CEDAR ISLAND

ORDINANCE and DEVELOPMENT CODE

DESIGN GUIDELINES I JANUARY 2009

Introduction

Project Abstract

Cedar Island is a 3,311,731.6 m² artificial island located in the Mediterranean Sea off the Lebanese coast. It redefines luxury living and maritime experience through its amplitude of services and state of the art facilities. The island's residents and visitors will enjoy the environment's glorious climate, sublime tropical beauty, safety and tranquility

The island's plots will accommodate residential, commercial, and mixed-use buildings. Various amenities are available on the island such as, beach resorts, hotels, children playgrounds, green landscaping and recreational facilities

The town center will be the commercial center of the island; it will include retail stores, mixed-use buildings and logistics. The innovative development and unique location of the Cedar Island, makes it an ultimate destination and a haven for tourists and vacationers


CEDAR ISLAND

CEDAR ISLAND

1. Project Description

Section 1.01. Design Concept

The overall idea of CEDAR ISLAND is to develop a planning scheme for a tourist site made for luxurious experience, and positively responds to the context in which it lies. Its community sustains a development pattern that keeps the locale, not only economically autonomous but a sure value added to the neighboring settlement. The Cedars Island of Lebanon, is a magnificent tribute to Lebanon's heritage and is styled to resemble the emblematical Cedar tree. A group of commercial, public & private zones merged with the elegant forms of local architecture and design. Set amidst green fields and palm trees, Palm offers sensually designed accommodation – Lebanese coast touched with the avant-garde. Palaces, Villas and Buildings, each showcasing its own distinctive design embodying the simplicity and elegance of the estate's graceful surrounds

Elements of Multiplicity

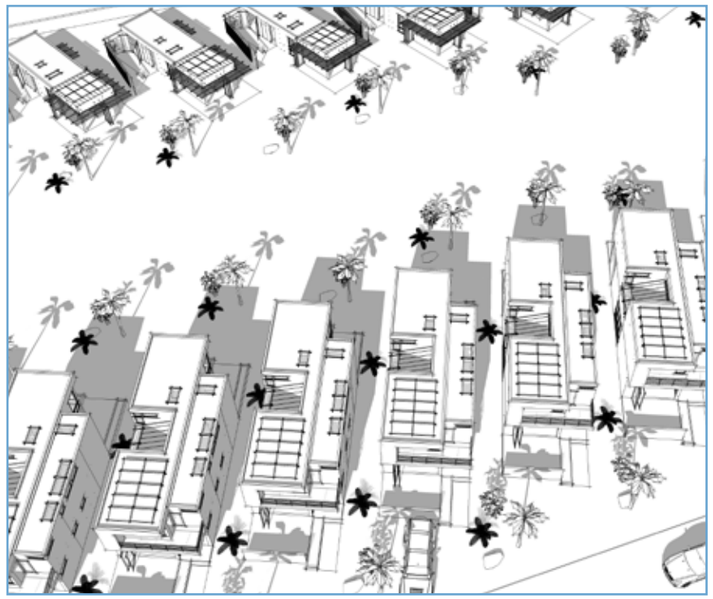
- Modular site design elements
    - . Street width
    - . Cul-de-sac size and capacity
    - . Curb width and street furniture
    - . Street lighting scape and spacing
    - . Signage content
- Landscape (library of species)
- Some of the public buildings (such as elementary schools) could be also standardized, as long as capacity and program have been realized

Character Related to Context and Surrounding

- Horticulture responds to climatic factors
- Cluster orientation, and facade treatment, are also contextual
- Density and amenities, accordingly, vary as per planning Decision Support System (DSS) output studies
- Public buildings' architecture and layout reflects culture character

Unique & Distinctive Elements

- Island market
- Leisure parks, and built landmarks
- Art work
- Character of dwellers



CEDAR ISLAND

Section 1.02. Design Criteria

Use passive environmental control devices, and technology, in order to :

. Control climate (such as the use of wind catchers or solar chimney)
. Use of water bodies, among other tools, to control ecological aspects
. Use shades and desert coolers to induce air draft

- Use integrated canvas building configuration to stimulate sense of community
- Housing is mostly low rise and walk-ups
- Creating a downtown area, as well as outer fringes, even for a basic cell
- Developing shopping arcade in a suqcultural sense, and a pedestrian mall, that takes people from one anchor feature to another
- Maximize sense of privacy, particularly in housing (neighborhood, cluster, and unit level)
- Promotes energy conservation and recycling principles
- Adapt hi tech concepts, and fiber optics for peripheral communication
- Environment friendly
- Adapts low-cost hi-impact design methodology
- Reliable infra structure system, and powerful physical plant
- Takes advantage of on and off site conditions
- Ample leisure places, and community park
- Peripheral green belt for reducing noise and air borne pollution

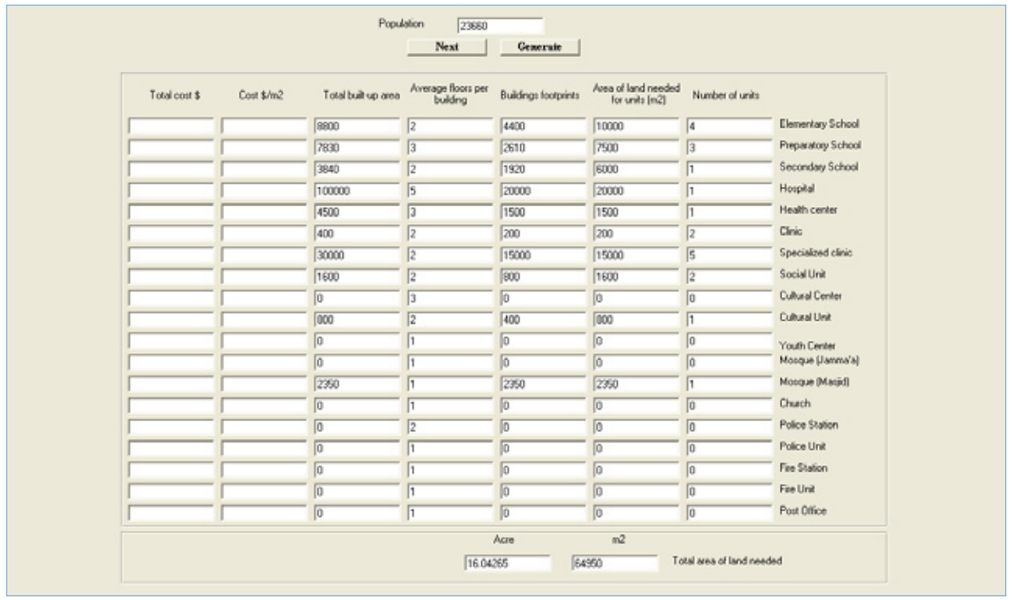
CEDAR ISLAND

Section 1.02. Design Criteria

Technically, sustainable development is our steering engine in this regard. Proposed planning and site design aspects, supported by DSS (Decision Support Systems) should minimize financial risks that associate with land development

The private sector is a vital component of sustainable economic growth in a global economy. Corporations and governments have come under increasing public pressure to be seen making an effort towards attaining sustainable development. Multinational enterprises in particular have worked with trade unions, non-governmental organizations and governments in recent years in a number of voluntary initiatives aimed at promoting corporate responsibility and sustainable development

Many have issued codes of conduct and designed management systems to stimulate compliance with these commitments. These corporate codes lay down a firm's commitments in areas such as environmental management. These private initiatives often complement government orchestrated initiatives, and they are increasingly integrated into regulatory or public enforcement strategy. This may eventually lead to greater consensus among businesses and other parts of civil society about the appropriate scope and nature of commitments in the various areas of business conduct, and about the management and reporting practices that are needed to support them



2. Technical Aspects

Section 2.01. Planning and Site Design

The elaboration of a mixed, high value land uses may be considered as one of building blocks of any nation to be on the path for sustainable development. The devised land use plan in itself will have its economic and social benefits. Interventions that will protect resources of the area from pollution, and in the meantime will improve the health conditions of the inhabitants

The land use plan that our team will elaborate will include means for sustaining economic growth, encourage the development of local private sector

The criteria used to develop the land use and urban designs of the detailed local study area include, but not limited to
1- Unity and coherence
2- Minimum conflict between pedestrians and vehicles
3- Protection from rain, noise, wind, etc
4- Easy orientation for users
5- Compatibility of land uses
6- Availability of places to rest, observe and meet; and last but not least
7- Creating a sense of security and pleasantness
The evolving site design will provide for residences,recreational, tourist services shopping conveniences, etc

Street pattern will serve the resident population and discourage through traffic. Major thoroughfares will often serve as boundaries. Site design will likely be laid out with common areas for residents to encounter each other in ways that promote social relationships. The land use will be structured to provide conveniently and safely much of what people need and use in their daily lives. The whole point of neighborhood planning is to understand what individual neighborhoods want to become

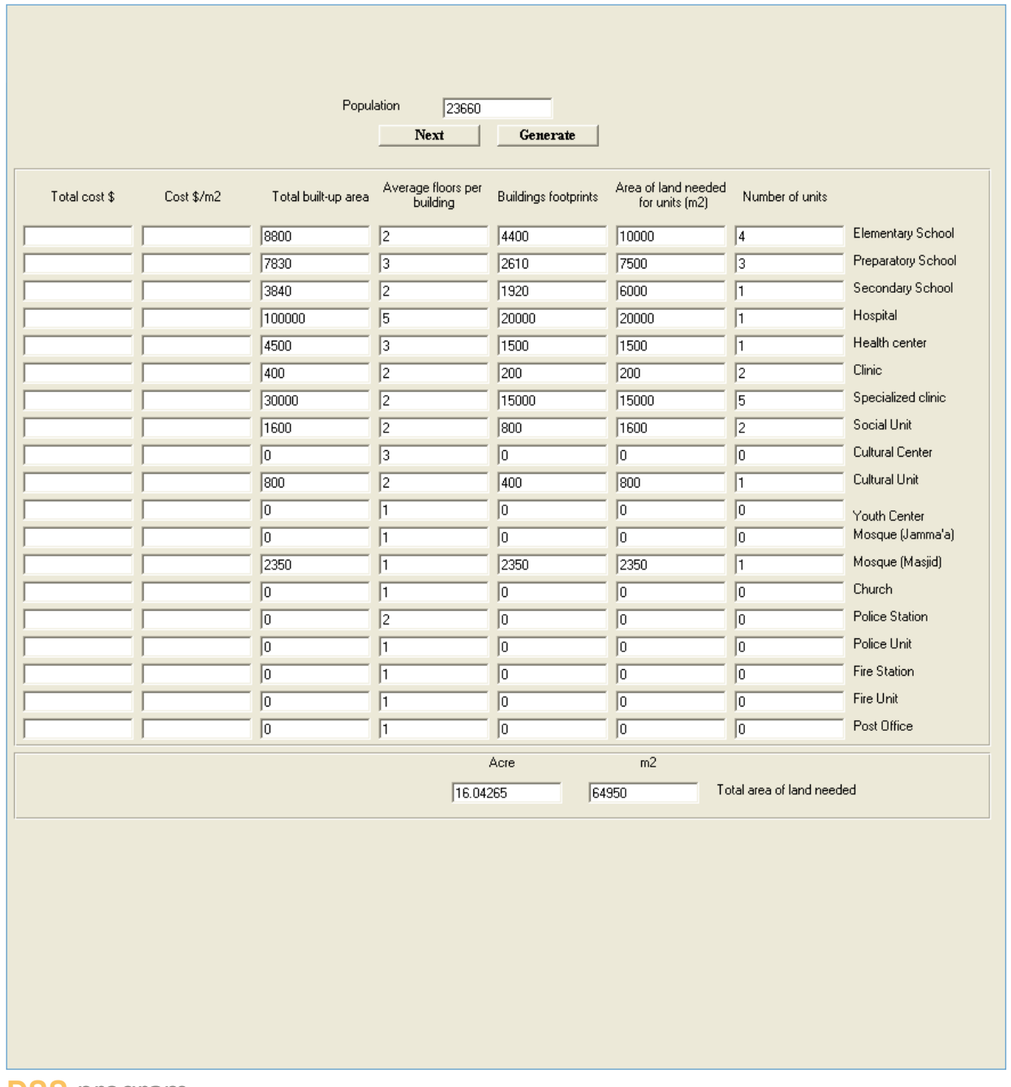
Section 2.02. Methodology and Approach

Many decisions are too complex or too important for decision-makers to make choices based solely on instinct. For example, a decision for land development involves a variety of tangible and intangible strategic goals, conflicting stakeholders (each grasping for their piece of the budget), dozens or hundreds of alternative initiatives to be pursued, and limited resources.No single decision-maker can meaningfully combine all of this information and make informed decisions

The proposed decision support system makes possible the synthesis of input from multiple, stakeholders/consultants and provides the necessary capability to analyze prioritize and communicate those decisions
Based on the Analytic Hierarchy Process (AHP), the proposed decision support system provides a rigorous application and proven process for prioritization and decision-making. By reducing complex decisions to a series of pair wise comparisons, then synthesizing the results, the decision support system not only helps decision-makers arrive at the best decision, but also provides a clear rationale for the decision

Decision support system provides decision makers with a proven process for synthesizing data and developing priorities in an easy to use application that doesn't require an advanced degree in decision science to implement. Decision support systems (DSS) are designed for business and government leaders who want to save time and improve their bottom lines :

1- Aligning their decisions with their organizational objectives
2- Implementing a structured, repeatable and justifiable decision making approach
3- Leveraging organizational expertise
4- Improving top-down and bottom-up communication
5- Building consensus



DSS program

Section 2.03. Building Planning Considerations

Orientation

The direction in which the residential units are oriented were carefully considered, in order to gain maximum use of the solar energy. That will also, affect the penetration into units, as well as solar exposure for outdoor areas such as patios and courtyards

Entry

Considerations have been carefully taken to provide a clear access and enter to the residential units. Buildings and units have a distinct main point of entry, and identifiable from a public way

Massing

The size and shape of residential structures individually and their arrangement relative to each other are primary urban design considerations. Massing is a major consideration in determining how a building or group of buildings will relate to the surrounding context

Section 2.04. Planning and Design Sequence

The planning and design sequence for residential development follows this general process :

1- Code Delineation: Research and document all relevant plans and codes, and their effect on gross densities, open-space requirements, setbacks, and design

2- Programming: Clarify the number of units, typical square meter (footage) of units, and sizes of other physical elements of the project

3- Opurtunities and Constraints: Delineate all physical opportunities and constraints present on the site, especially qualitative constraints, such as views, natural features, and adjacent uses

4- Site Plan Testing: Delineate all development program elements, overlaid with code and site constraints

5- Plan development: Develop project plans that reconcile all code and development program issues for review by authority

6- Final Platting: Coordinate and create, typically with a civil engineer, lot configuration and project design for the final site plan

7- Implementation: Create construction documents, obtain building permits, and initiate construction

3. Context

Section 3.01. Target Client

- Bourgeois working class (white collar)
- Corporations that support executives pension plans
- Investors (in general)
- Community service providers

CEDAR ISLAND

Section 3.02. Site Selection

Mapping and overall surveying of an area demarcated for development requires extensive analysis that utilizes the different available spatial data. This could include updated satellite imagery, aerial photographs, cadastral maps etc. Field surveys and ground trudging will supplement the already available selected spatial data to provide for full fledged provisions for integrated site analysis. The structure of site analysis also includes a set of, individual analytical exercises for each environmental component. This is the object of this proposal. It will include, but not limited to, the following :

It will include, but not limited to, the following :
- Soil classification
- Geological, morphological and hydro-geological analysis
- Land cover and surface water characteristics analysis
- Ecological analysis (flora and vegetation, fauna and habitats…etc)
- Visual studies
- Pollution spatial characteristics and risk assessment
- Overall environmental sensitivity analysis
- Zoning of existing community structure, settlement, and tribal land boundaries etc

Section 3.03. Site Analysis

Preliminary Data (calculated per unit cell/module)

Size might vary, and will be determined by DSS program

Area	3311732 m^2
population	73000 resident

On site Condition
- View
- Noise borne pollution
- Micro climate
- Soil conditions
- Land morphology

Off site conditions
- Density
- PLan Unit DEvelopment (PUD) regulations
- Quality of neighborhood, and community focus
- Facilities and amenities of relevance
- Site utilities

4. Zones and Building Types

Section 4.01. Housing

villa

3-4 bedroom duplex units arrayed horizontally, good for relatively larger size families. Each unit has front and backyards, and parking garage as well

Utility, maid's and hobby areas are accounted for within a given unit ...(fig.1)

Residential highrise buildings

2 and 3 bedroom apartments, properly planned for young couples, and children of smaller families

Living areas open to sizable patio-at all floors, giving benefit of this feature to all units evenly

A cluster of units (up to G+14) exquisite greenery, children's play yard, and a pool at some designated spots ...(fig.3)

Residential midrise buildings

2 and 3 bedroom apartments, propeply planned to absorb and unite families

A cluster of units (up to G+7)

A floor, a gathering space, especially designed for families' reunions with a section for kids another for adults comfortably and conveniently tailored ...(fig.2)

Fig.1

Fig.2

Fig.3

Section 4.01. Commercial

Low Rise

Malls

Mall buildings are structures designed primarily as places for Shopping, commerce (up to G+2)

Resorts

Resorts are destinctively designed to offer it’s occupants a gratifying experience (up to G+6)

Medium Rise

Office Buildings

Office buildings are structures designed primarily as places for work, commerce, or research. Population density, lease span, daylight requirements, and cost of land all influence building form (up to G+14)

Hotels

In the downtown area, several hi-rise towers are planned as iconic landmarks, as well as, an investment portfolio. A mix-use of residential and offices take place as per development criteria

One, and two bedroom residential units are evident, as well as compact office sold by the sq. foot (up to G+14)

Section 4.02. Urban Central District (Downtown)

It is mainly a village–market-like. Restaurants, cafes with outdoor porches and terraces, and boutique retail mix, where on upper floors); boutique offices, and hotels (3-4 stars) complexes occur as well

The down town is a designated pedestrian mall. Vehicles are kept away (even visually), and a qasaba khan) environment substitutes

This mall extends between two, or more, anchors that represent evident landmarks. Festivity piazza also occur at intervals

The plaza will be human-scaled and shaded from the extremes of sun and climate. Buildings will project over streets and courtyards to shade the pedestrian and shelter sidewalk cafés. The configuration and relationship between surrounding buildings will shape the public spaces into memorable destinations. This ‘Downtown’ area will become the activity focus of each quarter

5. Use

Section 5.01. Types of Use

The following serve as a key to the Land Use Table and indicate treatment for each use according to Zone Type

Permitted Users

A “P” indicates that a specific use is permitted by right within the given Zone Type
A “G” indicates that a specific use is permitted by right in the ground floor only within the given Zone Type. Such uses must meet all other appropriate requirements of this code

Conditional Uses

A “C” indicates that a use is permitted provided that the project appropriately responds to additional criteria
A “CG” indicates that a use is permitted in the ground floor only, provided that the project appropriately responds to the additional criteria. Conditional uses must meet all other appropriate requirements of this Code and must be approved by authority

Accessory Uses

An “A” indicates the use as accessory to the primary use on a given site. An Accessory use is permitted by right assuming that additional requirements established, Accessory use or Structure, are met

Uses Not Allowed

An “N“ indicates that a particular use is not permitted within a given Zone Type

Section 5.02. Use Categories

Classification

Use categories classify land uses and activities based upon a similar function, product or physical characteristics. Characteristics include the type and amount of activity, the type of customers or residents, how goods or services are sold or delivered, likely impact on surrounding properties, and site conditions

Determination of Use

Following are the criteria for determining classification :

- Actual or Anticipated characteristics of the activity
- Approximate size of site area or floor space
- Amounts of sales and customer type generated
- Number and character of employees
- Hours of operation
- Building and site arrangement
- Vehicles used and parking requirements
- Number of vehicle trips generated
- Required signage
- Advertisement of use
- Likely impact on surrounding properties
- Ability to operate independently of other activities on a site
- Any other criteria which authority deems relevant

Section 5.03. Conditional Use

Criteria for Approval

Approval of a use in a given Parcel Type is conditional if the use can be made compatible assuming specific criteria have been met to address negative impacts upon the surrounding area Following are variables for consideration of approval of Conditional Use :

- Conformity and compatibility with the approved Master plan for CEDAR ISLAND
- The proposed Conditional Use will not adversely impact the surrounding area or the overall development of CEDAR ISLAND
- The location, size, intensity, and accessibility of the use will not adversely impact the marketability of surrounding uses or reduce the anticipated standard of living
- The size, floor, area, mass, and general appearance of the proposed structure are to be compatible with surrounding structures
- Adjacent streets and utilities have sufficient capacity to meet infrastructure requirements of the Use
- Access to the site is acceptable to authority
- Adequate parking will be available and in accordance with criteria established by this Code
- Impacts such as night lighting and noise have been successfully addressed

Conditions

Authority may place conditions upon approval of a Conditional Use Permit to reduce or mitigate impacts upon surrounding uses

Transferability

Approval of a Conditional Use is not transferable to new tenants or operators and new or down-chain owners

Section 5.04. Accessory Use or Structure

Criteria

A use or structure shall be considered an Accessory Use or Accessory Structure if it meets the following criteria :

- The use or structure serves the primary use and its inhabitants or principal structure
- The use is subordinate in area, extent or purpose to the primary use
- The use is located on the same plot as the primary use
- The use is included in calculation of maximum built up area

Permitted Accessory Uses

Following are permitted Accessory Uses and Accessory Structures in CEDAR ISLAND Downtown

- Home Office and Caretakers quarters as noted, as well as, Home Office of this Development Code
- Storage structures not exceeding 10 percent of the maximum plot coverage and maintaining compatibility of scale, materials and design with the principal structure
- Commercial or Institutional uses such as cafes or mosques for the exclusive use of employees associated with commercial or office use
- Solar panels and similar features, awnings, canopies and other amenities attached or directly related to the primary structure
- Trash or refuge storage and enclosures
- Radio, television or other telecommunications antennas
- Temporary uses associated with construction sites

Prohibited Accessory Uses

The following uses are prohibited in CEDAR ISLAND :

- Open storage of loaded and unloaded vehicles
- Open storage of materials, supplies or equipment
- Outdoor display for sale of items such as automobiles, furniture, appliances or other arge-scale materials
- Raising, breeding, or keeping of dogs, cats, birds or other animals for sale, feeding or slaughter
- Any other use not expressly provided for within this code which authority deems as a prohibited accessory use

Home Office

A home office is permissible as a use in given Zone Type, as noted, if it meets the following criteria :

- The home office is clearly incidental to the residential use of the dwelling and is not more than 20% of the unit size
- Business connected to the home office is conducted entirely within a residential structure
- No outside storage of any kind is related to the home office
- The residential character of the dwelling and the plot are not altered in any way to account for a home office, including additional parking, placement of a business related sign, or display of wares in a manner as to be visible to the outside
- Deliveries by commercial vehicles occur only between 8am and 6pm
- The home office creates no disturbing or offensive noise, vibration, smoke, dust, odor, heat, glare, unhealthy or unsightly conditions, traffic, or parking problem
- The home office shall not result in the off-street or on-street parking of more than two vehicles at any one time not owned by members of the occupant family
- The business conducted within the home office does not involve retail sales or services

Accessory Use Development Standards

The following standards shall apply to all accessory structures :

- The combination of all structures on a property, including the primary structure and all accessory structures, shall not exceed any requirements established in 5.0, Form or the given Zone Type
- No accessory structure shall be constructed upon a property prior to completion of the primary structure

Section 5.05. Temporary Use

Permitted Temporary Uses

Unless otherwise prohibited by this Code, the following temporary uses and structures may be permitted provided that they do not adversely affect surrounding properties nor disrupt the normal activity associated with Permitted Uses :

- Contractor 's office, construction equipment sheds and lay down areas, haul roads, access
- roads, burrow/fill sites and other construction related uses
- A real estate office
- A car park

Duration of Temporary Use

- A temporary use shall be granted for a maximum time duration of 18 months by authority
  An extension of time for continuance of a temporary use may be granted by authority upon request and review
- Within 30 days following expiration of the granted time duration, the plot shall be cleared of all debris and all temporary structures. A guaranty or signed contract with a disposal firm may be required as part of approval of any Temporary Use Permit

Temporary Use Development Standards

The following standards shall apply to all temporary uses and structures, unless otherwise noted :

- Hours of operation shall be determined by authority upon approval of the permit for the temporary use
- Temporary sanitary facilities must be approved by authority
- Temporary uses shall meet all landscaping, fencing and sign requirements established for the given Zone type
- Parking for the temporary use may be required, including a stabilized drive to the parking area

The following standards shall apply to all temporary uses and structures, unless otherwise noted :

- Hours of operation shall be determined by authority upon approval of the permit for the temporary use
- Temporary sanitary facilities must be approved by authority
- Temporary uses shall meet all landscaping, fencing and sign requirements established for the given Zone type
- Parking for the temporary use may be required, including a stabilized drive to the parking area

No materials, supplies, tools, or equipment, including trucks and other vehicles of the developer, shall at any time be placed or stored in any area within CEDAR ISLAND Downtown other than the specified plot. Storage shall occur inside a closed, temporary building, or behind a visual barrier or fence of such design and construction to screen such areas from public view. Such temporary structures, fences and visual barriers shall require approval by authority and shall not extend over the designated boundary

6. Form Code

Section 6.01. General

Applicability

Design requirements established in Section 9.0, Form shall be applicable to all sites and structures in all Zones unless specifically exempted by this Code

Relationship to Design Principles, Master Plan, and three-Dimensional illustrations Development requirements regarding urban form are incorporated into this Code as a means of implementing design criteria established in the overall Master Plan design principles, ensuring a high quality of life and minimizing the opportunity for adverse impacts on the functionality of the community

Section 6.02. Building Configuration and Size

Building Elements

The development consists of one or more elements typically consisting of a base up to G+12 (in Gallery Type) , along with basements, rooftop mechanical enclosures, balconies, and parking structures. Mid range patio ranging up to 7 floors, and low rise (Villa Type) G+2. The overall controls for each zone are maximum overall FAR, maximum retail FAR, maximum height, allowable parking levels and major building entry location

Maximum Built Up Area

The maximum gross build able area - not including parking structures, basements, and rooftop mechanical enclosures . This area will be calculated to the exterior of all exterior wall enclosures and will include all service areas and elevator shafts. For mixed-use buildings the sum of all uses shall not exceed his FAR

Orientation and Entry

- All street edges of the plot shall have building frontage in the ratio prescribed for setbacks and with the quantity of glazing
- The major building entry shall face a primary street.Retail and townhouse entries are located at the center of the 4 Quadrants

- Parking Location and Vehicle Access
- Parking for the downtown will be below grade
- Parking for the Gallery will be below grade
- Parking for the Patio House will be above grade
- Curb cuts accommodating two-way vehicle access are required from perimeter or cross streets when available

Section 6.03. Urban Design

Corner Conditions

- For plots with corners facing two streets the architectural orientation and massing of the building shall face the corner

Ground Floor Treatment

All downtown units facing ground floor uses shall be retail, commercial, entertainment, service or civic unless a conditional use is granted by authority. Each individual shop or institution should have a private entry direct from the sidewalk, entry court or plaza

- Any residential lobby and entryway shall be clearly visible from the sidewalk and any drop off area shall not isolate the entry from the sidewalk
- Exterior building materials, particularly at the pedestrian level, should be selected with consideration given to durability and maintenance

Transparency

- Transparency shall constitute glass with less than 25 percent reflectance. No mirror or highly colored glass is emitted
- The transparency of the ground floor facade shall be a minimum of 50% along all streets and plazas. The upper floors shall have a minimum of 30% transparency other than facades set at a zone-to-zone property line that will have no windows or openings

Open space

- Each zone shall incorporate open space of at least 465 sq. m. Such open space may be located on top of the car park structure, at grade, or on roof

Entry Court

- Zones may incorporate a courtyard feature facing an adjacent right-of-way. Courtyard shall not exceed 280sq.m

Section 6.04. Architectural Treatments

Mix of Permitted Materials

- Exterior walls of non-base elements may be comprised of combination of the following materials
  . Brick, stone, cast stone, rock, marble, granite, glass block, tile, metal panels, or similar materials
  . Stucco, plaster, Exterior Insulation and Finish System (EIFS) or equivalent products
  . Glass with less than 25 percent reflectance used for windows or spandrels
  . Other compatible, high quality materials as approved by authority

Screening of Mechanical Equipment and Parking

- Mechanical equipment, to the extent possible should be placed on the roof of any structure. Mechanical equipment located on a roof shall be screened through development of an architectural top for the structure. Mechanical equipment located at ground level shall be fully screened from view from any public sight of way or other buildings
- Mechanical equipment that must be located below the roof and car park structures should be located to the side or rear of a structure and designed to be architecturally compatible with the remainder of the structure including incorporation of appropriate materials to assist in screening
- All mechanical structures will be subject to detailed review and approval by authority on a case-by-case basis

Color

- The color palette selected by applicant shall be generally compatible with the limestone podium, as well as surrounding development, with the rear and side of the primary structure completed in a color compatible with the front facade

Lighting

- Lighting designed to illuminate any or all of a site shall be fully concealed to avoid direct visibility from a street right-of-way and shall be designed to avoid unreasonable encroachment of light upon surrounding sites
- Commercial parking, loading and staging areas shall be expected to incorporate lighting during evening operation
- Lighting shall be provided at all entry and exit points of structures as well as locations throughout the site in which it is determined by authority that safety may be compromised
- Roof and facade lighting shall be in principle permissible but subject to detailed review and approval by authority

Balconies

- Balconies should be integrated into the facade composition, and may not as a general rule exceptions subject to approval of authority. Appear as boxes that protrude from the side of the building. Devices that help integrate balconies include: partially or fully recessing the balcony into the facade, placing the balcony at an inside corner of the building, and placing the balcony on the roof of a lower floor where the building steps back
- Balconies are meant to be exterior places, not a bonus room that does not count towards the allowed floor area of the building. Balconies which are glassed-in or have opaque wall surfaces above railing heights may be included as built up area by authority
- Openwork structures and plantings are encouraged, but must not cover more than 30% of the facade area they occupy
- The following structures apply o balconies :

  . Balconies may xtend up to 2.5m from the building face

  . Balconies may protrude into a setback on a public right-of-way up to 1m

  . Opaque walls above railing height are allowed only when balconies of different units are physically joined together. In this case the opaque wall may not be higher than 2m above floor height

Roofscape

- The top of each tower shall terminate in a distinctive form with a different architectural treatment than the body of the building
- Any mechanicals on the exterior, such as air handling units and communications antennae / dishes shall be roof-mounted and screened from sight from public space and other buildings within suitable enclosure areas. If screening areas are mounted atop roofs of lower floors a lattice shall screen the units from above

CEDAR ISLAND

7. Street System

Section 7.01. Micro Synthesis

Road patterns respond mainly to topographical parameters. They subdivide a island to zones as per land budget designated. The heart of the island, set as main street downtown, and amenities stretch adjacent, and around

Each cell is defined by the character of dwellers, and reflected onto architectural features

The form of the main street is typically a local commercial corridor along the main thoroughfare through the downtown, with buildings organized in storefront blocks and parking on the street

This main street will help in defining a unique identity to the community. A walk able main street helps in decreasing the number of single-purpose automobile trips

Main street parking will meet the needs of customers, merchants, employees, visitors, and residents. It will be regulated, to encourage turnover of customer spaces and to discourage abuse by long-term parkers, and would be accessible to handicapped visitors

Section 7.02. Macro Synthesis

Roads also define boarders of any given module/cell, and still extend connections to neighboring ones

Characters too integrate. Adjacent clusters bear the seeds of a common culture. Individually, each has its own identity, yet when connected, one still feels air of “similarities flowing

A group of clusters, though economically autonomous and independent, still cluster around an auxiliary service cell that adds further value (s)

A.3.1. On economic level: a feature distinctive project boosts the economy, and services, and attracts business from vicinity
A.3.2. The services level: amenities list gets extended which it belongs

CEDAR ISLAND

Section 7.03. Street Key Maps

The hierarchy of street types-perimeter streets, interior ones, and cross streets, directs varying intensities of traffic through the different districts of the site, reinforcing the overall design strategy The spatial hierarchy of the plan is reinforced by the character and scale of the streets. From the city type, to the perimeter type, these streets shape, complement and add to the identity of the districts and the public spaces throughout the site

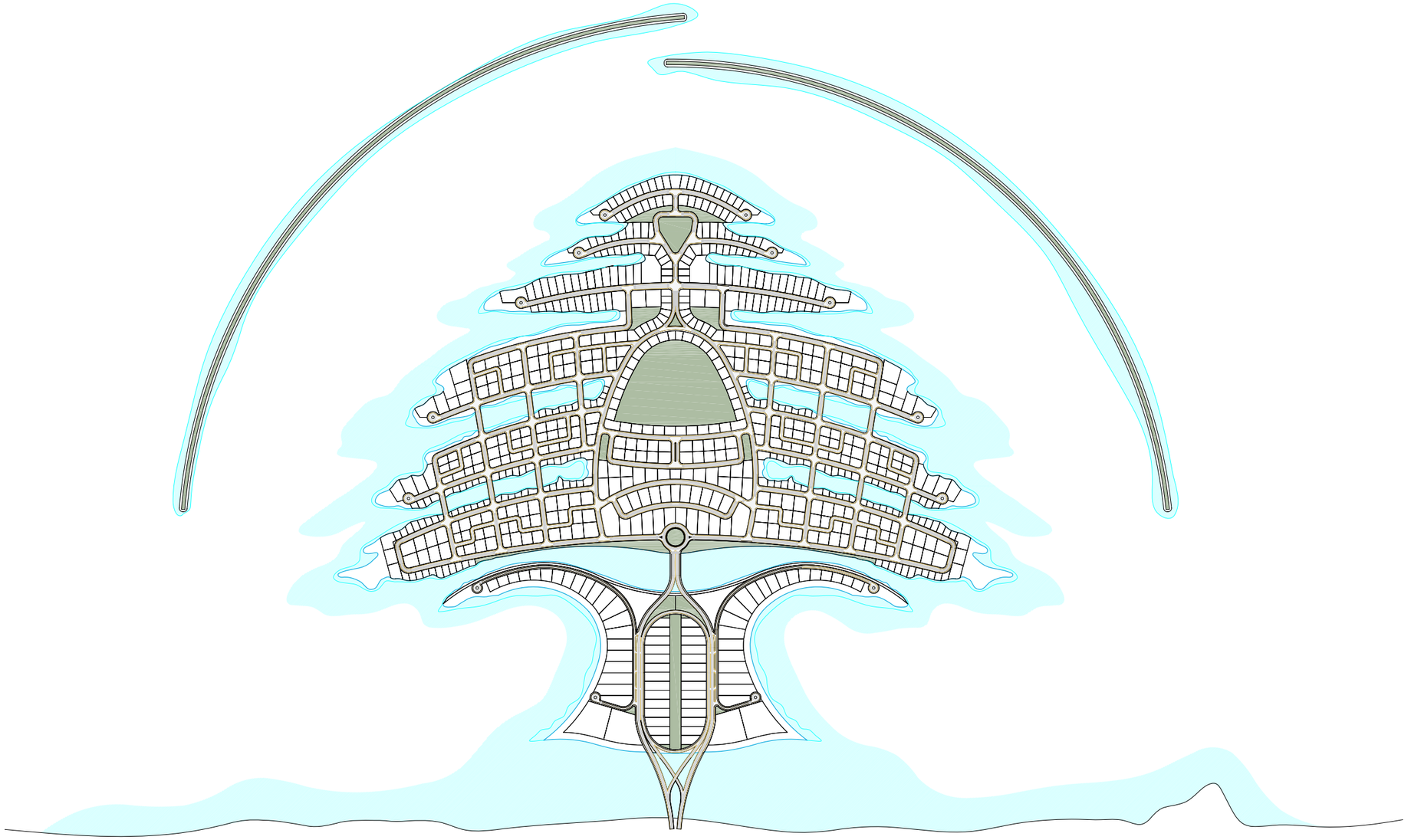


Figure 1: Section Through Boulevard

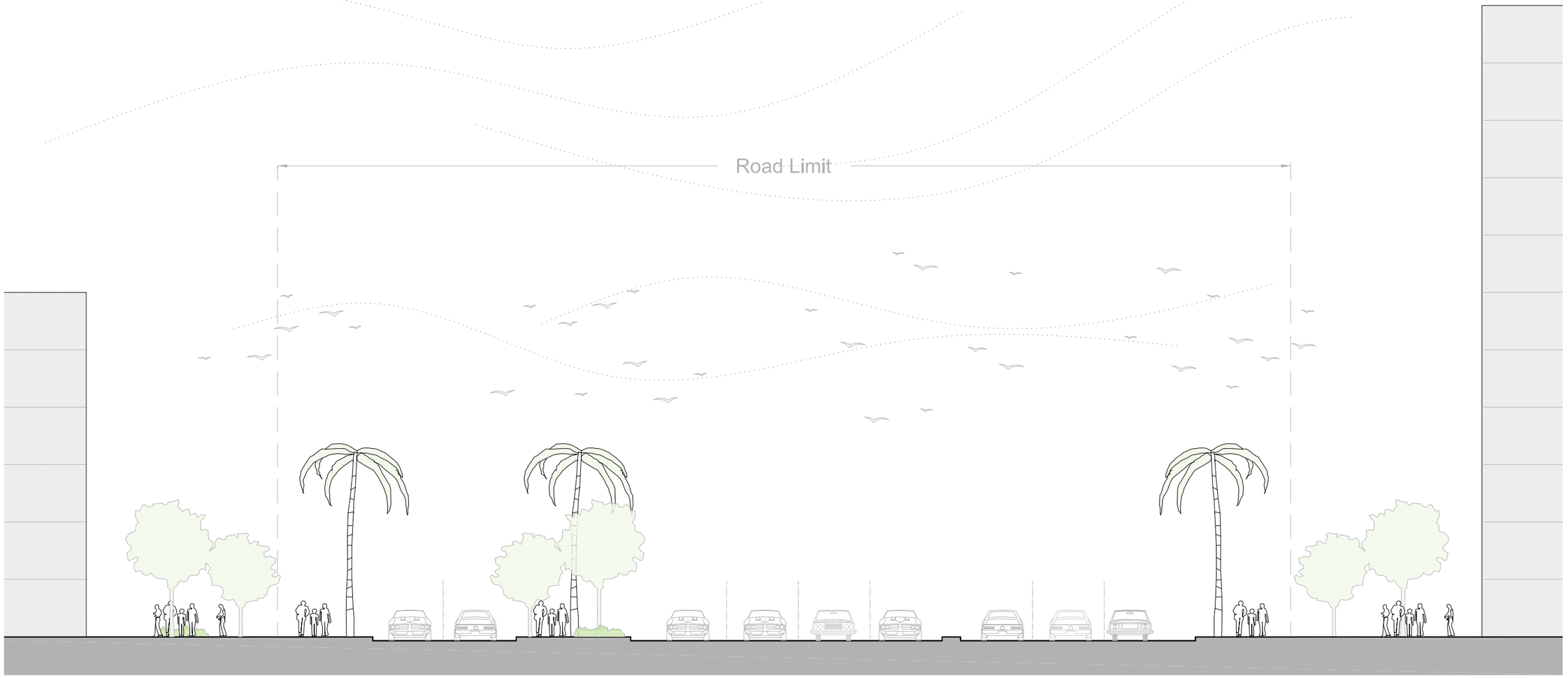


Figure 2: Section Through Local Road Type 1

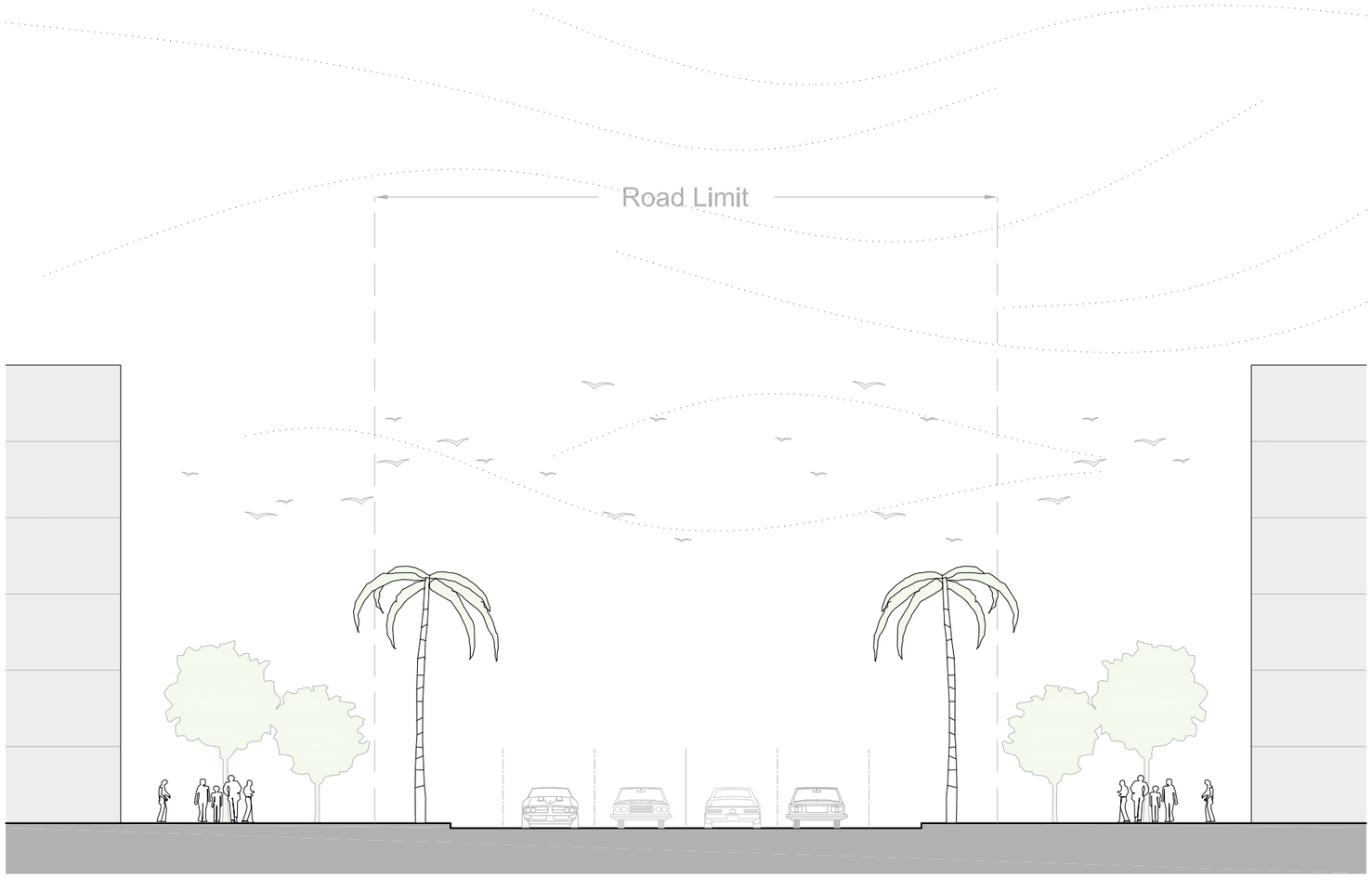


Figure 3: Section Through Local Road Type 2

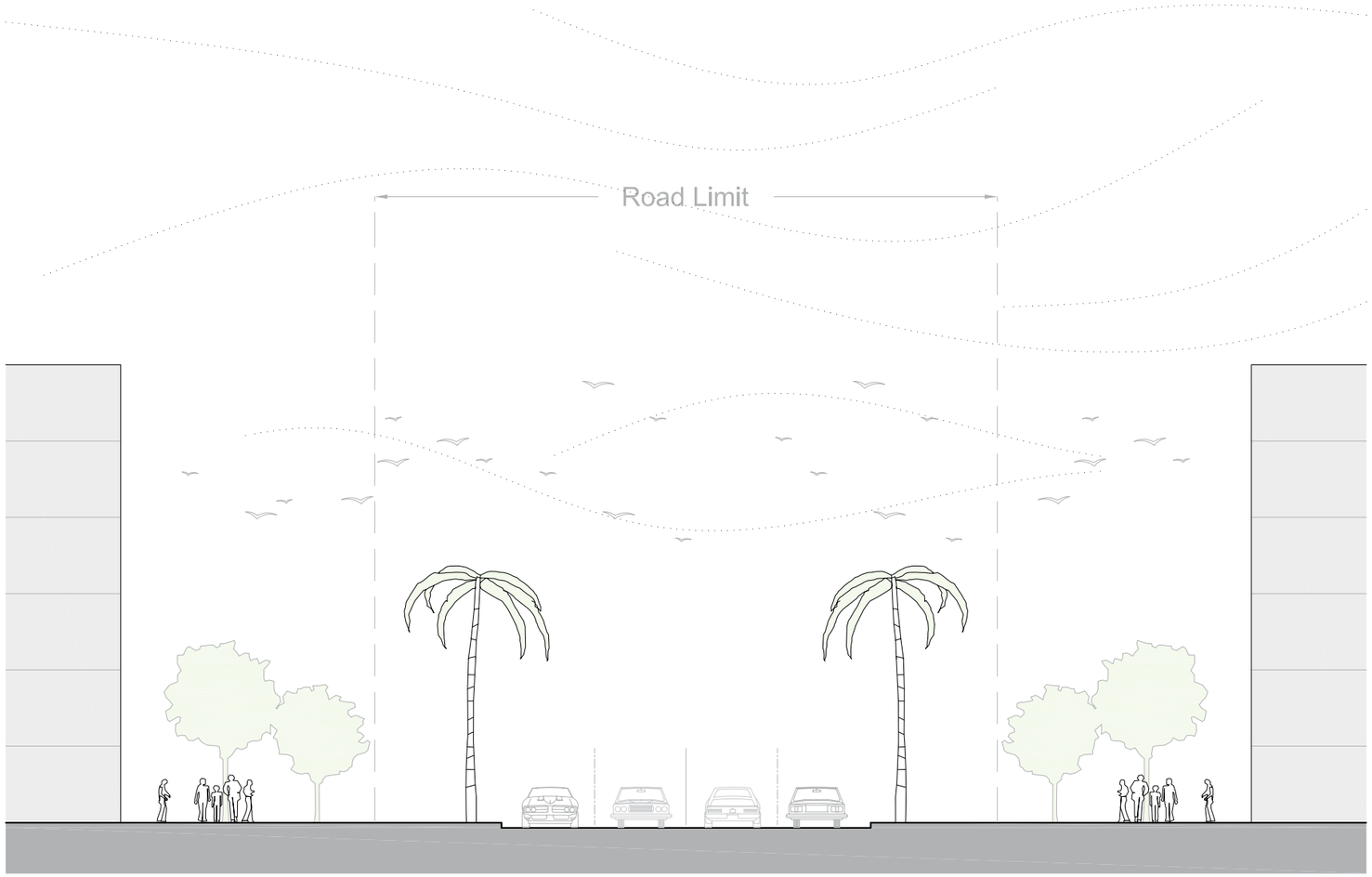


Figure 4: Section Through Local Road Type 1

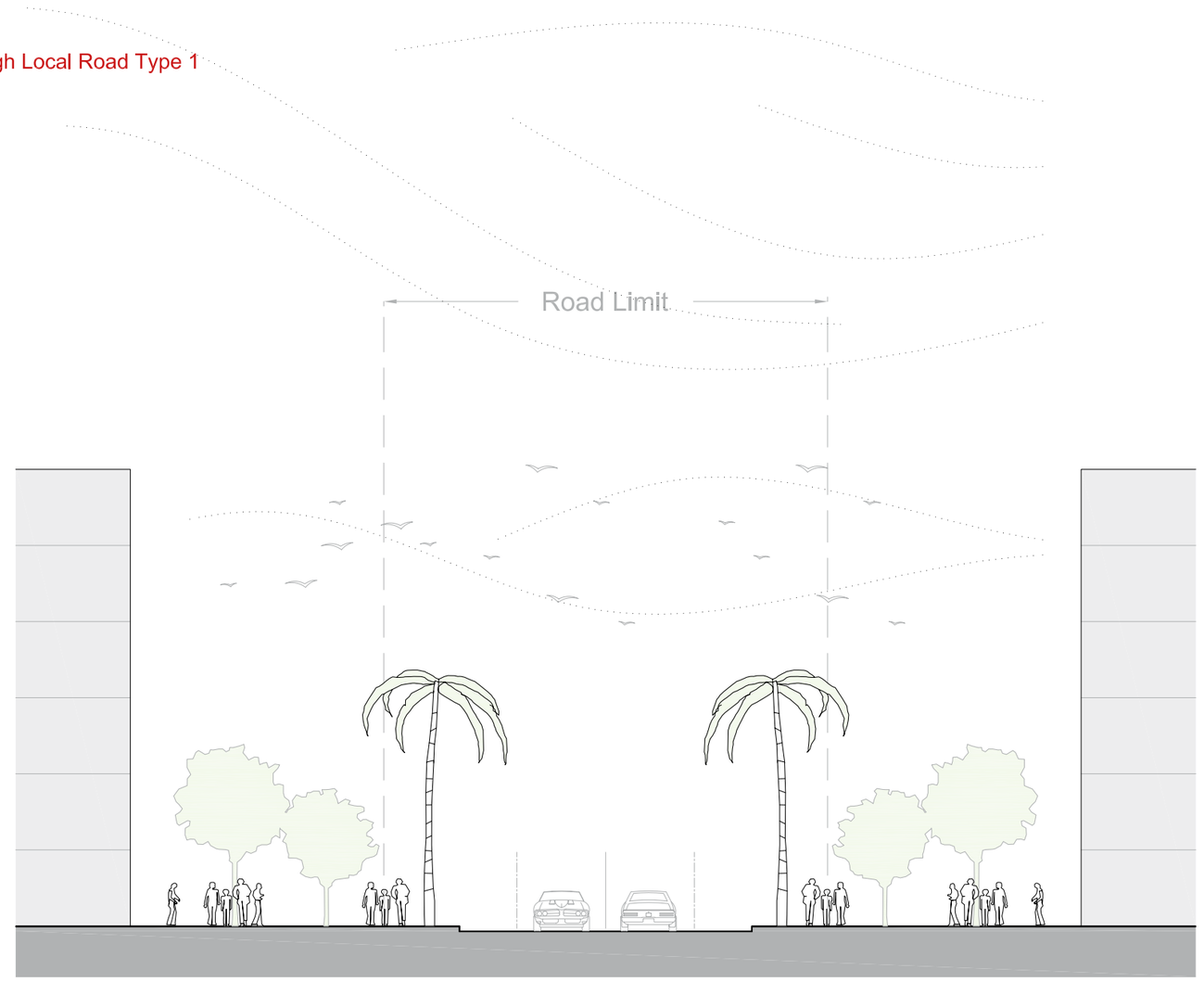
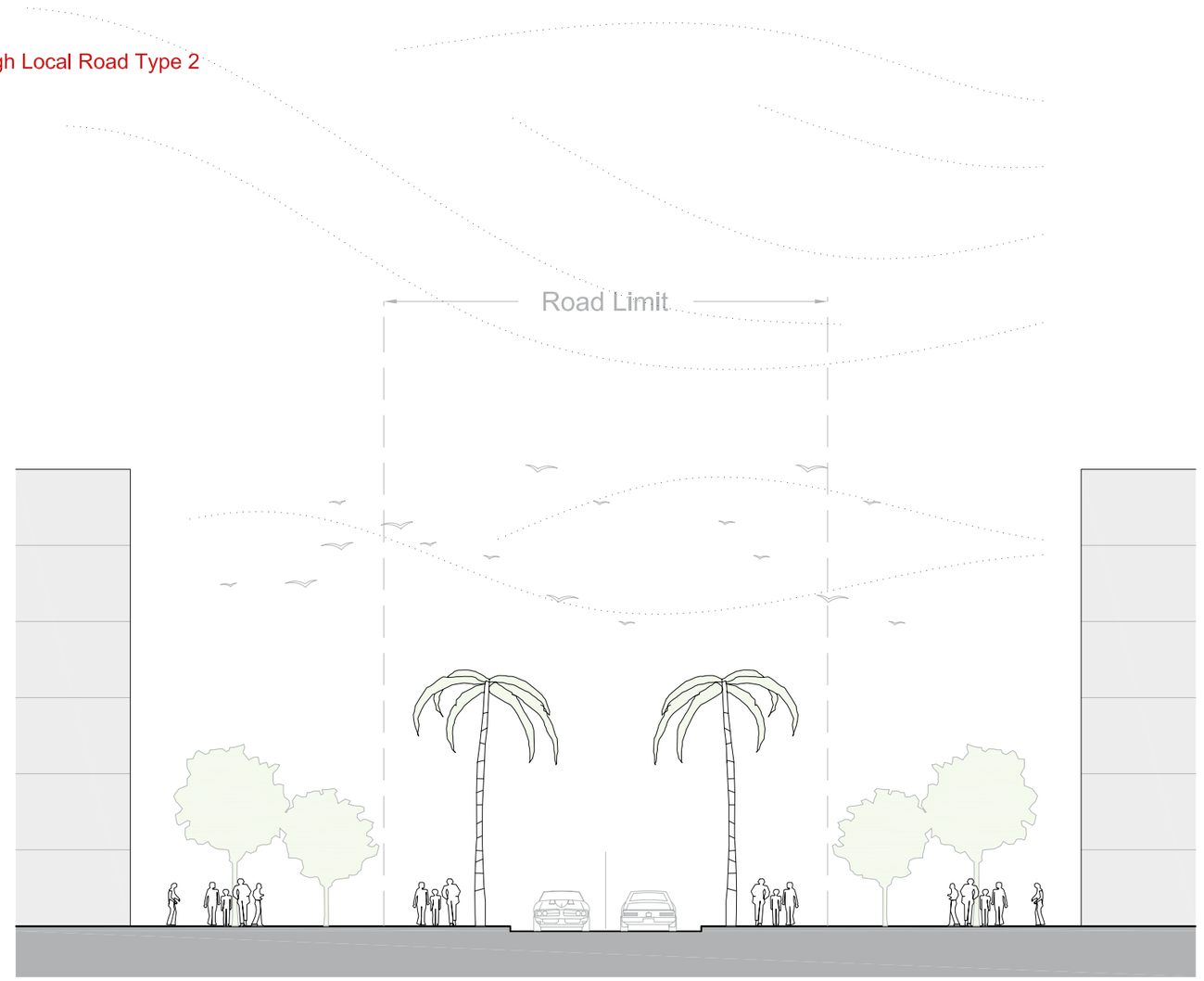
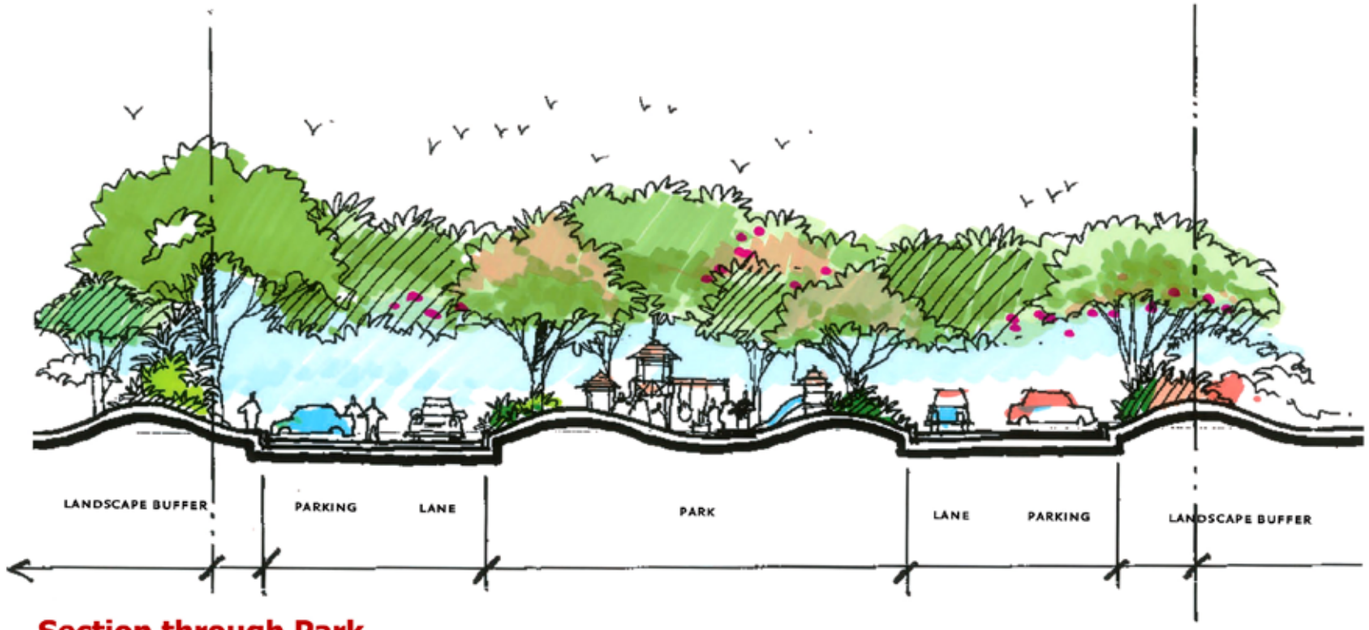
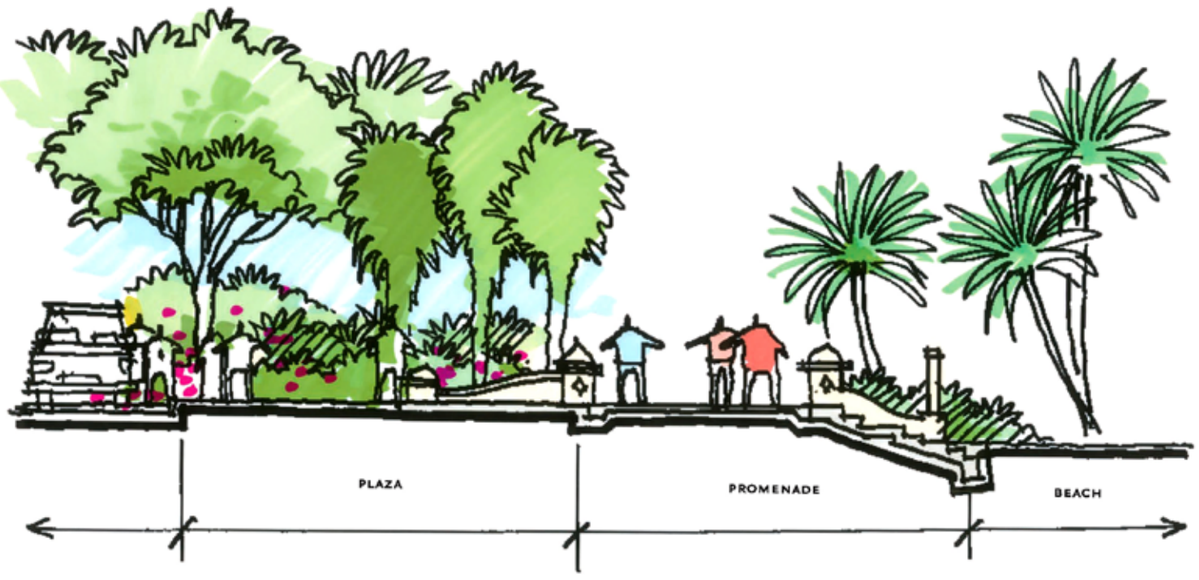


Figure 5: Section Through Local Road Type 2

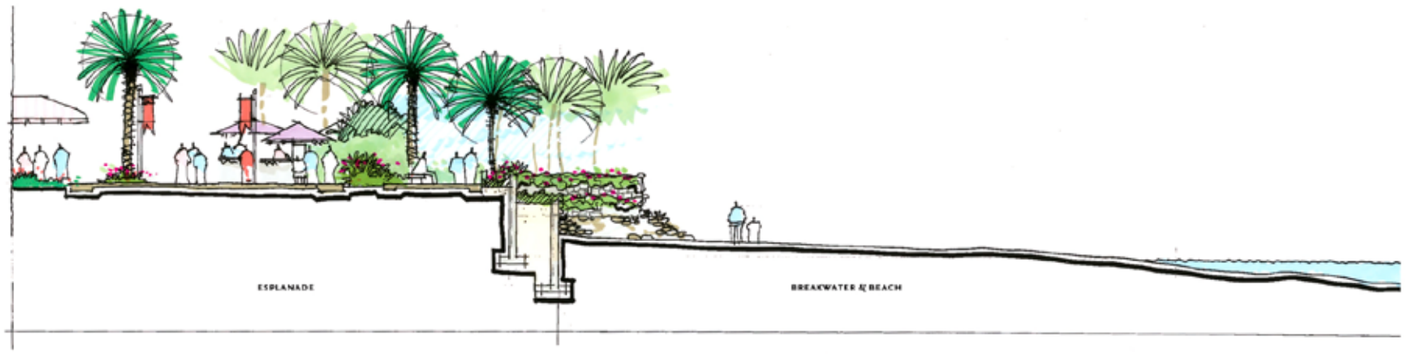




Section through Park

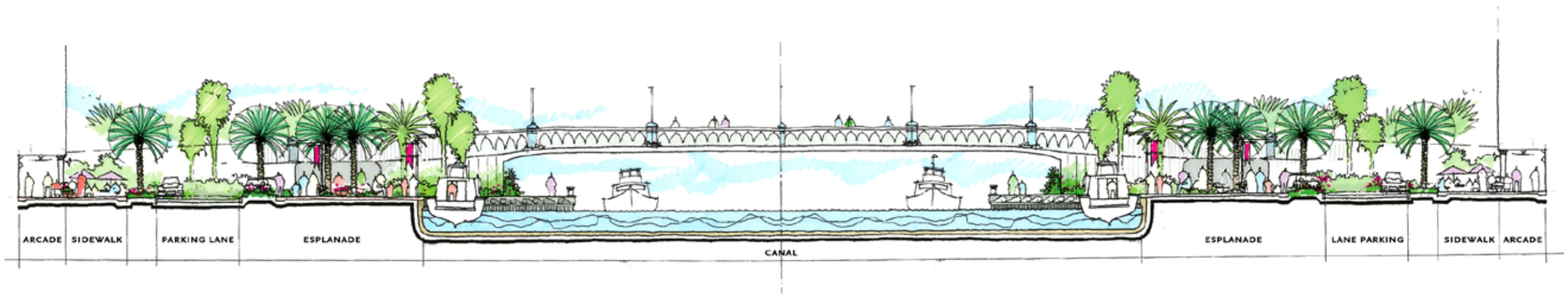


Section through Beach Edge



Section through Promontory Beach

Section through Beach Resort Hotels



Section through Canal

Section 7.04. Sidewalks

Sidewalk design is characterized by :

Grade : is defined as the slope parallel to the direction of travel. Maximum grade is a limited section of path that exceeds the typical running grade. In the pedestrian environment, maximum grade should be measured over 24inch intervals, which represent the approximate length of a wheelchair wheelbase or a single walking pace. When measuring sidewalk grade, both running grade and maximum grade should be determined so that small steep sections may be detected

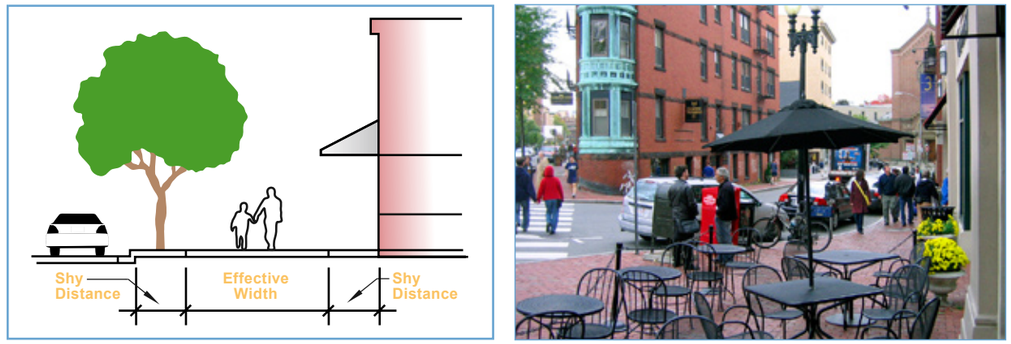
Cross-Slope : is the slope measured perpendicular to the direction of travel. Most sidewalks are built with some degree of cross-slope to prevent water from collecting on the path by allowing water to drain into the street. Water puddles pose a slipping hazard to sidewalk users and even more difficult to negotiate when frozen

Width : Sidewalk widths affect pedestrian elements that can be installed. For example, a 2m wide sidewalk is probably wide enough to accommodate pedestrian traffic in a residential area. A more wider sidewalk would be necessary to include amenities, such as street furniture or newspaper stands

Sidewalk Elements :

Curb Ramps : They are most commonly found at intersections, but they may also be used at mid-block crossings and medians. Curb ramps should be designed to minimize the grade, cross-slope, and changes in level experienced by users

Figure 7.04. Shy distance and effective width



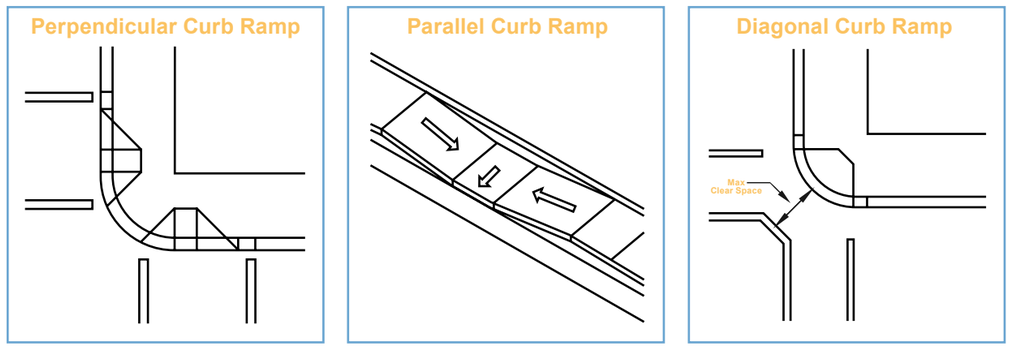


Figure 7.05. Curb Ramp Types

Section 7.05. Pedestrian-Friendly Streets

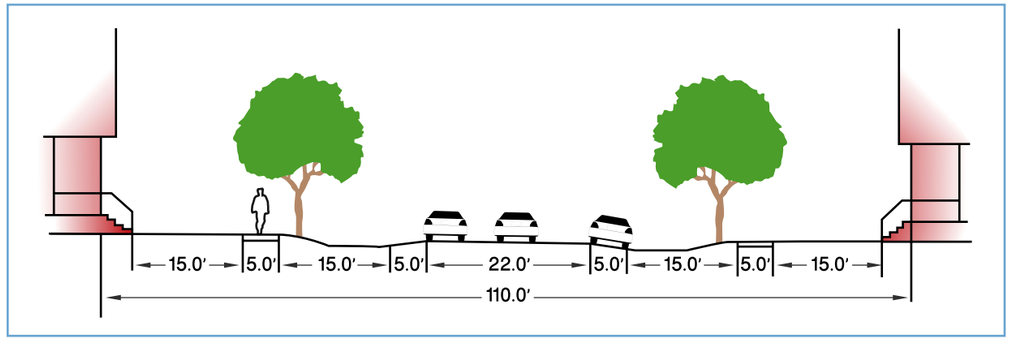
They are designed to be more accommodating to pedestrian traffic than are conventionally designed streets. Pedestrian traffic here includes bicyclists, the physically handicappedtransit users, and those of all ages on foot. Pedestrian streets here include yield or queuing streets along with narrower vehicular traffic lanes. Pedestrian friendly streets are designed in order to create a walk able neighborhood within the city

Scale and Context

The context is the most important variable in determining the suitable width for the street. This varies depending on several factors, including :

- Parking configuration
- Building use
- Degree/type of no motorist activity
- Truck traffic percentage
- Disability requirements
- Location within the urban fabric, and
- Transit use

Figure 7.05. Low Street



Section 7.06. Hierarchy of Streets and Roads

For urban streets, there are four classifications: principal arterials, minor arterials, collector streets, and local streets

Principal Arterials

It provides long-distance “trunk line” continuous routes within and between the urban areas. Typically, but with some important exceptions, they carry high volumes of traffic at high speeds. Freeways, including interstates, are principal arterials

Minor Arterials

The backbone of the urban street network, minor arterials are continuous routes through urban areas. they carry more than half of all vehicle miles of travel

Most trips include arterial streets. They contain most of a city’s commercial and institutional uses. The traffic function of minor arterial streets is challenged because of their attractiveness as business addresses, and attractiveness fostered by the traffic function of the street itself

Collector Streets

With continuity over short segments(0.4-0.8km), collector streets are minor tributaries, gathering traffic from numerous smaller (local) streets and delivering it to and from minor arterials. Seldom designated as numbered touring routes, collectors are usually city or county streets. Most collectors are bounded by properties (both business and residential) with driveways to the street

Local Streets

It includes all streets not on a “higher” system. They comprise percent of street mileage but carry less than 10 percent 90 of the total vehicle miles of travel. These streets may be short in length or frequently interrupted by traffic control devices, (stop signs or signals). Travel distance on local street is shorttypically to the nearest collector street

Section 7.07. Street Networks and Street Connectivity

Street Spacing Guidelines

Principal arterials should be located every 4.83 to 6.44 kilometers in urban areas. Minor arterials should be spaced at around 1.61km intervals from other arterials (principal or minor). Collector streets should be spaced roughly 0.8km from arterials. Local streets complete the network, with a local block spacing appropriate to the land use-typically 91.4-152m in business districts and 76.2 to 182.9m in residential neighborhoods

Street Connectivity

Can be defined as the quantity and quality of connections in the street network. The purpose of the street network determines how direct or indirect the connections are and governs the number of different paths that connect two places. A traditional rectilinear street grid provides relatively direct connections and multiple routes and thus has high connectivity. In contrast, the curvilinear networks dominated by the cul-de-sacs that are more typical provide relatively indirect connections and few routes, thus, have low connectivity

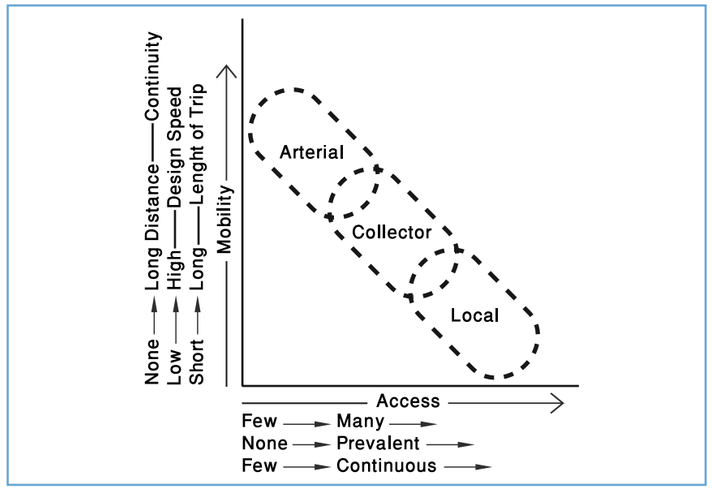


Figure 7.06. Access, Mobility, and Relationship to Functional Class

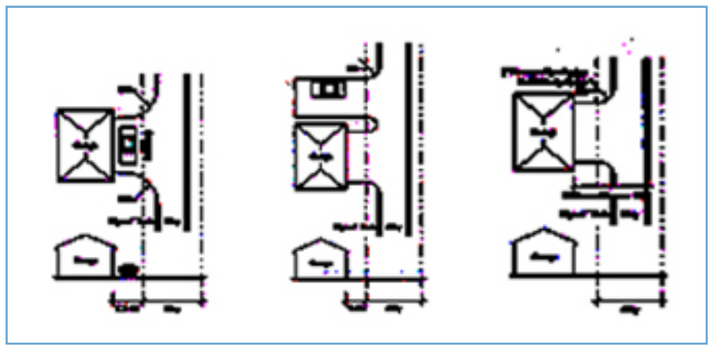


Figure 7.07. Alleys and Driveways

8. Parking and Loading

Section 8.01. Purpose and Type

Parking and loading requirements are established as part of this Code to ensure that all activities in CEDAR ISLAND Downtown are provided adequate and reasonable parking and loading facilities to meet the needs of structures and uses

On Street Parking

On street parking is strongly encouraged throughout MODULE City Downtown as a flexible, efficient parking option. On street parking shall be permitted along all streets throughout CEDAR ISLAND Downtown, with a few exceptions

- On street parking located adjacent to the front plot line of a plot shall be included in meeting parking requirements or hat particular lot
- All on street parking shall be designed as parallel parking. No diagonal parking is permitted along perimeter streets, cross streets, and interior streets of CEDAR ISLAND Downtown
- On street parking shall have a minimum length of 7m and a minimum width of 2.5m unless otherwise dictated by authority

Parking Types

Opportunities for parking shall be classified in two categories as follows :

- On street parking. Permitted in all Zones throughout CEDAR ISLAND Downtown
- Car park Structure. Car park structures are restricted by design and appearance. Ability to place parking below grade, improves the efficiency of car park structures

Parking by Zone Type

Parking type is determined to have an impact upon the visual character and overall efficiency of a plot or block. General Parking Requirements indicates the type of parking permitted in each Zone Type. A “P” indicates that the specific type of parking is permitted within the given Zone Type

Section 8.02. General Provisions

Location of Parking

Location of parking in relationship to structures on a plot and the streetscape are regulated by Table 8.01, General Parking Requirements and guided by the guidelines related to parking in Design Principles

Shared Parking

Two or more structures or areas may share parking provided that all height, design another criteria established within Section 10, Parking and Loading are met and approval is granted by authority

Approval Required

Parking and loading shall require approval by authority prior to construction or use. No concept plan or site plan approval shall be granted if authority is unable to determine that parking and loading areas meet the requirements of Section 10 of his Code

Section 8.03. Space Requirements

Number of Spaces

Parking Spaces Required, designates the minimum number of parking spaces necessary by type of and use

Bicycle Accommodations

One bicycle rack shall be required for each 30 parking spaces of a specific use and shall count as one parking space

Calculating Space Requirements

- Those requirements including a square meter measure shall base measurements on gross floor area
- In the event that calculations result in a fraction greater than one-half (1.5), the number shall be rounded up to the next whole number

Section 8.04. Space and Plot Design

Parking Space Size

- Parking spaces shall conform to the requirements established, Parking Area Dimensions
- Required parking spaces shall have minimum dimensions of not less than 2.5 meters in width and 5.0 meters in length
- In parking areas with 20 or more parking spaces, up to 15 percent may be designated as “small car” spaces with minimum dimensions of not less than 2.5 meters in width and 5 meters in length Small car spaces should be grouped and identified for exclusive use of small cars

Parking and Drive Aisle Widths

- Parking and drive aisle widths adjoining off street parking must meet the minimum standards described. Parking Area Dimensions
- End caps of parking aisles shall include a maximum radius of 4 meters

Access

- No parking space shall have direct access to a street except on street parking spaces. Off street parking spaces shall be accessible without backing into or otherwise entering street
- All off street parking areas shall be limited to one point of two-way operation access with the exception of those parking areas that exceed a total of 100 spaces, in which case two points of two-way operation access are permitted

Access Standards

Access driveways for parking and loading shall meet the following design standards :

- Access for emergency vehicles and loading shall have minimum vertical clearance of meters 55
- Curb cuts shall not be placed closer than 10 meters from a curb line intersection, measured from the nearest edge of the access driveway
- Access driveways shall have a minimum width of 3.75m for one-way operation or 6.0 meters for two-way operation
- At no time shall the total width permitted for access exceed 0 percent of the total street frontage

Markings and Accessories

- Each required off-street parking space shall be individually identified by surface markings in accordance with adopted standards. Aisles and maneuvering areas shall also be clearly marked with directional and traffic information as determined necessary
- Wheel stops or a continuous curb shall be provided along the boundary line of a parking area or within proximity to structures, pedestrian areas, or landscaping
- Lighting shall be installed as needed for purposes of safety and shall be installed in a manner to prevent light from reaching beyond the intended area

Screening and Drainage

- A car park structure shall maintain the design theme of the adjacent structure, including a minimum standard of architectural detail and screening integrated into the design of all parking and loading areas
- Parking and loading areas shall be graded, paved with a material acceptable to Limitless LLC, drained, and maintained to avoid dust, erosion or excessive water flow

Vehicle Stacking Areas

Vehicle stacking may be a consideration in “staging areas” such as banks or parking areas for commercial retail or entertainment activities. In such instances, the following requirements shall apply :

- Vehicle stacking areas must be provided on-site and may not impede on or off-site traffic movement
- The number of vehicles to be considered in the vehicle stack shall be determined in coordination with authority

Design of Loading Areas

Loading areas shall be screened from the view of the general public and designed to fit appropriately into the design theme of the surrounding structure

Section 8.05. Loading Areas

Location of Loading Areas

Loading areas shall be located beyond the view of the general public as determined, General Parking Requirements

- Bus and taxi pick up/drop off areas shall be permitted in areas visible to the general public

Typical Space Requirements

- Loading spaces shall have a minimum width of 3 meters and a length of 12 meters, exclusive of aisle and maneuvering space
- Loading spaces shall have a minimum vertical clearance of .55 meters
- Inside turning radius shall be minimum of 9 meters

Semi-Trailer Space Requirements

- Loading spaces shall have a minimum width of 3.5m and a length of 17m, exclusive of aisle and maneuvering space
- Loading spaces shall have a minimum vertical clearance of .55m
- Inside turning radius shall be minimum of 12.55m

9. Building Amenity

Section 9.01. Plant and equipment

All noise generating equipment must be acoustically buffered to prevent the penetration of noise to dwelling units on the premises as well as to adjacent properties

All rooftop equipment and machinery must be hidden from view or adequately screened. Incorporation of such equipment into a penthouse or other rooftop structure well integrated with the building's architecture is encouraged

Section 9.02. Refuse

Refuse disposal services adequate to service the needs of the development are required. Garbage rooms must be air conditioned and located within basement spaces convenient to loading and servicing areas

The developer will submit a waste management plan for this project

Section 9.03. Electricity

The electric service to each major building complex, being of medium and high density; these property owners will be required to provide transformer sub-station to convert to low voltage 380/220 volt, 3 phase, 50 hertz distribution

Low Voltage

Ordinary customers will be provided with low voltage 380/220 volt, 3 phase, 50 hertz distribution from transformer vaults located below sidewalk

Low voltage 380/220 volt, 3 phase, 50 hertz service will be provided for street lighting, traffic signals, and low voltage distribution

Section 9.04. Water supply

Two forms of water supply are to be provided for the CEDAR ISLAND a domestic water service that is used for drinking and fire service water supply and a recycled water supply that will be utilized for irrigation and toilet flushing

Section 9.05. Domestic Water Supply

A water main shall be available for connection at the front of each Lot and shall be of adequate size for both domestic and fire water demands. On site water storage tank will be required for as a second means of water supply for fire services or where an uninterrupted supply of water is required

A design supply pressure shall be provided at the relative street level of each Lot

Section 9.06. Recycle Water Supply

The domestic water supply or drinking water services shall be supplied from either the Municipality or the Developer

The Recycled water would be reticulated from the treatment plant to provide a water main available for connection at the front of each Lot and to the district cooling chilled water plant. The recycled water that is connected to the Lots would be for use as irrigation water and flushing water

The recycled water is also provided as a district irrigation service

Section 9.07. Sewer drainage

A sewer drainage system shall be provided as part of the utility services and would collect the sewer waste from the various Lots and convey it to a new sewerage treatment plant that is to be located outside the city centre. The sewerage treatment plants can be located locally, or can be located remotely, in undeveloped areas

Each Lot would be provided with a house connection manhole at the front of the Lot and would be of a capacity to satisfy the design load contained in the CEDAR ISLAND Plan Area Calculations

Section 9.08. Storm water drainage

The utility storm water drainage system shall convey the storm discharge from the Lots and street drainage with gravity discharge to the sea

At each Lot a storm water drainage point of connection shall be provided. These points of connections would consist of a utility manhole that would allow a future connection stub to be brought into the respective Lots. The surface and roof water from each Lot is also collected and drained to the utility storm water drainage system

Section 9.09. Telecommunications and data

PVC conduit duct banks will be routed under the sidewalks to provide telecommunication services to each Lot as required to accommodate telephone/data television, and other communication systems

PVC conduits will be routed below street medians for traffic signaling control and systems monitoring

10. Services

Section 10.01. Feature Community Service

This could be represented as :

- Country Club
- Golf Course
- Play Ground
- Theatre Complex
- Medical Center
- Hotels and Resorts
- Office Park
- Daycare and Nursery
- Kintergartens
- School
- Health Centre and SPA
- Hyper Market
- Mall
- Museum
- Diving Center
- Marina
- Aquarim
- Aqua Park
- Yacht Club
- Maritime Restuarants
- Sailors Club
- Coffee Shop (Barbera Cafe)
- Internet Cafe
- VIP Cedar Lounge
- BBQ Park
- Multi-purpose Hall
- Youth Center
- Public Gardens

Section 10.02. Recreational

Contemporary parks and open-space planning focus on creating systems that respond to local values, needs, and circumstances. The region of the country, physical setting, landscape features, demographics, and socioeconomic characteristics are all determining factors in the form that a community's park and open-space system will take. In each system, parks and open spaces are defined under various classifications that function individually and collectively to create a cohesive and balanced system

- **Community Leisure Park**
A central recreational spot is planted in proximity to all cell features. A meeting place for families, friends, and children, and a supervised sports outlet for teenagers

- Sports fields and arenas

This is one important catalyst to boost sense of community and belonging

- Green belt
A heavily vegetated strip, which acts as an environmental filter, keeping pollution, noise, and urban hazards away/distant from the inside

Not only it is an eco booster, but also it defines cell boundaries, and discourages trespassers

Medium-rise units are also planted within

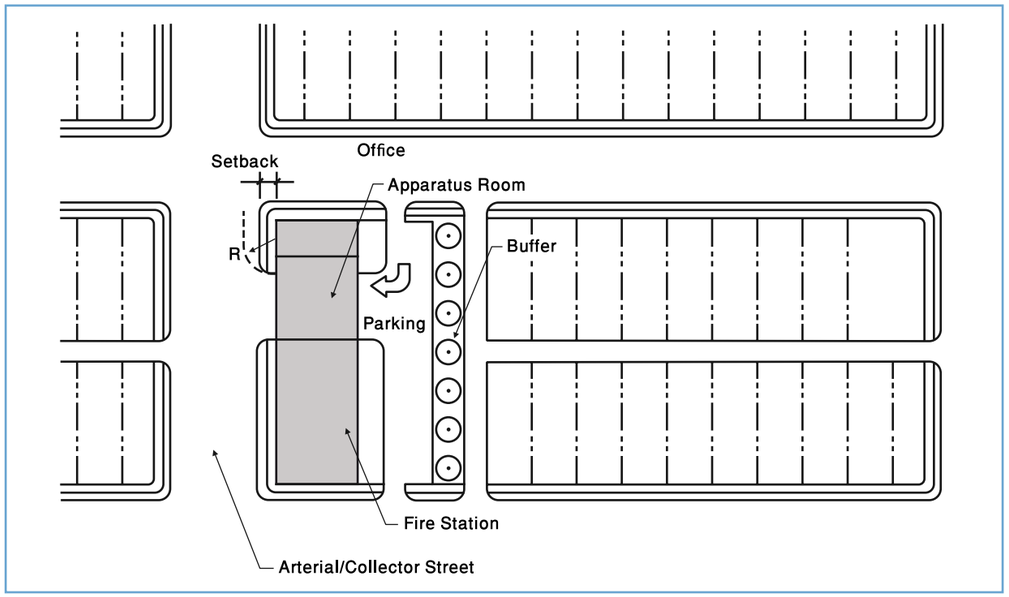
- Cluster green and Pools
All units are planned to enclose greenery play yards for children, and swimming pools at times

Civil Defense

Fire stations are an integral part of municipal emergency service functions. Fire stations provide “first response” for local emergencies, including medical, vehicular, hazardous materials situations, and natural disasters

One-story fire and rescue stations provide a facility unencumbered by stairs. It will have a larger foot print than a two-story building. It my require a more elongated, also limiting the site flexibility

Figure 10.01. End Block Location, One-Story Station



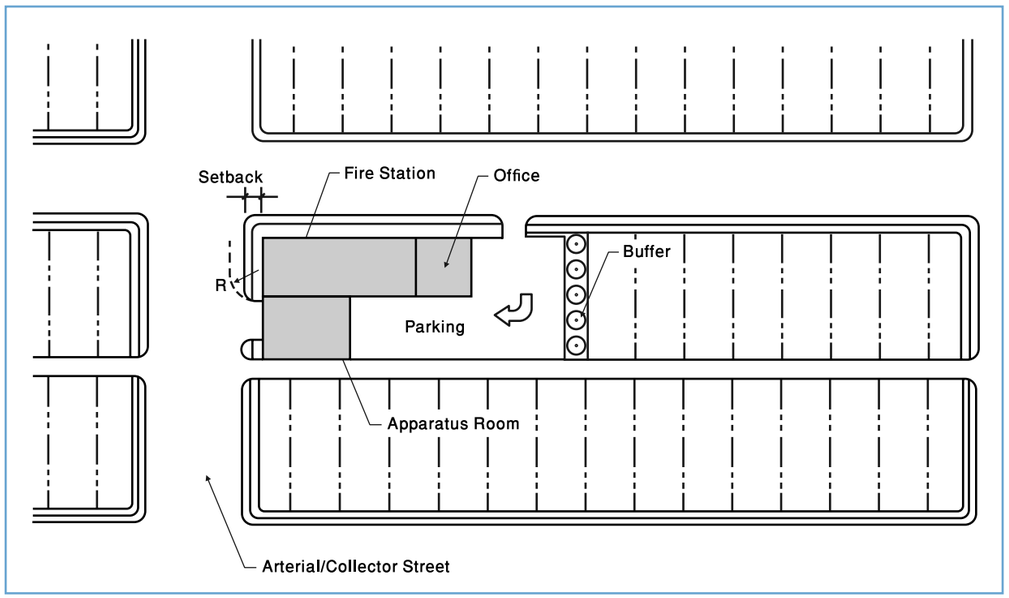


Figure 10.02. Mid-Block Location, One-Story Station