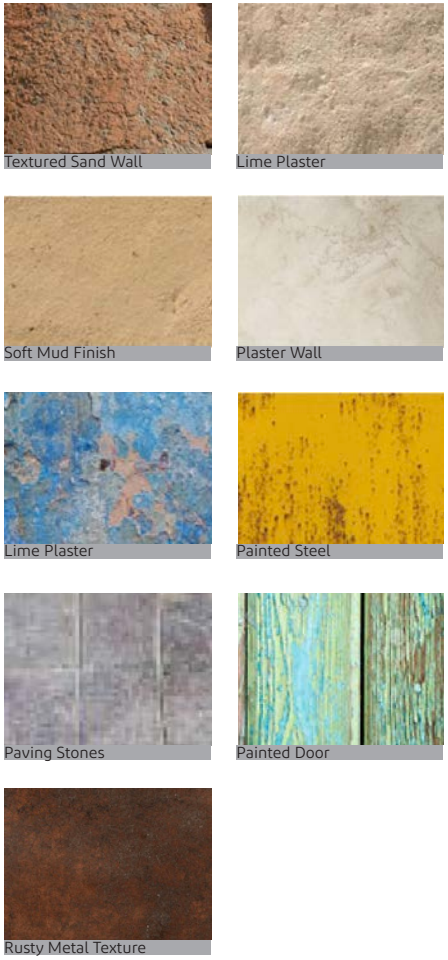
d. Using the same or similar colors on new and existing buildings can help unify a group of buildings.

e. Contrasting colors/materials can be used to highlight doors, windows, gates and other architectural features, or to sub-divide large expanses of wall areas to reduce apparent bulk. They should however be limited in their extent of use.

Examples of Al Qatif Oasis colors



Examples of Al Qatif Oasis building materials



Examples of East Coast building materials

Examples of East Coast colors

7.5.4 Construction Sites and Vacant Units

(1) Principles for Construction Sites:

a. Comply with Saudi standards and specifications for construction site hoardings as per the Buildings Construction Sites Covering Guidelines Manual, issued by MOMAH 2023..

b. Ensure all construction areas are fully covered with appropriate materials like polyester mesh or polyethylene.

c. Comply with Saudi standards and specifications for construction site hoardings.

d. Implement fire safety measures to protect construction areas.

e. Ensure compliance with fire safety regulations during the construction phase.

f. Adhere to detailed spatial organization and technical requirements to ensure stability and safety of construction hoardings.

g. Conceal bracing and ensure finish-painted hoardings to maintain aesthetic and functional integrity.

h. Maintain uniform coverage and appearance across all construction sites to minimize visual pollution.

i. Use high-quality materials that meet construction standards for durability and safety.

(2) Principles for Vacant Retail Units:

a. Install hoardings with a minimum height of 3.0 meters in front of vacant retail units during fit-out phases.

b. Position hoardings 1.0 meter in front of the Unit Lease Line, ensuring a 2.0 meters clearance from obstructions.

c. Enhance visual appeal with high-quality graphics, photos, and informative content on hoardings in front of vacant retail units.

d. Align hoarding designs with the brand image and contribute positively to the urban landscape.

e. Customize screening solutions for privacy needs, particularly for units like lady salons or specific retail functions.

f. Design screening solutions with stickers or other graphics that align with the brand and enhance the retail environment.

g. Regularly inspect hoardings and screening solutions to ensure they remain in good condition and free from damage.

h. Securely install hoardings to prevent accidents and ensure pedestrian safety around vacant retail units.

Construction Site hoardings

Vacant Retail Units hoardings

7.6 Shading Devices

Notwithstanding any other provision included in Section 3, Built-Form, and any guidance on architectural design that supports the regional identity and Al Qatif Oasis Architecture Guidelines and East Coast Architecture Guidelines, the following regulations and guidelines shall apply for any development in the Coastline concerning shading devices.

(1) Shading devices are an integral regional design element to improve comfort, increase activation of the public realm, and reduce heat impacts on urban areas, and should be incorporated in all developments. Shading devices include, but are not limited to, the following:

a. Canopies,
b. Awnings,
c. Architectural overhangs,
d. Umbrellas,
e. Window shades.

(2) Shading devices should be constructed with high-quality and durable materials that are waterproof, have a high ultraviolet protection factor (UPF), are easy to maintain, and are complementary and compatible with the other building materials used on the site.

(3) Materials such as fabrics, tension membrane (matching the guidelines above), steel structures and wooden frames may be used.

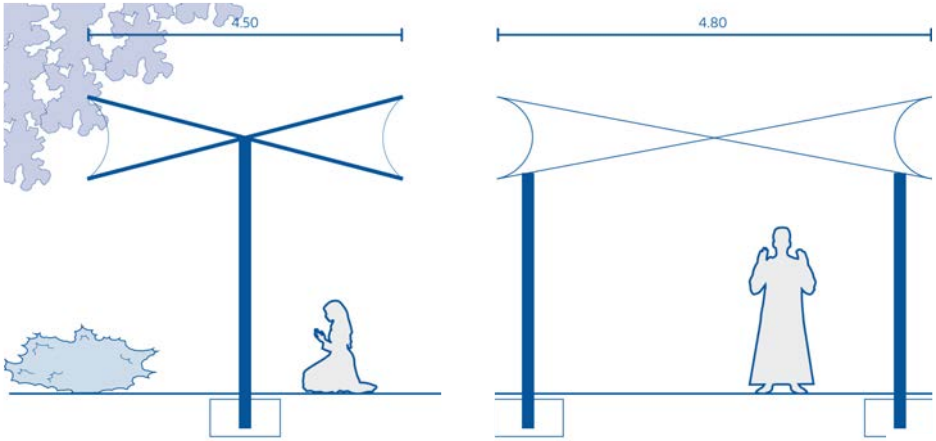
(4) Shading devices should not obstruct movement and visual continuity within the public realm or right-of-way.

(5) The articulation of building facades with recessions, extrusions, and overhanging elements can be used as shading devices for outdoor areas adjacent to the façade, while reinforcing the regions architectural identity.

(6) Awnings and window shades should be incorporated in building design to allow for the provision of windows for the flow of air and light, while providing shade and mitigating the impacts of direct sunlight into buildings.

(7) The technical specifications of shading devices are specified in the Saudi Building code. It is highly encouraged to incorporate these devices into the building design to create visual interest, support the regional architectural character, and add variation to the building elevations.

(8) The design of shading devices shall incorporate technologies that effectively protect against direct sunlight throughout various times of the day.



Shading devices are an integral regional design element to improve comfort, increase activation of the public realm, and reduce heat impacts on urban areas

Example of an acceptable ground floor shading device

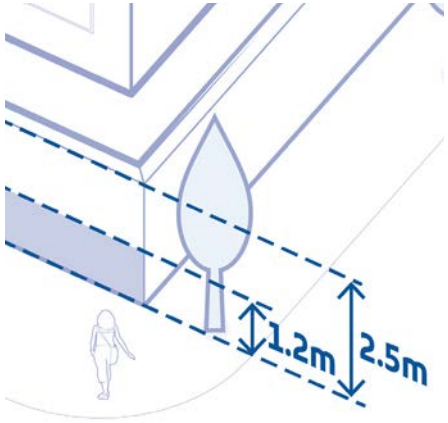
Riverside Green, South Brisbane, AUST

7.7 Walls & Fences

Notwithstanding any other provision included in Section 3, Built-Form, and Al Qatif Oasis Architecture Guidelines and East Coast Architecture Guidelines, the following regulations and guidelines shall apply for any development in the Coastline concerning walls and fences.

(1) Walls and fences are generally not recommended, but where they are necessary they must follow the standards and guidelines of this section.

(2) See the applicable built-form type guidelines and standards for any specific wall and fence requirements for each built-form type.



Maximum height and material separation heights of walls.
[Guideline 7.7.7 (b)]

(3) Ensure the design and style of a fence or wall is complementary to the surrounding neighborhood character.

(4) Walls and fences should be integrated with landscaping.

(5) Ensure that walls and fences do not cause any negative impacts on adjacent properties or the public realm.

(6) No wall or fence should exceed 2.5 meters in height. Exceptions will only be granted to buildings and facilities which require special security measures.

(7) The use of a variety of materials is encouraged in wall and fence design. It is recommended that either:

a. A portion of the wall or fence should not be opaque, with regular openings for sightlines through the wall or fence, or

b. The use of one material should be used up to 1.2 meters in height and a combination of materials should be used for the portion of the wall or fence above 1.2 meters. The portion of the wall or fence above 1.2 meters in height should be no more than 50% opaque

(8) Where planters are used as fences or barriers in cases where fencing is required, it shall applay the follwing;

a. It should be placed in a clear location avoiding confusion to pedestrians.

b. Small hanging planters should be avoided.

c. The planter base shall not exceed 1.2 meters in height, be made from high-quality materials of a robust and durable nature, and be similar in size and color to limit clutter.

d. Plants should not exceed a height of 1.2 meters.

e. Planters are to have deep troughs for draining excess water and should not overflow into Master Community property.

f. Planters shall always respect the design of the building and not obstruct any ornament or signage.

g. All planters must-have plants contained within them. Plants to be well maintained and have an attractive appearance at all times

7.8 Advertising Signage

The standards and guidelines of this section apply to advertising signage and signage associated with businesses or buildings, and do not apply to wayfinding signage.

(1) Advertisement signage should be limited, to prevent unnecessary visual pollution.

(2) Notwithstanding the regulations and guidelines developed for signs, billboards and advertisements by the Ministry of Municipal and Rural Affairs and Housing, Article 5.4 of the 10th Report and any provision included in Section3, Built-Form of this manual; the following regulations and guidelines must apply:

a. signs attached to building facades must not exceed 5.0 square meters in area for every meter of façade width;

b. signs detached from building facades must not exceed 3.0 square meters in area and 8.0 meters in height;

c. sign placement must not obstruct the clearway of required sidewalks and pedestrian paths;

d. signs located on the corner of a plot must not obstruct views for drivers and cyclists; and

e. signs must preferably be constructed with materials that match or compliment the surrounding building materials and not produce light or sound.

(3) Advertisement signage is prohibited in the following areas or on the following elements:

a. In naturally protected or preserved areas (such as mangrove forests or sand dunes),

b. In public parks, plazas, and other public spaces,

c. On trees of any size,

d. On transportation-related signs or infrastructure, including bridges, viaducts, tunnels, and street lights,

e. On continuous blank walls or fencing,

f. On or next to public works of art.

(4) The following types of advertisement signage are prohibited:

a. Unipoles,

b. Billboards,

c. Megacoms,

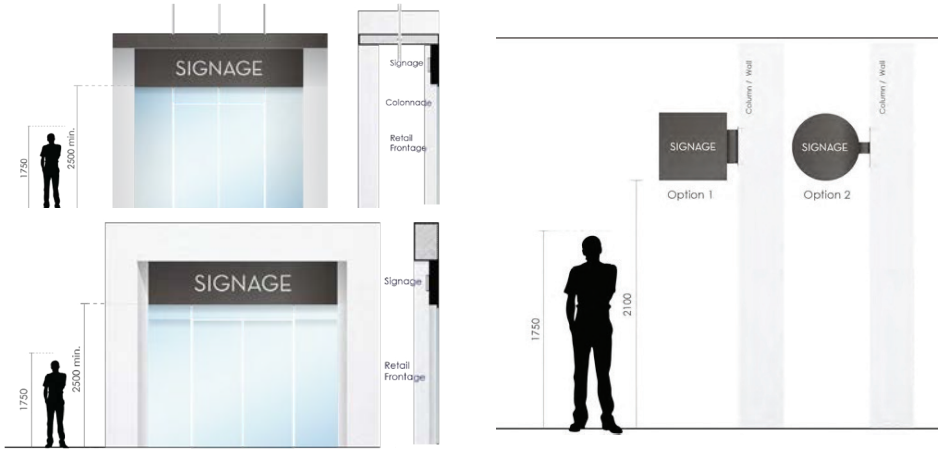
d. Hoardings.

(5) Advertisement signage may be placed on transit shelters and kiosks, but may not take up more than 30% of the total available surface area, and must not obscure vision for bus drivers and transit users.

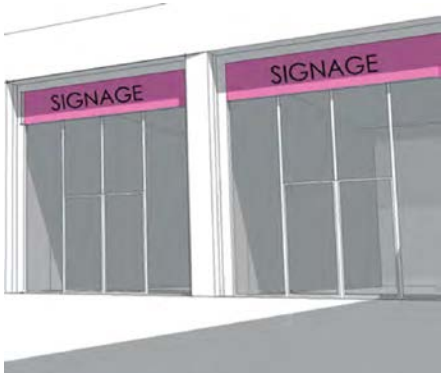
(6) Advertisement signage is not permitted on public seating or landscaping planters.

(7) Signs material shall be durable and fire-resistant.

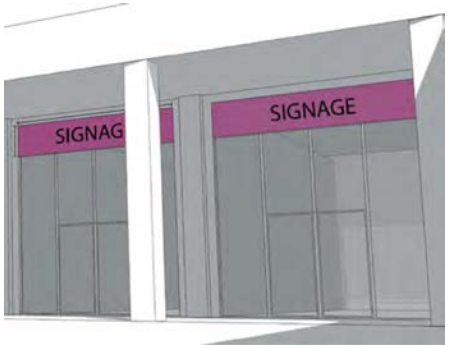
(8) Signage cabling shall be screened from public view, and adequately insulated for safety and avoid any hazard.



Retail Frontage ; Design visuals are for illustration purposes only.



Flushed Retail Frontage (No colonnade)



Recessed Retail Frontage with colonnade

7.9 Landscaping

Notwithstanding any other provision included in Section 5, Parks and Open Space, the following regulations and guidelines shall apply for any landscaping in the Coastline.

(1) All plants and plant material used in landscaping must be approved according to the guidelines of local native plants list, resisting saline conditions (halophytic plants)

(2) All landscaping must be regularly maintained and manicured to upkeep visual appearance, prevent overgrowth, and promote plant health.

(3) Landscaping created to satisfy a screening requirement for parking, loading, or service areas should meet the following guidelines:

a. A combination of trees and plants measuring at least 1 meter in height must be used for at least 70% of the width of the screening area. Plants of lower heights may be used in combination with these taller plants.

b. A combination of plant species with a variety of bloom times throughout the year should be used, to ensure screening is provided through all seasons.

(4) Trees needed to cast a wide shade should be chosen among trees forming crown shapes; they should have a straight trunk with no branches for at least 2.5 m.

(5) Trees must be away from pedestrian crossing areas and lane-change points for a distance of no less than 6.0 meters; this distance should be planted with bushes not exceeding 1 meter high.

(6) Visibility must be taken into account for pedestrians, cyclists and motorists when determining where trees should be placed; also consideration must be given to the height of their trunk and the area needed for periodic maintenance work.

(7) In all cases, suitable types of trees and plants should be selected, resistant to pollution, suitable for the local environment, not bearing fruits, providing shade, fast growing, and needing medium watering in order to rationalize irrigation.

Example of landscaping separating use.

7.10 Other Furnishings

Other furnishings guidelines refer to any street furniture or design elements of a practical use, located at primary park activity areas and along pathways, provided they do not obstruct clear access to park features or structures.

(1) Furnishings may include civic features occasionally combining public art, such as clocks, flags, banners, tents, commemorative monuments, sculptures, murals, wall mosaics, street art, water features, fountains, benches, trash bins and similar items.

(2) Water fountains should be provided near areas of high activity and along primary pathways, including children's playgrounds, sports fields, and primary gathering areas.

(3) At a minimum, trash bins should be located near all parking areas, at entrances to major buildings, and near areas of high activity.

(4) Provide consistency in the design character of park furnishing, to fit with the overall character and style of the park.

(5) Use materials that are easy to maintain and are resistant to vandalism or accidental damage.

(6) Use green-certified and local materials where possible.

Examples of seating areas and benches.

Furnishings includes the additional elements added to the public realm that provide a service or amenity to users, such as seating, trash containers, drinking fountains, bicycle parking stations, and more.

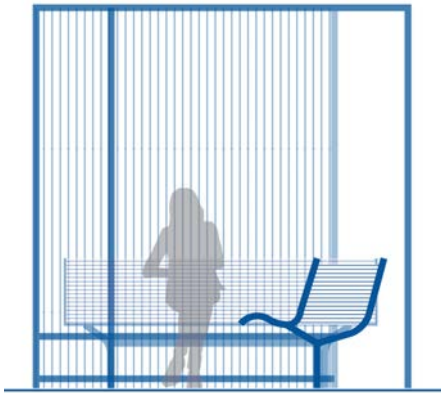
(7) All furnishings are encouraged to be designed in a style that reinforces the community identity or character.

(8) The placement of furnishings must not interfere with required rights of way for pedestrians, cyclists, motorists, or emergency vehicles.

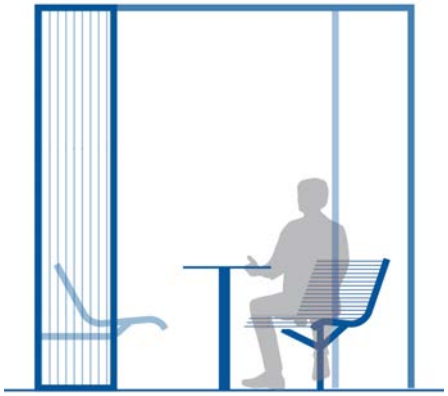
(9) Furnishings should be designed for universal accessibility, for easy use by all users regardless of age or ability.

(10) Trash containers should be screened from view from the public realm with Built-Form, landscaping, or other screening elements.

(11) Design external seating areas to be inviting with unobstructed views, avoiding enclosure and securing furniture to street infrastructure.



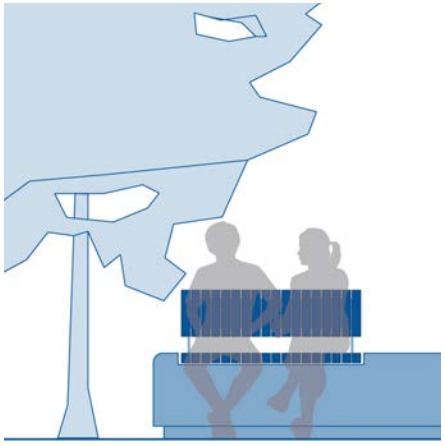
Furnishings not to interrupt pedestrian right of way.
[Guideline 7.9.8]



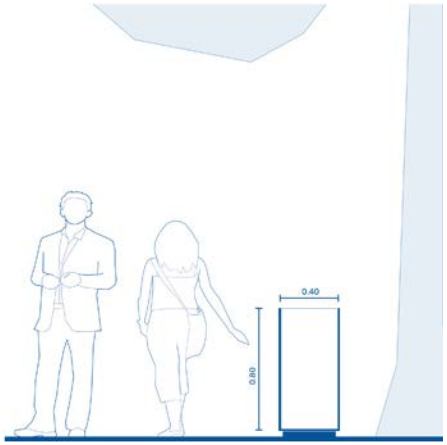
Furnishings not to interrupt pedestrian right of way.
[Guideline 7.9.8]

Civic features throughout public spaces. [Guideline 7.10.1]

Furnishings should be consistent in design character where possible. [Guideline 7.10.4]



Civic features throughout public spaces may include benches. [Guideline 7.10.1]



Civic features throughout public spaces.
[Guideline 7.10.3]

7.11 Public Art

Public art encompasses a broad range of artistic practices as an expression of the tradition of visual arts, including but not limited to sculpture, murals, street and graffiti art, video, and digital media.

It can also include aspects of performance, theatre, music, culturally significant ceremony, or other more ephemeral artistic experiences.

The following are key considerations to achieve an optimal effect from Public Art in the Coastline:

(1) Consider public art as a long-term or "permanent" installation, built to last for the foreseeable future, or as a shorter-term, "temporary" work, designed to be experienced over a period of days, weeks, months, or several years.

(2) Consider public art as a platform for local artists and arts organizations who should be involved as early as possible in the creation of public art.

(3) Consider involving members of the local community in the creation of public art, to create a project that is deeply relevant and connected to the community.

(4) Consider creating art that is interactive, for a higher degree of engagement with the community.

(5) Consider the surrounding land uses and populations served when designing public art, and create artwork that is situationally relevant. For example, if located near a school, consider creating artwork tailored to children or is physically interactive for children's enjoyment.

(6) The engagement of local artists and art that honors local history, culture, or identity is encouraged.

(7) Consider creating a "destination" art work, that functions as a landmark or gathering space.

(8) These focal points can serve as a tourist attraction and result in economic benefits for the region.

(9) Public art must be regularly maintained and cared for to ensure the artwork continues to make a positive impact on the community over its lifespan.

Long-term or "permanent" installation.
[Guideline 7.11.1]

A platform for local artists.
[Guideline 7.11.2]

Temporary art installation, Brazil

Flying Marlin, Tapeart Mural, Dubai Canvas Festival

Public art can foster community pride, be a catalyst for social interaction, and increase a person's sense of belonging to a place.

It can create a visual and tactile connection between passers-by and local history and culture. Public art includes sculptures, installations, murals and other art forms. It can be incorporated in the form of functional objects such as street furniture, wayfinding signage, and paving designs.

In addition to the foregoing key considerations, the following are practical guidelines to be combined with other forms of streetscape (e.g. Other Furnishing, see Chapter 7.10) in frame of the achievement of the optimal effect from Public Art in the Coastline:

(10) Provide maps or directory information at entrances and pathway intersections. Emphasize primary entrances, restrooms, and key design features.

(11) Avoid placement of signage in locations that interfere with pedestrian or cyclist pathways and sightlines.

(12) Provide a consistent hierarchy of signage and wayfinding elements, using consistent fonts, text styles, colors, and similar elements. Illuminate signage in areas of high night-time usage.

(13) Use materials that are durable and easily-maintained with non-reflective matte finish on all signage. Incorporate green-certified and local materials.

(14) Consider appropriateness of the scale of the artwork to it surroundings.

(15) Any significant existing character and distinctive craftsmanship of landmarks must be preserved. Deteriorated historic features should be repaired rather than replaced, ensuring that new features match the original design. Furthermore, any new additions must be compatible with, yet clearly distinguishable from, the historic elements.

Example of interactive public art. [Guideline 7.11.4]

Example of interactive public art. [Guideline 7.11.4]

Use materials that are durable and easily-maintained. [Guideline 7.11.13]

Shifting Utopias, Canada
(Québec's Collectif 5M2, 2019).

Shadows Traveling on the Sea of the Day, Qatar
(Olafyr Eliasson, 2022).

Examples of elements of interactive public art

Examples of elements of interactive public art

Examples of elements of interactive public art

Examples of elements of interactive public art

Examples of elements of interactive public art

Examples of elements of interactive public art

Examples of elements of interactive public art

Examples of elements of interactive public art

7.12 Lighting

Notwithstanding any other provision included in Section 5, Parks and Open Space, the following regulations and guidelines shall apply for any lighting in the Coastline.

(1) Lighting should be designed to ensure all usable areas, including streets and sidewalks, are well-lit, to increase safety and extend the space's usability.

(2) All required pathways must be illuminated. Lights should be designed and spaced in order to illuminate entire pathways.

(3) Lighting equipment should be of a design and character that complements the surrounding design or character.

(4) Light poles for illuminating pedestrian and cyclist pathways should be between 3 and 6 meters in height.

(5) Light poles for illuminating vehicular travel lanes should be between 8 and 12 meters in height.

(6) The spacing between two light poles should be roughly 2.5 to 3 times the height of the pole. Shorter light poles should be installed at closer intervals. The density, speed of travel, and the type of light source along a corridor will also determine the ideal height and spacing.

(7) Lighting must be shielded to protect the dark sky and must not create a substantial amount of upward-directed lighting.

(8) Avoid too-bright lighting that creates blinding glare or deep shadows.

(9) Use lighting to highlight or create clear sightlines to restrooms, playgrounds, public art, water features, architectural features or other design features.

(10) Wayfinding signage should be illuminated.

(11) Display windows should be illuminated to attract attention and enhance the visibility of restaurants, and stores frontage

(12) Steps, ramps, and edges of pedestrian pathways should be illuminated for safety.

(13) Where possible, solar facilities should be considered to power lighting equipment.

Lighting should be of a design and character that complements the local character. [Guideline 7.11.3]

Display windows should be illuminated to attract attention to stores frontage. [Guideline 7.11.11]

Steps, ramps, and edges of pedestrian pathways should be illuminated for safety. [Guideline 7.11.12]

solar facilities should be considered to power lighting equipment. [Guideline 7.11.13]

7.13 Off-Street Parking

(1) Detailed parking standards are specific to each applicable Built-form type, as provided in Section 3.

(2) Surface parking lots should be limited, and where necessary should be screened from view of the public realm by landscaping, walls or fences, buildings, or other elements.

(3) The number of parking spaces provided on a lot should be minimized as much as possible.

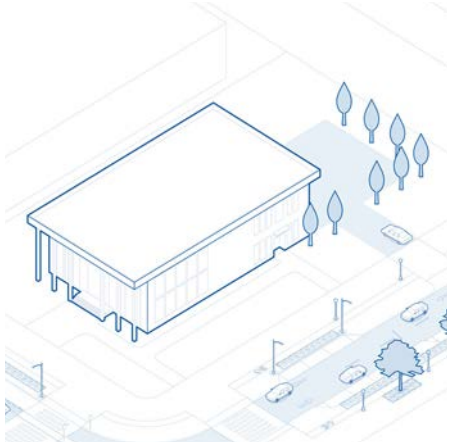
(4) Pedestrian pathways through parking areas should be clearly marked using contrasting paving materials, paint, signage and other elements.

(5) Parking areas must be clearly marked, and easy to navigate with clear sign boards displaying all information including the numbering of parking spots and floor levels (in English/Arabic).

7.14 Sustainable and Ecological Design

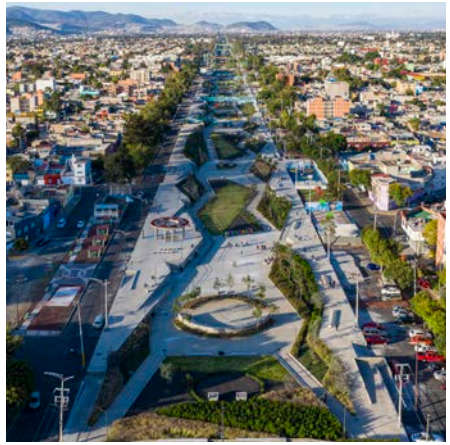
Sustainable and ecological design refers to design that embraces and integrates itself with natural, ecological processes to mitigate any negative impacts the design may otherwise have on the natural environment.

Designing for DMA, considering sun / shade, wind and storm patterns, being resilient against natural elements, rather than resistant, minimizing the use of continuous hardscaped surfaces to reduce the heat-gain impacts, using green-certified and local material where possible are an examples of the intent of this guideline.



Surface parking screened from public view with landscaping. [Guideline 7.13.2]

Parking screened from public view with landscaping. and Pedestrian pathways through parking areas in front.



Linear Park regenerates Mexico City's historic Grand Canal.

Cool Abu Dhabi Challenge Oasys+System by Mask Architects.

7.15 Security

Safety and security guidelines are established to help ensure that the public realm all along the Coastline of DMA is safe and conformable for all users and fosters positive social interactions. Most of the foregoing guidelines have made a provision for such principles.

Security and safety are key elements in the design, particularly of open spaces, as they ensure the wellbeing of residents and visitors.

(1) Clear sight lines should be maintained to toilets and playgrounds. Overall, ensure unobstructed views across public spaces by minimizing tall vegetation, structures, or obstacles that could provide hiding spots for potential wrongdoers. Clear sight lines enhance natural surveillance and deter criminal activities.

(2) Design public spaces with features that allow people to observe their surroundings easily.

(3) Walls, fences and screens that do not restrict views could be used to maintain park security and encourage the safety of park users.

(4) Install adequate and evenly distributed lighting throughout public spaces, including pathways, plazas, and parking areas. Illuminated spaces reduce the risk of accidents and discourage criminal behaviour.

(5) Use plantings strategically to delineate spaces and pathways, keeping sightlines open while creating a pleasant environment.

(6) Implement clear and intuitive wayfinding systems with signage and landmarks to help people navigate public spaces easily. Well-defined pathways and signage reduce confusion and enhance personal safety.

(7) Control access points to public spaces, such as parks or recreational area, to prevent unauthorized entry during closed hours. Use physical barriers, gates, or turnstiles as appropriate.

(8) Install and maintain a comprehensive network of CCTV cameras in public areas such as streets, squares, parks, and public transportation hubs.

(9) Emergency call boxes (help stations) should be placed in all parks.

7.16 Universal Access

Universal access and inclusive design refers to the ability of all people regardless of age, size, ability, or disability to access and use a space to the greatest extent possible.

(1) Extra care should be taken when designing every aspect of a Public realm to ensure that it is designed for all users and in alignment with local and international standards such as Universal Accessibility: Built Environment Guidelines for the Kingdom of Saudi Arabia (1431 H - 2010 G), and the Simplified Guide to Comprehensive Accessibility Standards in Facilities by The Authority of People with Disability (APD), and the Americans with Disabilities Act (ADA)..

Providing elements of the design for all users.
[Guideline 7.16.1]

Marshall Forest Braille Trail, Georgia.

7.17 Protection of Natural Resources

Notwithstanding the regulations and guidelines prescribed under Chapter 5.3, module "Parks & Open Spaces", Type 1, Natural Places, and under Chapter 6.1, module "Water Edge", Type 1, Natural Edge, of this Manual, the following guidelines and standards are additionally established to protect the natural landscape to preserve the unique character of the Coastline for future generations.

(1) Natural areas that are identified as contributing to a key natural ecosystem, or to a culturally or historically significant natural feature or area, should be protected.

(2) Generally, development directly along the water's edge should be prohibited or limited, to protect the environmental health and views of the area. As established by Royal Decree , no private development is permitted within 100 meters of the water.

(3) Existing natural coastal areas, including mangrove forests and beaches, may not be removed. On the contrary, expansion of these natural areas along the waterfront is encouraged.

(4) The creation of sea walls, revetments, and other hard structures that interfere with natural ecosystems and processes is not recommended.

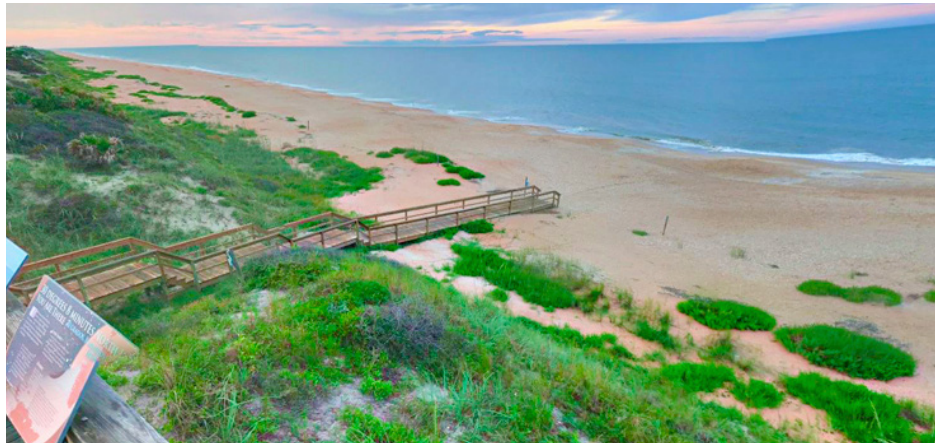
(5) "Nature-based" design solutions that use or mimic natural systems and processes should be followed wherever possible.

(6) Green-certified and local materials should be used where possible.

(7) The conservation and restoration of natural areas should be given priority. The use of water management infrastructure as a natural design feature is recommended.

(8) Working with experts in the field is advised to determine the best design for projects to limit any effects on the surrounding natural ecosystems.

Ecopark Mangrove forest area should be protected.
[Guideline 7.17.3]



Green-certified and local materials should be used where possible. [Guideline 7.17.6]

7.18 Outdoor Thermal Comfort

Shading structures are critical to encourage pedestrian movement due to the warm climate, especially during the summer.

Thermal comfort in intensely urbanized areas in the DMA Coastline area is influenced not only by natural temperatures but also by additional heating effects from urban heat gain caused by direct and reflected sunlight and heat radiating back from warmed surfaces.

Reduction of urban heat gain can be achieved through the use of materials that retain and radiate less heat.

The following guidelines and standards are established in connection with outdoor thermal control in the Coastline:

(1) Consider the exposure to wind and water impact in the design and placement of shading structures so they are resilient to the adverse climate factors and are safe for the users.

(2) Integrate shade structures such as pergolas, canopies, or shade sails over seating areas, walkways, and waiting areas to protect visitors from direct sunlight.

(3) Design covered walkways and arcades connecting different parts of the public realm to shield pedestrians from the sun.

(4) Incorporate water features like fountains, misters, or shallow pools to create a cooling effect and help reduce ambient temperatures.

(5) Use materials that do not absorb excessive heat and provide seating and rest areas in shaded or cooled zones.

(6) Choose light-colored or reflective materials for pavements and pathways to minimize heat absorption and improve pedestrian comfort.

(7) Opt for sustainable and heat-resistant materials that can withstand the harsh climate and contribute to a more comfortable environment.

(8) Use energy-efficient and low-heat emitting lighting fixtures for night time illumination to avoid adding unnecessary heat to the space.

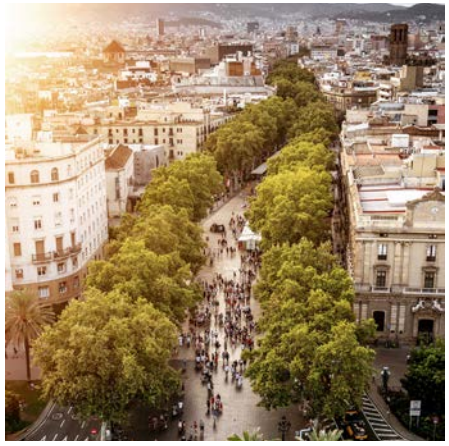
(9) Create walkable, cycle friendly neighborhoods by providing pleasant, shaded routes between destinations. In addition to reducing ambient air temperature and create a cooled local micro-climate.

(10) Planting should add color, texture, contrast, motion, and scents to the urban environment

Lookout da Cova, Spain (ARROKABE Arquitectos, 2019).

Henley Square, Australia (TCL ,Troppo Architects, 2015).

The Goods Line, Sydney (Aspect Studio, 2015).



La Rambla in Barcelona; Creating walkable, cycle friendly by providing pleasant, shaded routes between destinations.

(11) Some plant species may have a cultural association that can be honored in how they are utilized,

(12) Minimize car-trips

(13) Encourage walking & cycling by incorporating a network of pleasant, safe, shaded connections to key destinations such as mosques, retail, school, recreation facilities and campuses.

(14) These green streets should, be within reach of residential & commercial clusters.

(15) Planting should delineate edges or identify special places and add a processional quality to a street.

(16) For sites that are susceptible to sandstorms, use walls and green buffers to capture dust while allowing airflow for cooling. Moreover; it will reduce traffic noise and pollution in residential areas

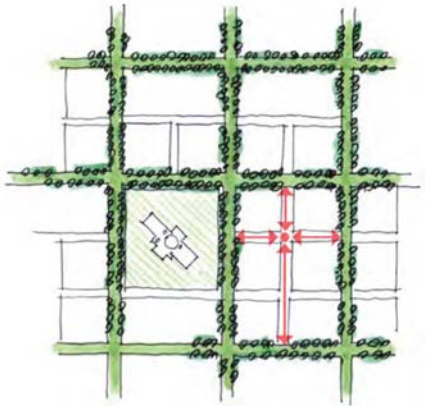
(17) Design water features to create a cooler micro-climate and enhance ambiance should adhere to the following principles:

a. Utilization of Moving Water: Select features incorporating moving water to enhance cooling through the process of evaporation.

b. Strategic Placement in Shaded Areas: Position these features in shaded locations to minimize water loss due to evaporation.

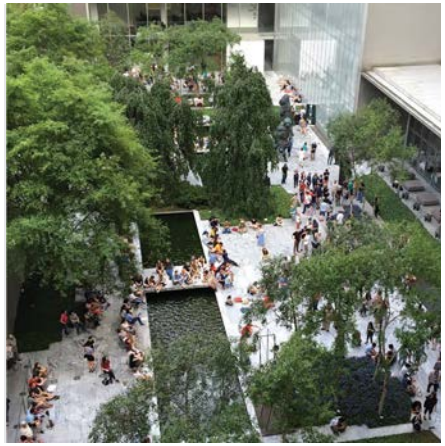
c. Proximity to Living Spaces: Install water features near dwellings or breakout spaces to maximize their usability and enjoyment.

d. Wildlife Attraction: Incorporate elements designed to attract birds, thereby enriching the environment with natural beauty and soothing sounds.



These green streets should, be within reach of residential & commercial clusters.

Wall & Green buffer captures dust while allowing windflow for cooling.



MoMA The Museum of Modern Art, USA (Yoshio Taniguchi, 2004)

Raadhuisplein Emmen, The Netherlands (Latz + Partner, 2015).

8 Definitions

Definitions

The following definitions are revising, amending or supplementing the definitions given in the 10th Report for the purposes of this Manual. The definitions are given with reference to their context, not alphabetically. Underlined terms first appear in this Manual Definitions first given are underlined

Greater Dammam Metropolitan Area (DMA)	The geographical area including the cities of Dammam, Khobar, Dhahran, Al Qatif, Ras Tanura
SDA	Sharqia Development Authority, the Regional Development Authority for the Eastern Region of the Kingdom of Saudi Arabia.
Coastline	The strip of land facing the Arabian Gulf, part of Greater Dammam Metropolitan Area, demarcated as per Section 2 of this Manual.
Waterfront	The area directly adjacent to the coastline. This may or may not include a beach, a park, a road or a building or other structure.
10th Report	General Guideline Plan and Local Plans for Cities of the Region.
District categories	The areas ("zones") of DMA shown in the Local Plan with a distinctive color and symbol referring to broad land use categories, as further listed in Art. 3 of the 10th Report and described in detail (plot and bulk regulations etc.) in Art. 4 of the 10th Report.
Guidelines Manual or Manual	The present Manual for the Design and Building Controls for the Uses Overlooking the Coastline in Greater Dammam Metropolitan Area
Regulation	A concept or a requirement for a Development that must be met. See also Article 1.5.3 of this Manual.
Guideline	A concept or a requirement that should be considered and ideally incorporated into the planning or the design of a Development whenever possible. See also Article 1.5.3 of this Manual.
Standards	Rules with specific measurements or ranges for specific elements of the Development. See also Article 1.5.3 of this Manual.
Planning Authority	The Government body affiliated to a Municipality, an Amanah or a Region, responsible for spatial planning matters in general, and for the planning control in particular.
Development	Construction works or activities, Use of Land, plot configuration or reconfiguration or any other similar operation on Land, leading to a change to the physical form of the Land.

Planning application	An application made to the Planning Authority for a planning or building permit and "**Applicant**" shall mean the individual (natural or legal person) who has made such an application.
Planning permit	A formal approval granted by the Planning Authority, approving a proposed Development to proceed to the issue of building permit.
Building permit	A permit issued by the Planning Authority granting approval to a natural or legal person for the construction, demolition or alteration of new or existing structures in accordance with the Law of Roads and Buildings (1361H).
Regulatory requirements	Requirements or formalities issued by the competent Planning Authority for obtaining a planning permit.
Owner	One or more individual or a legal person (including a government agency) who can demonstrate with deeds and other official documents ownership of a land.
Plot / Site	Any tract of land, including buildings and facilities, in, on, over or under the surface of land, owned by one or more individuals or a government agency and is intended for development (**Project Site**).
Corner plot	A plot overlooking two or more streets.
Plot area	The total horizontal area within the plot lines.
Plot area requirements	The requirements imposed on a plot that make it suitable for development.
Plot line	The outer line of a plot separating it from adjacent properties or streets.
Plot front line or plot frontage	The plot line separating it from a street identified as a "primary street" for the access of the plot.
Plot back line	The farthest side of a plot line. In case of an irregularly shaped plot or a triangular plot, the plot back line is the farthest line of 4.0 meters inside the plot and parallel to the port front line.
Plot side line	Any plot line other than the plot front line and the plot back line.
Fence	A barrier on the plot lines made of masonry, concrete, iron, or mesh that protects the plot and earmarks its individuality.

Block	A group of plots surrounded by streets on all sides.
Building	A construction to accommodate human activities in general.
Building area	The area of a plot covered by a building, measured from the outmost external walls.
Total Floor Area or Building Floor Area	The total area covered by all floors of a building, measured from the outmost external sides, including the basement floor if more than half it it is located above the street level.
Building Mass Factor or Floor Area Ration (FAR)	It is a numerical coefficient arrived at by dividing the building floor area by the plot area. For example if FAR is 3.0 and the plot area is 2,000 square meters, the building floor areas (all floors) allowed is 2,000 x 3.0 = 6,000 sq.m.
Plot coverage or Building percentage	The percentage of the building area of the ground floor over the plot area.
Building height	The vertical dimension of a building measured from the ground level to its highest point.
Building width	The horizontal dimension of a building measured in meters.
Ground level	The point in a building for the departure of measurement of its height. It is located at the middle of the line connecting the two outmost external walls perpendicular to the plot frontage.
Basement	One or more floors below the ground floor, provided its height does not exceed one and a half (1.5) meters above the ground level.
Mezzanine	A single floor above the ground floor with commercial use and connected internally to it. It is not counted within the building floor area or within the maximum number of floors of the building. It does not have any protrusion or excesses beyond the boundaries of the ground floor.
Service floor	A floor used to provide services to the building, such as rooms for mechanics, air conditioning, electricity, prayer places and their accessories, and it is not counted within the building floor area or within the maximum number of floors of the building.

Maximum floors	It is the maximum number of floors permitted by regulation, including the ground floor and upper floors. The definition does not include the mezzanine floor, basement, floors designated to include service rooms (vehicle parks, or service floors that electrical, mechanical, air conditioning, etc.) or upper annexes or staircases or upper water tanks.
Ground annex	A building separated from the main building on the ground floor with a secondary, accessory or complementary to the use of the main building.
Upper annex	Part of the building that is erected on the roof of the main building, with a secondary, accessory or complementary to the use of the main building.
Low-rise building	A building of 3 floors or less in height.
Mid-rise building	A building that is 4-12 floors in height.
High-rise building	A building 13 floors or greater in height.
Building frontage	The side of a building facing the plot frontage.
Setback	The distance between the plot front line and the closest to that line building walls.
Front setback	The required minimum or maximum distance from a front property line that a building may be located.
Rear setback	The required minimum distance from a rear property line that a building may be located.
Side setback	The required minimum or maximum distance from a side property line that a building may be located.
Entrance	The point of entering a building.
Vehicle parks or Parking places	Spaces or places for parking of vehicles.

Basement parking	Vehicle parks that are established below the ground floor of buildings and connected to the ground level through suitable ramps for entry and exit.
Multi-floor parking	Vehicle parks consisting of several floors above the ground, either within a building or in a separate building, not counted within the building floor area or within the maximum number of floors of the building.
Land use or use	The purpose for which a site is put to use for public or private benefit.
Conditional use	A use that may be appropriate in a specific area, but subject to certain conditions because of their location or other distinctive features. See also Article 3.2.1(1)(c) of this Manual.
Residential use	Land use that is intended for human habitation, such as homes, apartments, townhomes and condominiums.
Residential unit	A building with one or more spaces (rooms) that are intended for habitation by a single family and have a cooking facility. Buildings constructed for temporary use, such as hotels, are not residential units.
Villa, detached	A single residential unit is an stand-alone building.
Villa, attached	A single residential unit in a building that is attached to another residential unit horizontally on one or more sides. May be distinguished to “duplex” (two floors) or “triplex” (three floors) and “townhouse” (attached on both sides).
Apartment	A building combining residential units that are attached to each other either horizontally or vertically or both. Does not include student dormitories, boarding houses and other types of communal homes.
Residential complex or compounds	Secluded and usually gated complexes of residential units, with specific entrance and exit. May include personal services and facilities, as well as entertainment centers and sports facilities intended for the residents only.
Non-residential use	All land uses except residential uses.
Residential area	An area designated for residential use of various types, including public uses and community facilities depending on the number of population.
Commercial use	Activities and facilities covering retail trade, personal services, small scale repair, food and beverages.

Mixed commercial use	A land use combing commercial, offices and administrative activities and facilities existing in **mixed commercial areas**.
Commercial streets or Business Streets	Main commercial streets located within the urban area, with a variety of commercial uses, as defined in Art. 7.2 of the 10th Report.
Business Axes	A road that connects the main urban centers and is arterial for traffic and passes through lands that are suitable for current and future development through various uses to form desirable visual formations and contribute to reducing the burden on the central areas.
Commercial centers or malls	Open or closed commercial markets that include a number of commercial shops (and other similar establishments) gathered in one location.
Hotels	A facility providing short-term residential stays (typically less than one month) of a size and number of floors depending on the district (zone). May include personal services and facilities intended only for the customers, including but not limited to restaurant, gift shop, conference rooms, spa and sports grounds.
Public use	Land Uses such as community centers, government buildings, libraries, religious institutions, parks and other uses that are intended for use by the general public.
Regional service area	Area designated for public and community services (such as educational, health, security, recreational and other services) at the level of an entire housing community (region).
District service center	Service centers at the level of a district (10-30,000 population) and residential complexes, in which activities and uses are to serve primarily the residents of these areas.
Central district	It is the area defined in Art. 6 of the 10th Report, which includes the main service areas of local or regional scope, or both, and contains residential and commercial uses, mixed uses, administrative and governmental uses, and other service requirements at the city and region levels.
Community services	Buildings, equipment, Land or services provided for public benefit by either government agencies or private entities; the term includes but is not limited to facilities for healthcare, education, leisure, worship, cultural, municipal/ emergency services and open spaces for recreation, sport and other related amenities. See Section 3.7

Entertainment center	A place including a group of games and recreational activities that are established specifically for the purpose of entertainment and fun.
Major Distinguished Projects	Distinguished projects of an area not less than 100,000 square meters within the urban area with a distinctive character of large scale. See Article 10 of the 10th Report.
Important Investment Projects	Multi-story projects (6 floors or more) or projects that are built on lands with an area of (10,000 square meters) or more, characterized by a distinctive architectural character. See Art. 11 of the 10th Report.
Right of way or street registration line	The distance between the two sides of a street.
Street	A mobility corridor reserved for vehicles and/or pedestrians.
Sidewalk	Part of the street, slightly elevated from the surface of the pavement, for pedestrian movement and access to buildings.
Pedestrian only street	A street designed exclusively for pedestrians in an intense urban environment. In less intense urban environment (i.e. [parks) they can be **pedestrian paths**.
Sustainability	The ability to achieve and continue development by improving the utilization of natural, human, economic and urban resources, reducing operation and maintenance costs, improving the natural environment, and paying attention to quality in urban, architectural and engineering design to avoid negative effects on the environment.
Security and safety requirements	Requirements for security, safety and fire prevention that must be taken into account when designing, implementing and operating the facility or building to be licensed, as approved by the General Directorate of Civil Defense.
Transparency	A quality in building and urban design making it easy for people to see what actions are performed behind a certain boundary or wall. Transparency implies openness and communication spirit.
Signs or billboards	Any board, installation, fence, panel or means of advertisement to directly advertise on it by writing or drawing, whether that billboard stands alone or is part of an establishment.
Wayfinding signage	Signage created and located to provide navigation assistance through a site.

Pedestrian amenities	Design elements, features and facilities created for use by pedestrians, such as seating, drinking fountains, trash bins, wayfinding signage, and lighting.
Hardscaped	Created with materials that are solid and generally unchanging over time, such as pavers, asphalt, wood or tiles.
Softscaped	Created with materials that are soft and able to change or flex over time, such as gravel, dirt, mulch, or planted areas.
Mangrove	A wetland area dominated by mangrove trees or shrubs.
Pervious	A material that allows water to pass through it.
Revetment	A man-made barrier created along the water's edge to protect the shore and built environment from erosion or storm surges.

List of References

This Manual has been prepared on the basis of National and Regional codes, Studies, and the review of best practices in the region and beyond, listed below.

National and Regional References;

- Council of Ministers of Saudi Arabia, (1974), Road and Buildings Act.
- MOMAH, (2001), Road Engineering Design Guide.
- Eastern Province Municipality, (2004), The 10th Report.
- Royal Commission for Riyadh City, (2014), Metro Urban Design & Streetscape Manual.
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- MOMAH, (2022), National Public Realm Guidelines.
- MOMAH, (2023), Buildings Construction Sites Covering Guidelines Manual.
- AlUla Developmnet Authority, (2020), Architectural Guidelines for AlUla Urban Areas.
- AbouKorin, A, Alsayel, A, Abdelfattah, H, (2020), Metropolitan Dammam: City of Mega-Projects, World Bank Group.
- MOMAH, UN-Habitat, (2019), Dammam City Profile.
- MOMAH, (2022), Report on the Implementation of the New Urban Agenda.

International References;

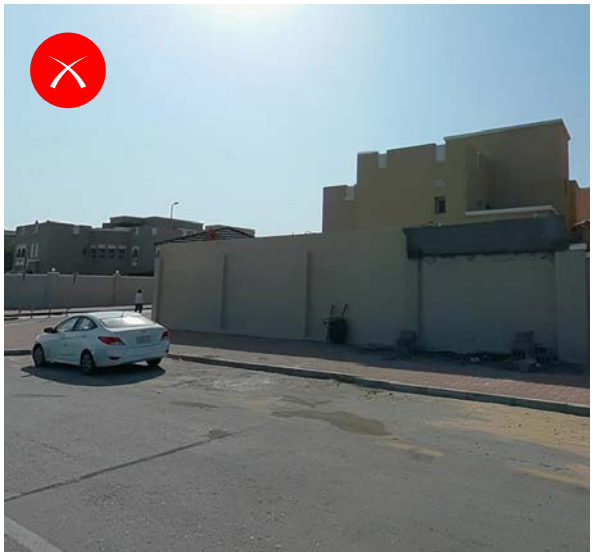
- Dubai Development Authority - UAE, (2019), Master Planning Guidelines.
- Abu Dhabi Department of Municipalities and Transport- UAE, (2017), Abu Dhabi Urban Street Design Manual V1.1
- Abu Dhabi Department of Municipalities and Transport- UAE, (2022), Abu Dhabi Public Realm Design Manual
- Abu Dhabi Department of Municipalities and Transport- UAE, (2015), Code of Practice for Marina Operations in Abu Dhabi.
- Ministry of Municipality & Urban Planning - Qatar, (2013), Interim Coastal Development Guidelines.
- Lusail City - Qatar, (2016), Waterfront Residential District Planning & Design Guidelines.
- Abu Dhabi Urban Planning Council, (2009), Al Bateen Waterfront Design Guidelines.
- Waterfront Toronto, (2023), Waterfront Accessibility Design Guidelines *Creating an Accessible Waterfront - Draft September 21, 2023*
- Toronto City, (2019), Toronto Public Art Strategy 2020/2030
- The Lego Foundation *et al* , (2023), Playful Cities Design Guide
- National Association of City Transportation Officials, Urban Street Design Guide
- National Association of City Transportation Officials, Urban Bikeway Design Guide
- National Association of City Transportation Officials, Global Street Design Guide
- National Association of City Transportation Officials, Design Streets for Kids
- City of Boston, (2013), Boston Complete Streets Design Guidelines

9 Appendices

9.1 Examles of Applying the Guidelines

Built Form

The following are examples of places designed without implementing the Guiding Principles established in this Manual, and should act as examples for what not to do when developing projects.

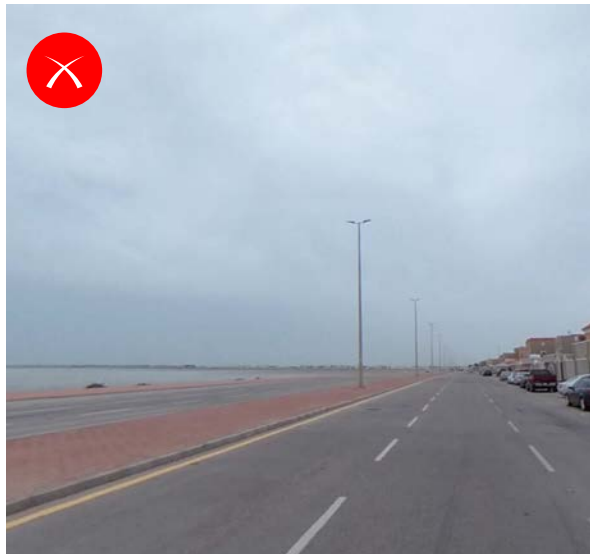


- Long blank walls [Guideline 7.7]
- No landscaping or shade structures
- No pedestrian amenities
- No bicycle facilities

- Lack of suitable Windows, doors, and architectural features that creates a sense of identity [Guidelines 3.2.7 and 7.5.1]
- Lack of entries that activates the public realm [Guidelines 7.5.1 and 7.6]
- The need for proper landscaping and shading to create an enjoyable pedestrian experience [Guidelines 7.6 and 7.9]

Streets and Mobility

The following are examples of places designed without implementing the Guiding Principles established in this Manual, and should act as examples for what not to do when developing projects.

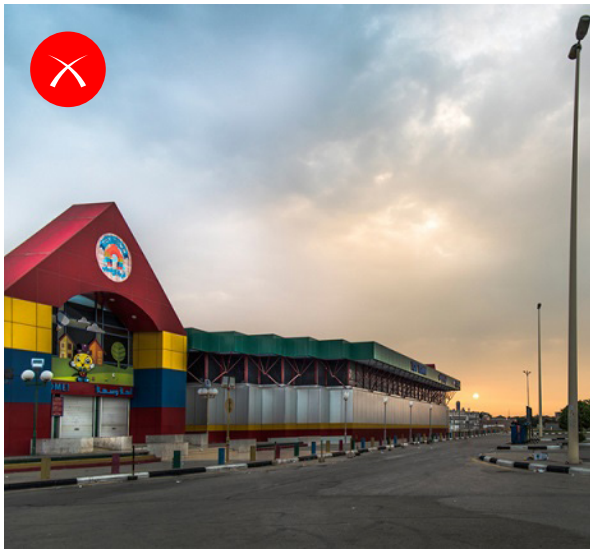


- Monotonous experience
- No sense of “place” or identity
- No landscaping or pedestrian amenities
- No bicycle facilities
- No safe pedestrian crossings

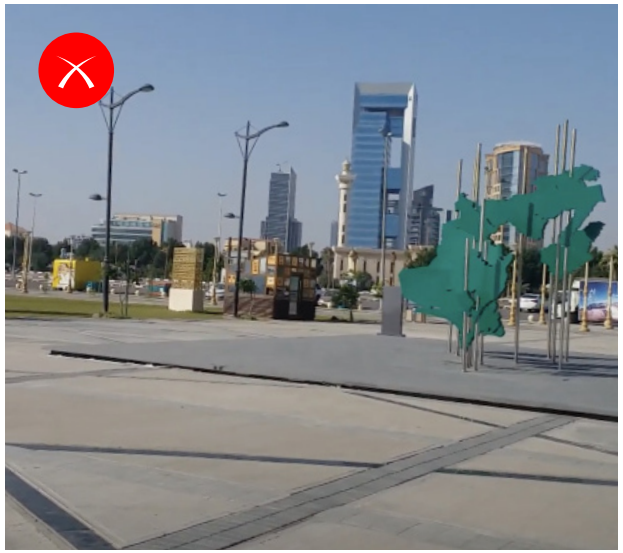
- Lack of separated and safe pedestrian and cyclist facilities improve connectivity networks [Guideline 4.2.1(3)]
- Lack of Landscaping provides screening and improves natural systems [Guideline 4.2.6]
- Weak sense of “place” [Guideline 4.3.9]
- Absences of an enjoyable and safe pedestrian environment[Guideline 4.2.1(3)]

Parks and Open Spaces

The following are examples of places designed without implementing the Guiding Principles established in this Manual, and should act as examples for what not to do when developing projects.



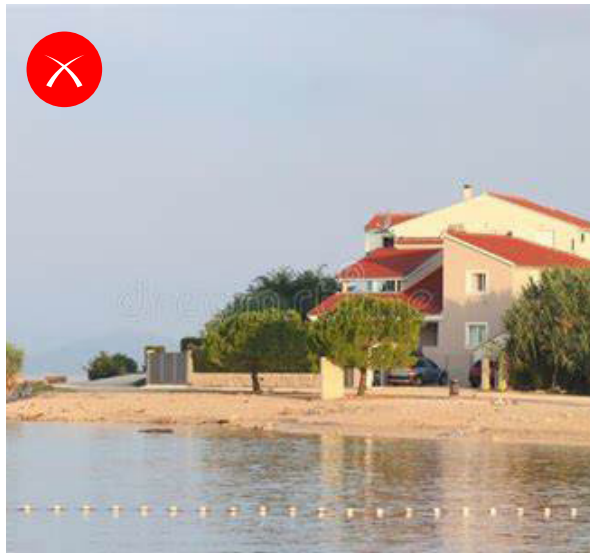
- Confusing functionality (overmix of uses)
- No clear programming
- Poor vegetation
- Hardly delineated pedestrian pathways



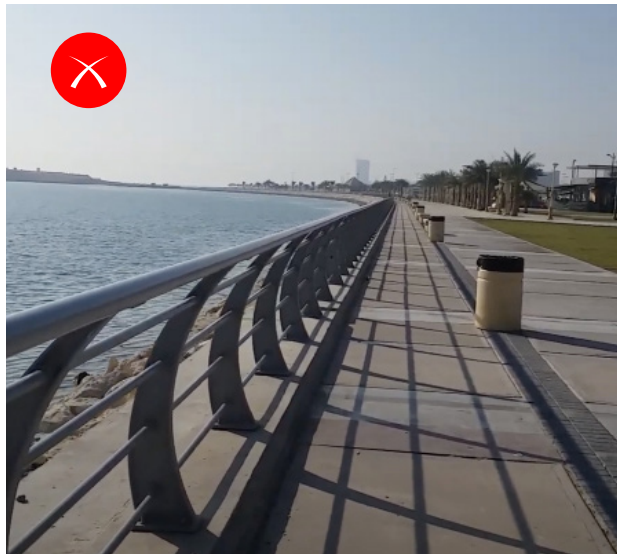
- Absences of Landscaping used for creating sub-spaces [Guidelines 5.2.1 & 5.2.2
- Absences of Programming and spaces for different activities [Guideline 5.2.3
- Absences of Native vegetation improves natural systems [Guideline 5.2.6
- Weak Universally accessible [Guideline 5.2.15

Water Edge

The following are examples of places designed without implementing the Guiding Principles established in this Manual, and should act as examples for what not to do when developing projects.



- No public access to waterfront
- Uninteresting image
- Deprivation of public realm
- No clear programming
- No pedestrian pathways



- Weak access to waterfront [Guidelines 6.2.1 & 6.4.1
- Absences of Wayfinding signage improves navigation [Guideline 6.2.10(3)(f)
- Lack of Landscaping and pedestrian amenities provided [Guideline 6.2.10

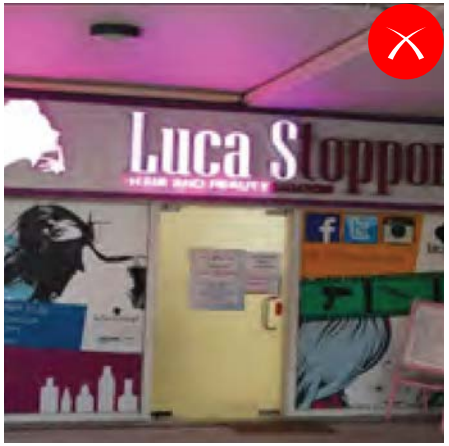
Avoid contrasting materials

Avoid blank frontage

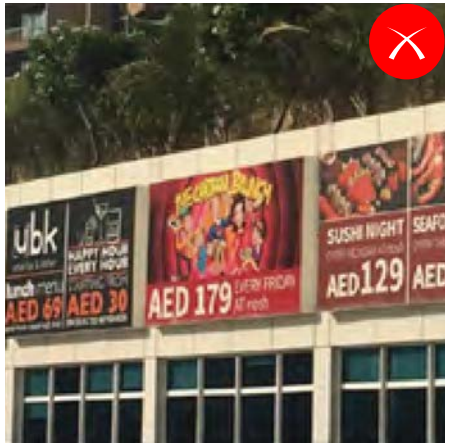
Low quality details & materials

Avoid different facade features

Show Legible branding & sign

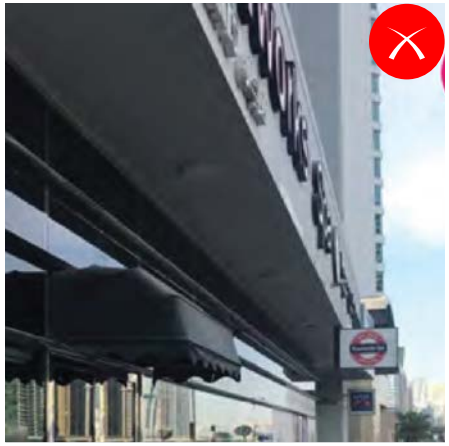


Show Organized branding & sign

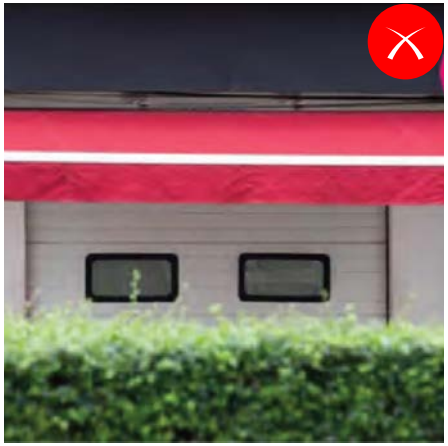


absences of Integrated signage with facade

absences of consistent color scheme

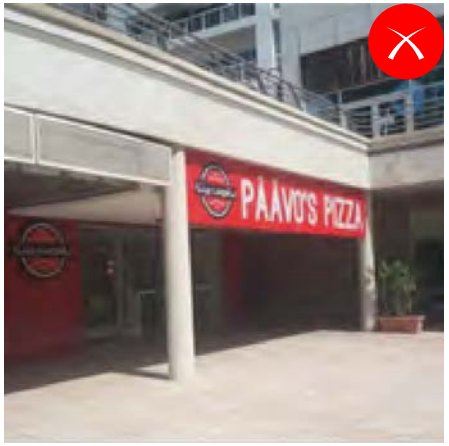


Inappropriate shading strategy

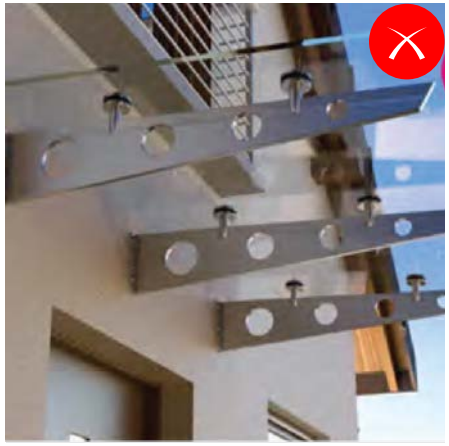


Avoid bad design canopies

Should not look abandoned

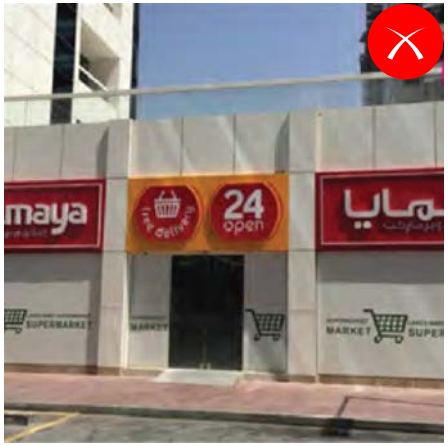


Graphics to have relevance to brand



Avoid Glass canopies

Vacant unit look unpleasant

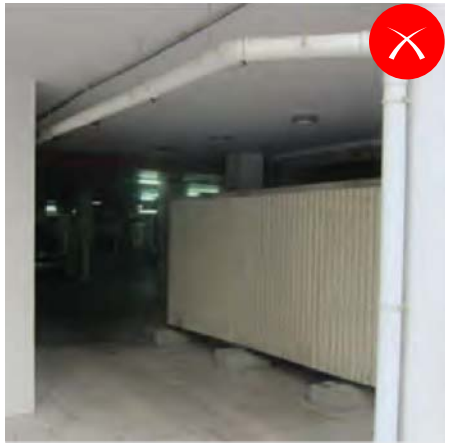


Graphics to have relevance to brand

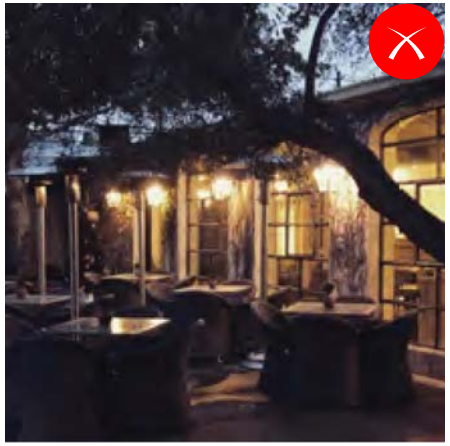
Graphics to have relevance to brand

Should be screened from public view

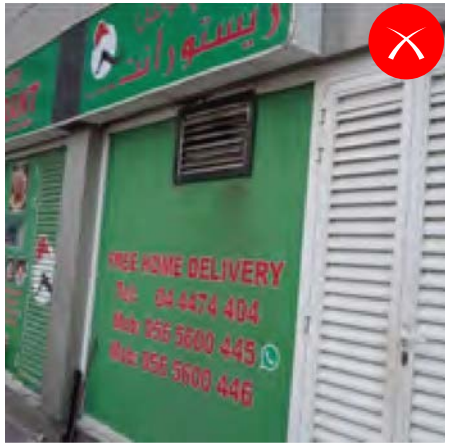
Should be screened from public view



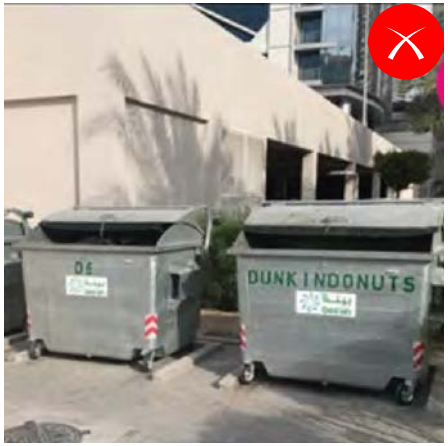
Shipping on main pathway



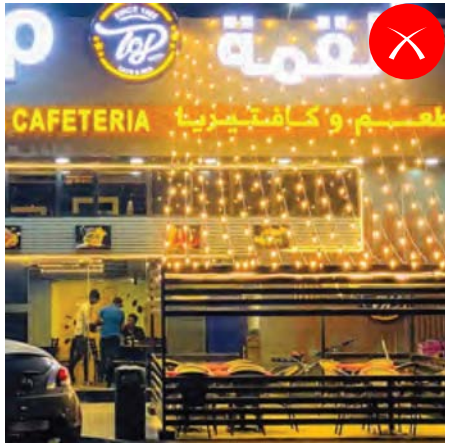
Lack of lighting for outdoors



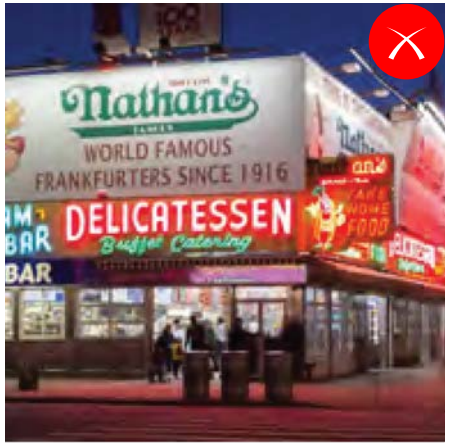
Should be screened from public view



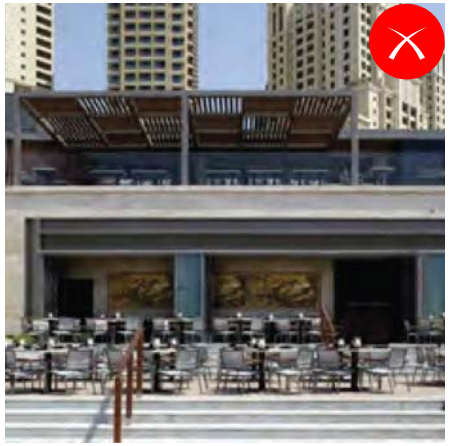
Should be screened from public view



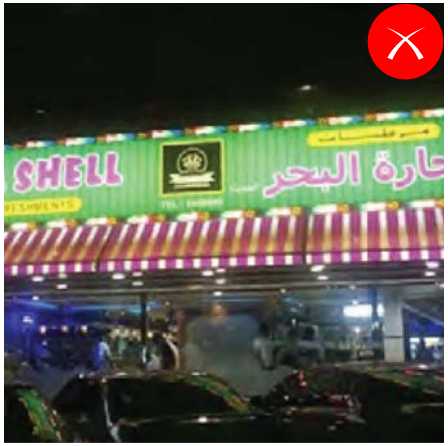
Random placement of lighting



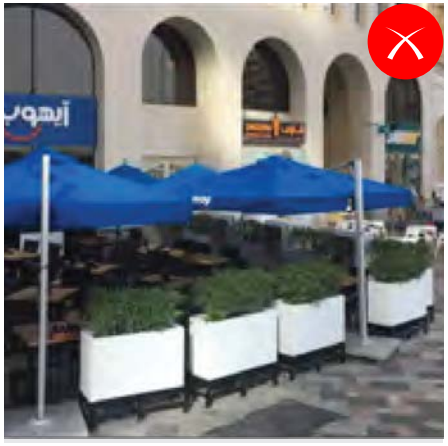
Outward light pollution



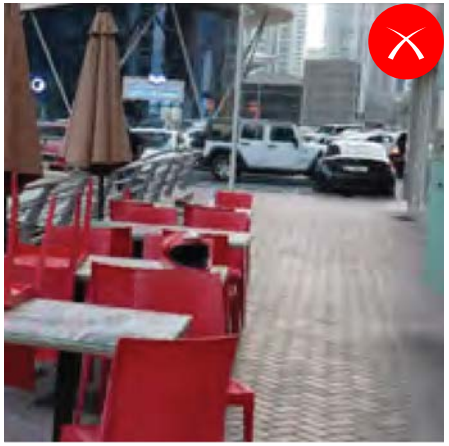
Lack of branding & signage



Avoid too many colors

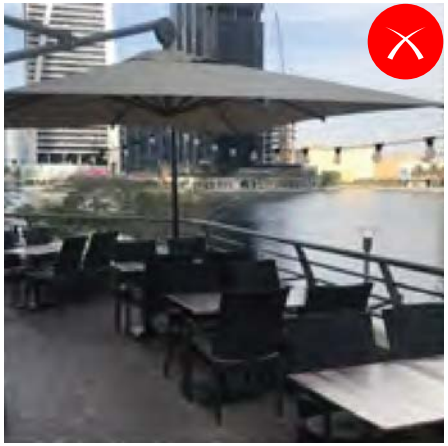


External space should be open

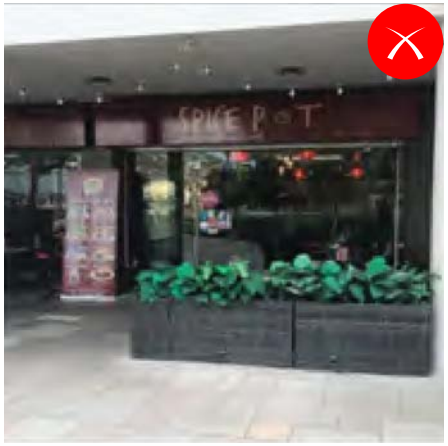


Overlooking Public Realm

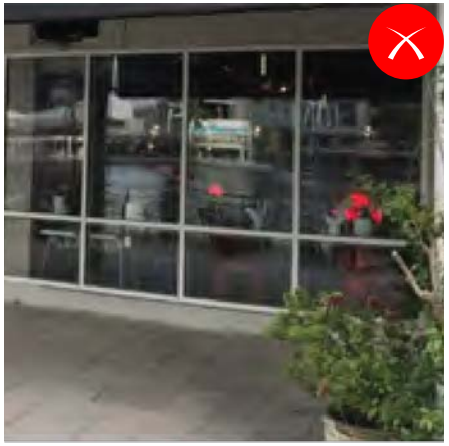
Avoid clutter signage

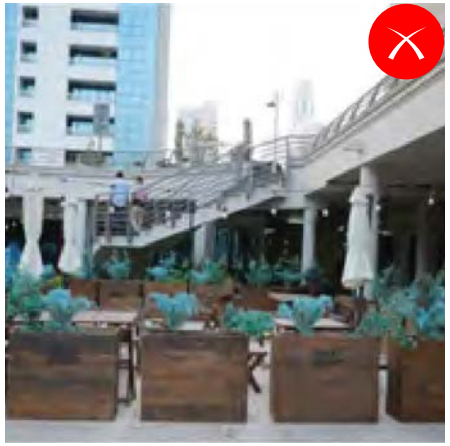


unclear pathway

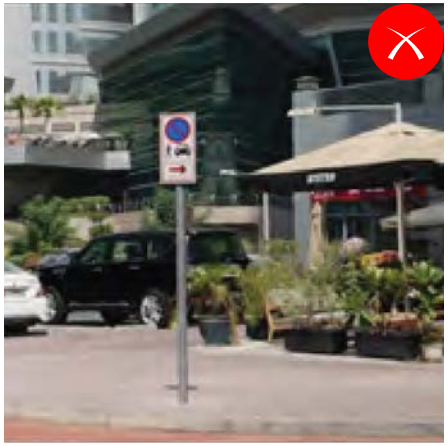


Arrange fixtures for circulation

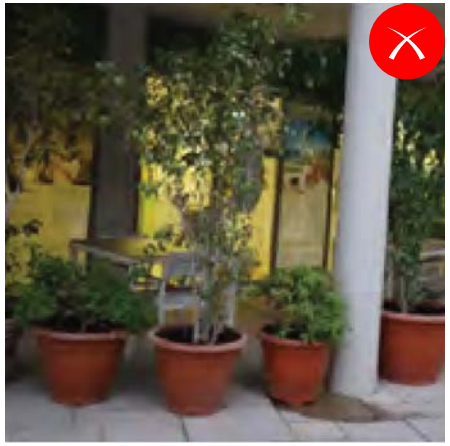




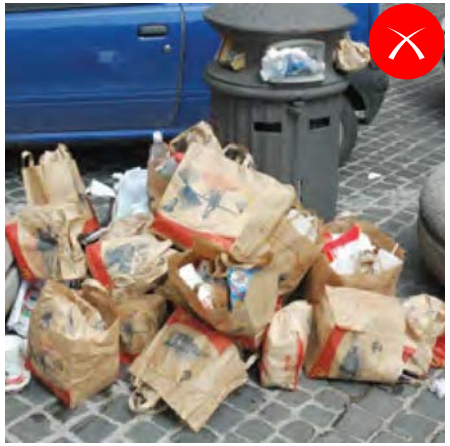
Lack of proper landscape barriers design and arrangement



Lack of proper landscape barriers design and arrangement

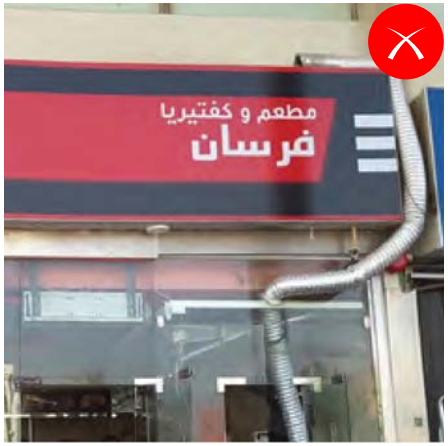


Lack of proper landscape barriers design and arrangement

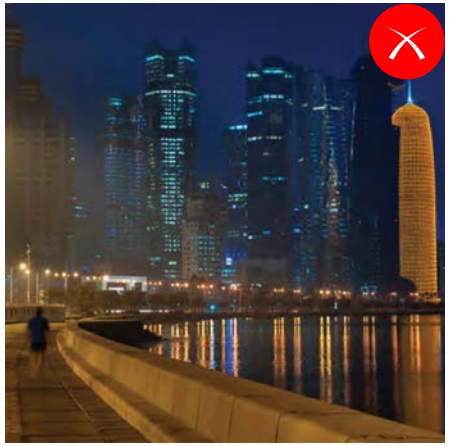


Lack of bins in restaurant area

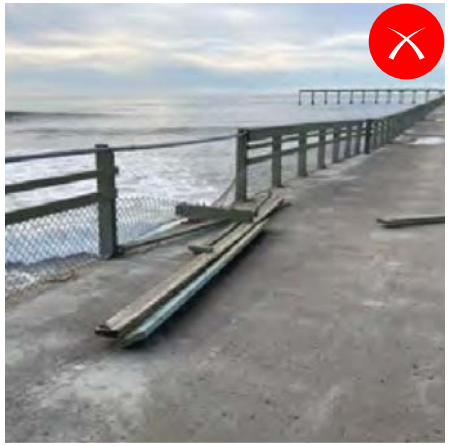
Back-of-house exposed



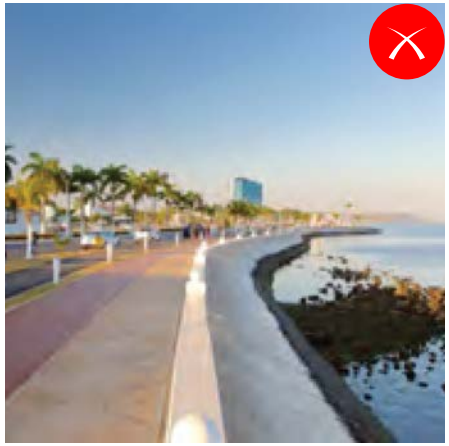
MEP exposed to Public Realm



Weak visual and physical link

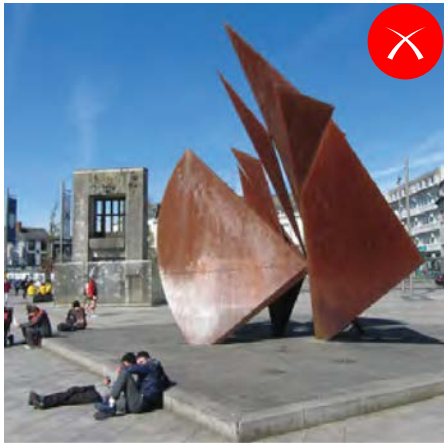


Eroding materials

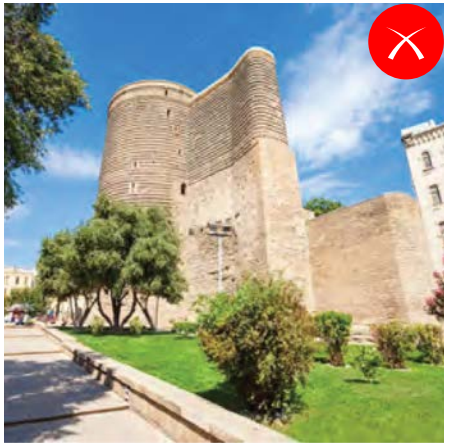


Lack of flexibility of the space

Insignificant scale

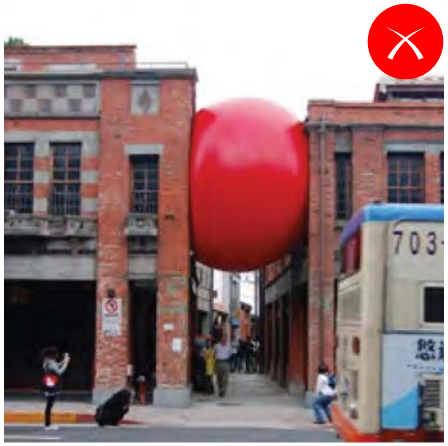


Absence of seating



Lack of information for visitors

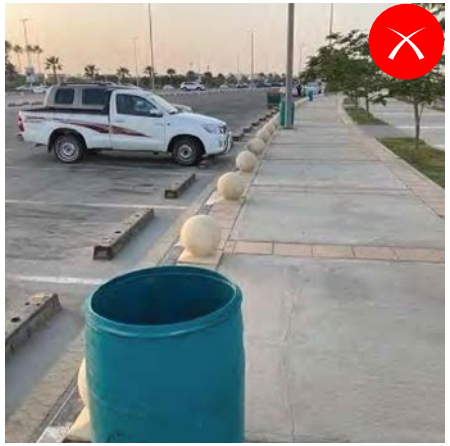
Lack of relevance



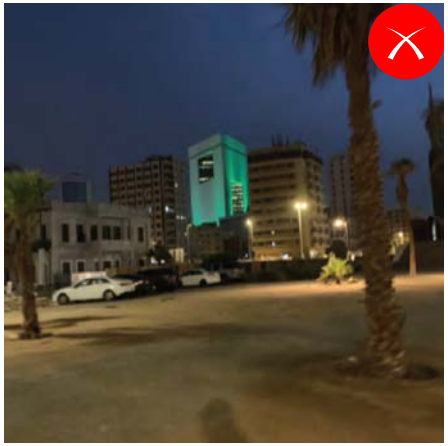
Lack of public interaction

No accessible provisions

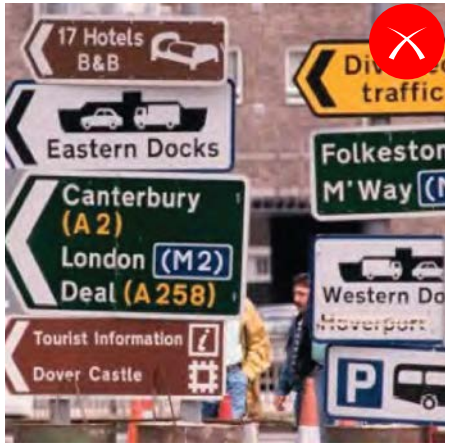
Vacant lot parking



Absence of Accessible Parking



Lack of lighting & wayfinding



Directional Clutter

Directional Clutter

9.2 10th Report

Please refer to the Tenth Report in its original version

9.3 Saudi Architecture Guidelines

Please refer to the Saudi Architecture Guidelines in its original version

https://architsaudi.dasc.gov.sa/

9.4 Blue Flag Beach Criteria

Please refer to the Blue Flag Beach Criteria via the official website

www.blueflag.global.com

COASTLINE URBAN DESIGN MANUAL
GREATER DAMMAM METROPOLITAN AREA

This Manual supplements the 10th Report for Development and Development Control in the Coastal Strip of Greater Dammam Metropolitan Area (DMA).

The Manual was created to respond to the Vision 2030 plan and national initiatives to enhance urban environments in the Kingdom of Saudi Arabia in general, and in the Eastern Region in particular.

The application of this Manual is a unique opportunity to strengthen the urban image of DMA and enhance the identity and heritage of the region through the creation of a sustainable and modern 21st-century coastal metropolitan area.

This document aims to be a paradigm of integrated planning and design, addressing key issues that shape "**The Image of the City**", such as urban form, architectural style, sustainable design, enhancement of heritage identity, and creating people-friendly and active public spaces. The guidelines will protect the natural and environmental value of the coastal area and serve as a tool for the enhancement of DMA waterfront image.

2025

COASTLINE URBAN DESIGN MANUAL
GREATER DAMMAM METROPOLITAN AREA
2025

أمانة المنطقة الشرقية
Eastern Province Municipality
هيئة تطوير المنطقة الشرقية
Sharqia Development Authority