HOUSING
DEVELOPMENT
CORPORATION

Parking Building Development Guidelines

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Table of Contents

Introduction 4
Definitions & abbreviations 4
Planning approvals 7
Building height, F.S.I and setback plan 7
Foundation depth 9
Services 9
Access and circulation 11
Structural and civil works 13
Land usage 15
Boundary wall 15
Parking 15
Development Requirements 16
ANNEX 1 – Parking Standards 18

Introduction

1.

1.1. This guideline will be applicable to the parking buildings to be developed Hulhumalé.

1.2. Developments coming under this guideline will follow the general and specific requirements to the development based on the usage.

1.3. Prior drawing and construction approvals need to be obtained from this corporation before the construction of any building in Hulhumalé.

1.4. Prior building permit for building use needs to be obtained from this corporation once the construction works have been completed for any such building.

Definitions & abbreviations

2.

2.1. MHLUD: Ministry of Housing, Land and Urban Development

2.2. EIA: Environmental Impact Assessment

2.3. GPON: Gigabit Passive Optical Network which is used to deliver broadband access to buildings.

2.4. HPA: Health Protection Agency

2.5. MNDF: Maldives National Defense Force

2.6. SQFT: Square feet

2.7. PWD: People with disabilities

2.8. MWSC: Male' Water and Sewerage Company

2.9. Building: A constructed dwelling that is not movable/portable within a given plot, and one that is finished using different materials and is constructed to a certain standard that is acceptable to HDC

2.10. QP: Qualified Person. (Architect, Civil Engineer, Urban Planner)

2.11. Accessway: A driveway that provides access to the parking place, without any adjacent parking lots.

2.12. Clearway Ramps: Inclined floors that provide access between two levels, but without any parking lots adjacent to them.

2.13. Inside lane of curve: The innermost lane, nearest to the centre point of curve.

2.14. Inside radius of lane of curved accessway and driveway: The distance measured from the inside curve edge to the centre point of the curve

2.15 Multi-lane: Where more than one vehicle can pass through at any given time and there is no physical separation/divider, such as curbs, railings, parapets or walls, between the lanes.

2.16 Maximum gradient: The steepest gradient of ramp measured along the centre line of the lane.

2.17 Outside lane of curve: Any lane positioned after the innermost lane

2.18 Parking Lot: The space for parking of one vehicle. The parking lot should be rectangular, with the longer side known as length and the shorter side is the width. In parallel parking, the longer side is parallel to the parking aisle or driveway.

2.19 Parking aisle: An access lane or driveway with adjacent parking lots.

2.20 Parking angle: The angle measured between the longer side of the parking lot and the line of traffic flow of the aisle.

2.21 Parking ramps: Inclined floors that provide access to adjacent parking lots. These are sloping aisles with parking lots adjacent to them.

2.22 Single-lane: A lane where only one vehicle can pass through at any given time.

2.23 Traffic Flow: The direction of vehicle movement.

2.24 Permanent Parking: Parking spaces sold for vehicle registration.

2.25 Long-term Parking: Parking spaces leased out on a monthly basis.

2.26 Short-term Parking: Parking spaces leased out on an hourly basis.

CHAPTER 1
GENERAL REQUIREMENTS

Planning approvals

3. 3.1. Concept-level drawings (site plan showing the surrounding context, floor plans, conceptual sections and elevations) and spatial layout, showing the overall classifications and requirements of the development, must be submitted to this corporation for comments before proceeding to the final architectural and structural drawings.

3.2. The final architectural and structural drawings shall be stamped by a local architectural and structural checker registered as a professional in relevant authorities.

3.3. A detailed breakdown with the list of spaces and the area allocated for the spaces must be provided at each submission stage.

3.4. Before the construction, all the related approvals for the purpose must be obtained from This corporation.

3.5. The permit to use the building will be issued after the construction works, followed by an inspection of the development.

Building height, F.S.I and setback plan

4. 4.1. Building setback plan, allowable maximum heigh, F.S.I and other specific requirements will be provided in the guideline drawings.

4.2. F.S.I is calculated as:

$$\text{Floor Space Index (F.S.I)} = \frac{\text{Gross floor area}}{\text{Plot Area}}$$

4.3. The following spaces will be excluded from GFA:

4.3.1. Basement parking

4.3.2. Terrace communal open areas

4.3.3. Ramp dedicated to parking

4.3.4. Open voids

4.3.5. Service ducts

4.3.6. Lift void

4.3.7. Stair void of the top floor

4.4. Building Height is subjective to the plot location, area of the plot, and land usage. (Please refer to the guideline drawings for maximum height, footprint, and gross floor area)

4.5 Minimum clear height between finished floor levels should be 2.2 meters.

4.6. No part of the building such as roof eaves, gutters, door/window panels, etc. should be projected beyond the building setback line.

4.7. The setback area at ground level can be utilized for circulation but should not be covered above at any level.

4.8 An additional 4 meters height from the terrace slab is allowed for a lift machine room.

Foundation depth

5.

5.1. The structural engineer of the development will decide the foundation depth for each building.

5.2. The foundation protection method should be submitted with the final detailed drawings.

5.3. The foundation system shall be approved by the relevant government entity and submitted with detailed drawings if:

5.3.1 The building height exceeds 37m from the natural ground level; OR

5.3.2 The structure's foundation is deeper than 2m below the natural ground level.

Services

6.

6.1. Consultation is to be done at the concept level with service providers of electricity, plumbing, and sewerage, as to how these could be economically and sustainably incorporated into the development.

6.2. Any space required by the relevant service provider for the installation or provision of a supporting facility (transformer, pump rooms, storage tanks, service stations, etc.) should be provided well within the given area for the development.

6.3. Dedicated utility space at ground floor level should be provided for the provision and/or installation of relevant services as required.

6.4. The water quality should comply with the standards set forth by the Health Protection Agency (HPA) if proposed to use a private water supply.

6.5. An approved firefighting layout for the development should be obtained from Maldives National Defense Force (MNDF) Fire and Rescue Services.

6.6. The discharge of foul water should be to a sewer network approved by the relevant service provider.

6.7. The layout of each utility network within the development should generally be in accordance with the established practice of the relevant service provider.

6.8. The building should accommodate security post and a service area which is easily accessible by service providers.

6.9. Electrical and such provisions should be done to give connection to air conditioning easily within the development.

6.10. If a café or a restaurant is proposed within the development, all requirements set forth by the Food & Drug Authority relating to food storage/preparation/service and disposal should be adhered to.

6.11. A Waste Management Room must be provided within the development.

6.12. The Waste Management Room must be provided in accordance with any laws, guidelines, or regulations implemented by the Utilities Regulatory Authority, Waste Management Corporation, or any of the other regulatory bodies mandated with the regulation of Solid Waste Management/Collection within the Greater Male' Area.

6.13. Waste management zones must be planned to guarantee waste separation. Waste Management Rooms must be constructed to prevent cross-contamination of waste and must adhere to the segregation act.

6.14 A waste management plan is to be developed along with the waste management authority to minimize public intrusion and ease of access

6.15 Any telecom-related infrastructure/ equipment can be installed on the buildings with prior approval from this corporation

6.16 A minimum space of 8 sqft should be allocated within the equipment/server room for this corporation's equipment rack

Access and circulation **7.**

7.1. A sheltered, safe, and convenient vehicular drop-off/pick-up area, with universal access, should be provided to all dwellings, facilities & services within the plot.

7.2. Frontage of the site and pedestrian & vehicular access ways into the site should be designed & constructed by the developer. This includes but is not limited to the pathways, lighting, softscapes, hardscapes & urban furniture.

7.3. Ingress & egress into the plot from the roads should be clearly indicated in the site plan drawings.

7.4. Ingress and egress should be minimized to reduce disturbance to the green verges and ensure smooth pedestrian circulation around the site.

7.5. All circulation routes and entrances should be well defined and well lit. The entrance should be highlighted as well and should be welcoming for walk-in entrances

7.6 An adequate number of elevators should be provided along with an elevator traffic analysis report justifying the number of elevators.

7.7. At least one elevator must be fire rated and must be able to accommodate a stretcher.

7.8. An adequate number of staircases should be proposed based on the MNDF fire protection guidelines.

7.9. Routes for pedestrians should be marked off, and illumination should be adequate.

7.10. Disability access should be integrated at all pedestrian and vehicular drop-off/pick-up points.

7.11. Disability access should be provided to all aspects of the development.

7.12. If shared pathways (for vehicles and pedestrians) are to be provided within the development, appropriate markings should be used to indicate pedestrian prominence over vehicles.

7.13. Any corridor or walkway should have a minimum width of 1250mm.

7.14. When stepped access is necessary, especially at ground level, the stairs should be made to accommodate wheelchair users or physically disabled people.

7.15. Any slope provided for vehicular access should be between 1:8 to 1:12 and with a firm and even surface.

7.16. Any slope provided for pedestrian/PWD access should be between 1:12 to 1:20 with railings and a firm & even surface.

7.17. There must be egress facilities for the building's occupant load on each floor.

7.18. Vehicular pathways within the plot should be designed safely, with minimum interruption to both

pedestrian pathways and green verges within the plot and during ingress and egress

7.19. Use scored, colored, textured, and/or similar paving that is distinguishable from the travel lane at the drop-off area.

7.20. All loading/unloading must be accommodated for from the rear side of the building

7.21. Illuminate all outdoor parking areas with illumination towards the paved areas only and not into any adjacent buildings.

Structural and civil works

8. 8.1. The designed lifespan of the main structure should be a minimum of 50 years.

8.2. The structural design must be done in accordance with British standards or any superseded European standard (Eurocode). The developer must include a local registered engineer during the design process and should get the drawings stamped by an accredited structural checker.

8.3. Necessary standards for construction to ensure the quality of workmanship and site safety during construction should be followed

8.4 At the concept stage as a deliverable, the developer should propose a structural system/material as well as the proposed methodology brief with the above-mentioned standards

8.5 At the concept stage as a deliverable, the developer should propose a structural system/material as well as the proposed methodology brief with the above-mentioned standards

CHAPTER 2
SPECIFIC REQUIREMENTS

Land usage **9.**

9.1. This allocated land plot is for the construction of a multi-storey parking development with a dedicated commercial area at terrace floor level.

9.2. Following is prohibited uses within this development:

a) Residential use
b) Any industrial use, any use involving the use of combustible materials, any use that disturbs the public due to loud noises, smell or dust-generating activities, building go downs, etc.

9.3. Commercial spaces allowed within the development include:

a) Café/restaurants
b) Arcades
c) Prior approval must be taken from HDC for any other commercial activities.

9.4 Recreational Activities must be provided as mentioned in the guideline drawings

Boundary wall **10.**

10.1. Boundary walls are not allowed to be built on the commercial front to encourage urban interaction at street level and to provide urban interaction.

10.2. If required the developer may choose to demarcate the plot boundary with a natural green verge.

Parking **11.**

11.1. Please refer to the Annex 1 and for the parking requirements for the parking building.

		11.2.	Minimum parking numbers must be achieved as mentioned in the guideline drawings.
		11.3.	80% of the parking should be dedicated for permanent parking and 20% should be dedicated for long term & short term parking.
		11.4	EV charging ports must be provided for 10% of vehicle parking.
Universal/ PWD Access	**12.**	12.1.	The entrance should be a safe transit point to go between internal and external spaces, as well as within the internal spaces, for people with limited mobility and wheelchair uses.
		12.3.	At least one universal PWD toilet must be provided separately for commercial and overall development use
		12.4.	PWD toilets should have a minimum turning diameter of 1.5m and an outward opening door with clear access of minimum 900mm.
		12.5.	Ensure that all aspects of the building comply with the Maldives Disability Act
Development Requirements	**13.**	13.1.	The design method to provide both aspects of natural lighting & ventilation should be taken into consideration when designing.
		13.2.	The building has to be designed in a way that it does not hinder the privacy of the surrounding private residential plots.
		13.3	It is encouraged for the building to be aesthetically designed consisting of different elements of sustainability.

13.4. At least one male and one female toilet must be separately provided separately for the commercial and overall development use.

13.5. The services are to be screened away from public view and should not be a hindrance to the aesthetics of the development.

13.6 Ensure that all aspects of the building comply with the Maldives Disability Act.

13.7 The whole development should follow all updated and the most recent guidelines set by relevant authorities of the government.

13.8 Clear Height of basement should not be less than 2.4m

13.9 Any covered area at the terrace/top level should be covered/fitted with solar panels.

13.10 All parking floors should remain open and not be fully enclosed.

Note: *In addition to the aforementioned requirements, refer to the guideline drawings issued by this corporation with details specific to the allocated development.*

ANNEX 1 – Parking Standards

DEFINITIONS & ABBREVIATIONS

1. 1.1. **PWD**: Person with Disabilities.

1.2. **QP**: Qualified Person. (Architect, Civil Engineer, Urban Planner)

1.3. **Accessway**: A driveway that provides access to the parking place, without any adjacent parking lots.

1.4. **Clearway Ramps**: Inclined floors that provide access between two levels, but without any parking lots adjacent to them.

1.5. **Inside lane of curve**: The innermost lane, nearest to the centre point of curve.

1.6. **Inside radius of lane of curved accessway and driveway**: The distance measured from the inside curve edge to the centre point of the curve.

1.7. **Multi-lane**: Where more than one vehicle can pass through at any given time and there is no physical separation/divider, such as curbs, railings, parapets or walls, between the lanes.

1.8. **Maximum gradient**: The steepest gradient of ramp measured along the centre line of the lane.

1.9. **Outside lane of curve**: Any lane positioned after the innermost lane

1.10. **Parking Lot**: The space for parking of one vehicle. The parking lot should be rectangular, with the longer side known as length and the shorter side is the width. In parallel parking, the

longer side is parallel to the parking aisle or driveway.

1.11. **Parking aisle**: An access lane or driveway with adjacent parking lots.

1.12. **Parking angle**: The angle measured between the longer side of the parking lot and the line of traffic flow of the aisle.

1.13. **Parking ramps**: Inclined floors that provide access to adjacent parking lots. These are sloping aisles with parking lots adjacent to them.

1.14. **Single-lane**: A lane where only one vehicle can pass through at any given time.

1.15. **Traffic Flow:** The direction of vehicle movement

CAR PARKING

2. 2.1. The Rules in Hulhumale allow for a range-based parking provision for developments throughout the island. Number of parking lots should not exceed +/- 10% from this guideline.

2.2. Within this range, developers may propose a parking provision that meets their needs without the need for additional approval.

MOTORBIKE PARKING

3. 3.1. Developers in Hulhumale are required to provide dedicated parking for motor-cycle within their developments. Parking should not be allowed on walkways and carriageways.

3.2. This requirement helps to ensure that motorcycles are parked in designated areas and do not cause obstruction to pedestrians or traffic.

3.3. Building owners are also encouraged to allow dispatch riders to park temporarily at their loading/unloading bays to facilitate delivery by motorcycles. This initiative aims to make delivery processes more efficient and convenient for both riders and building owners.

LOADING AND UNLOADING

4. 4.1. Loading Bays, Coach and Other Heavy Vehicle Parking Facilities:

4.1.1 The Parking Places (Provision of Parking Places and Parking Lots) Rules in Hulhumale stipulate requirements for loading bays, coach, bus, and lorry parking for different types of developments such as office, retail, hotel, school, industrial, and warehouse uses.

4.1.2. Arrangement should be made for loading and un-loading for residential plots with commercial activities, in a way that does not block or hinder road movement, traffic and pedestrian paths. This initiative aims to make the delivery processes more efficient and convenient for both residents and delivery drivers.

COMPUTATION FOR THE NUMBER OF PARKING LOTS REQUIRED

5. 5.1. The parking provision standards outlined in Annex 2 are used to determine the number of parking lots required for a development in Hulhumale.

5.2. The calculation for the number of required parking lots for the lower and upper bound is to be rounded to the nearest integer.

5.3. It is essential to note that rounding off is done for each use before adding up to obtain the total requirement for the development.

REVIEW OF PARKING PROVISION

6. 6.1. Developers and designers are required to comply with the parking standards within the development boundary. However, this corporation has the discretion to review the parking provision for a development below the lower bound if they are convinced that it is technically and physically impossible to make full parking provision. In such cases, the QP and the developer must demonstrate that the deficiency would not result in illegal or indiscriminate parking.

6.2. For provision of parking lots above the upper bound, the developer must provide justifications for the overprovision. Information such as the nature of business, staff population, visitor-ship, parking/travel demand management measures, traffic and parking impact study, etc. must be submitted for evaluation.

PARKING LAYOUTS AND DIMENSIONS

7. 7.1. The Parking Places (Provision of Parking Places and Parking Lots) Rules mandate the adherence to minimum parking layout dimensions for

various types of vehicles such as cars, heavy vehicles, motorcycles, and bicycles. It is the responsibility of QPs to ensure that all geometric dimensions are met when designing a parking place.

7.2. Additionally, QPs are required to provide parking dimensions that exceed the minimum requirements to cater to the actual parking needs of the development.

7.3. When designing a parking place, QPs must consider the presence of columns, ducts, services, and other factors that may affect the standard parking dimensions.

7.4. These items must be clearly indicated on the plans and must not impede the minimum dimensions stipulated in the Rules in a completed or constructed parking place.

7.5. Furthermore, QPs are advised to consider the best practices outlined in Chapter 4 during the design and implementation of the parking place.

CAR PARKING PLACES

8. 8.1. The minimum dimensions required for a car parking lot are as follows:

Parking Lot Dimensions	Minimum Requirements
Width	2.3 meters
Length	5.0 meters
Length for Parallel Parking	5.4 meters

8.2. Additionally, the area of each lot should be flat and free from any obstructions such as kerbs or other encumbrances. It is important to comply with these minimum dimensions to ensure adequate space for vehicles to park and manoeuvre safely.

The minimum dimensions of car parking lots with adjacent obstructions is as shown in **Figure 1.0**.

13.2.1. Lot A: without any obstruction within Obstruction Free Zone

13.2.2. Lot B: with obstruction on both sides

13.2.3. Lot C: with obstruction on one side

8.3. In cases where an object or obstruction is located within the middle of a parking lot's length, the lot must be widened. If the obstruction is on one side, the minimum lot width required is 2700mm. If the obstruction is on both sides, the minimum lot width required is 3000mm. An obstruction is

defined as any large element 175mm above finished floor level, such as columns, walls, or ducts.

8.4. Compliance with these minimum dimensions is crucial to ensure that vehicles can park and manoeuvre safely without any obstructions.

A figure of the parking lots with adjacent obstructions & minimum headroom clearance can be seen as in **Figure 1.1 and 1.2** respectively**.**

8.5. To parallel park a car, there are specific minimum length requirements for the parking lot. These requirements depend on whether the lot is adjacent to any obstructions. If the parking lot is clear of any obstructions, then the minimum length needed for parallel parking is 7.2 meters.

8.6. However, if the lot is next to an obstruction like a wall or another parked car, then the minimum length needed for parallel parking is reduced to 6.0 meters.

8.7. It is important for drivers to be aware of these requirements to ensure they have enough space to safely park their vehicle without causing any damage to their own car or other vehicles nearby.

Figure showing minimum dimensions of parallel parking lots can be seen as shown in **Figure 1.3.**

8.8. This extra space allows for drivers to manoeuvre their vehicles in and out of the parking spaces without blocking neighbouring spaces or causing any damage to their cars.

The plan showing increase in width of perpendicular lots can be seen as shown in **Figure 1.4, 2.5** and **1.6**.

8.9. Additionally, this gap can improve accessibility for disabled motorbike drivers who require more space to enter and exit their vehicles. By taking into consideration these recommendations, parking lot designers can create a safer and more accommodating environment for all users.

(Refer to **Figures 1.7 – 1.18**)

8.10. Minimum of 2.5% parking spaces in any parking place should be specified for PWD parking.

MOTORBIKE PARKING PLACES

9. 9.1. Developers must ensure that their developments include designated areas for motor-cycle parking.

9.2. These parking areas should be located at corners or any available space within the parking

premises, and it is advisable to separate them from car parking areas.

9.3. These motor-cycle parking lots should not impede the movement of other vehicles and pedestrians. If they are situated adjacent to car parking spaces, a clearance of 500mm should be maintained between them.

Parking Lot Dimensions	Minimum Requirements
Width	0.85 meters
Length	2.0 meters
Length for Parallel Parking	2.2 meters
Access-way (Single Lane)	1.2 meters
Access-way (Double Lane)	2.4 meters

The minimum dimension of car parking lots with adjacent obstructions can be seen as shown in **Figures 1.19 – 1.22.**

BICYCLE PARKING SPACES

10. 10.1. Bicycle parking lots shall be should be located at spots that are visible and convenient. While allocating bicycle parking lots, any cycling paths in the vicinity should be taken into consideration.

10.2. In any case there are constraints to consolidate all bicycle parking lots in one location, it is acceptable to propose more than one bicycle location within a development. It is a minimum

requirement to have 10 bicycle lots within a development.

10.3. Bicycle parking and car parking should be segregated, in cases where possible. The route cyclist take to reach the bicycle parking lots shall avoid vehicular ramps and driveways.

10.4. A bicycle parking rack shall be provided for each bicycle parking lots and must be anchored to the ground so as to allow cyclists to lock the bicycles. The rack should be strong enough to support the bicycle upright by its frame.

For high density parking, double-tier bicycle racks can be used.

The Figures for bicycle parking dimensions are as shown in **Figures 1.23 – 1.25.**

MARKING OF PARKING LOTS

11. 11.1. In order to ensure efficient use of space and safety for all drivers, it is essential to have clear demarcation lines in parking lots.

11.2. These lines serve as a visual guide for drivers to park their vehicles within the designated area and in the center of the parking spot.

11.3. Without clear demarcation lines, drivers may park too close to another vehicle or encroach on other

parking spots, leading to unnecessary inconvenience and potential accidents.

The Figure for Parking lot marking is as shown in **Figures 1.26 – 1.28.**

11.4. When drivers encounter a bend or corner within a two-way driveway, it is important that they remain within their designated lane to avoid collisions and ensure the safety of all drivers.

11.5. One effective strategy is to include a continuous white line on the road surface, which helps to clearly demarcate the boundaries of each lane.

11.6. Additionally, QPs can use chevron markings, which are triangular symbols painted on the road surface that point in the direction of the turn.

11.7. These markings serve as a visual cue to remind drivers to stay in their lane and follow the curvature of the roadway.

11.8. By incorporating both continuous white lines and chevron markings, QPs can create a clear and intuitive visual guide for drivers to follow when navigating turns and bends within a two-way driveway.

11.9. This can help to reduce the risk of accidents and promote safer driving practices

Figures for corner road marking are shown in **Figures 1.29-1.33.**

BEST PRACTICES

12. 12.1. Provide Clear Information:

12.1.1 To prevent drivers from becoming disoriented in a parking area, it is crucial to provide clear directions through adequate signage and road markings.

12.1.2 Chevron markings, guiding lines, and different coloured or textured paving stones can be utilized to guide drivers and their vehicles in specific directions.

12.1.3 Directional information should be prominently displayed at the entrances and throughout the parking facility to aid in traffic flow and proper use of parking spaces.

12.1.4 Signage within parking facilities should consist of a coordinated system of signs and graphics, offering directional information and a professional appearance.

12.1.5 This includes parking availability signs at the entrance of car parks and on each parking level, which assist drivers in making informed decisions about where to park.

12.1.6 By implementing clear signage and road markings within parking areas, drivers can navigate through the space safely and efficiently, leading to a more positive parking experience for all.

12.1.7 No-entry signs at the end of one-way aisles could aid in the reduction on movement in the wrong direction.

12.1.8 If parking is available for visitors this should be displayed clearly at the entrances of parking areas as shown in **Figure 2.1.**

12.1.9 Directional arrows, markings on the floor surfaces and walls/columns aids motorists to pause and make decisions before moving off.

12.1.10 Height clearance signs serve to inform drivers of the presence of height restrictions in a car park. A clearance bar could also be suspended at the entrance, so that any tall vehicle or vehicles with protruding objects can reverse out of the car park. An example of this shown in **Figure 3.2 & 3.3.**

13. VEHICLE CONFLICT WITH OTHER USERS

13.1. Vehicle Conflict with Other Users:

13.1.1 An essential aspect to consider in the design of parking facilities is the

intersection of movements between vehicles, cyclists, and pedestrians.

13.1.2 To mitigate potential conflicts and enhance safety, it is beneficial to separate these user groups through the development of designated paths or walkways. This separation minimizes exposure to risk and accounts for the varying speeds and vulnerabilities of different user groups.

13.1.3 In the parking network design, efforts should be made to reduce conflict between drivers and pedestrian/cyclist movements. Circulation roads and driveways should prioritize vehicular traffic, minimizing pedestrian and cyclist movement along these areas. Moreover, special attention should be given to areas with high pedestrian flow to reduce the flow of vehicles and ensure the safety of pedestrians.

13.1.4 To ensure safe interactions at driveways, it is crucial to provide adequate sight distance for drivers. This can be achieved by incorporating "clear sight distance triangles" or splay corners for exiting driveways, allowing drivers to have

sufficient line of sight to spot approaching pedestrians and vice versa. To maintain clear visibility, no obstructions such as signs or walls should be erected within these sight distance triangles. Alternatively, convex mirrors can be strategically placed at sharp building edges and blind spot areas to enhance safety measures.

13.1.5 By implementing these measures, development proposals can create parking facilities that prioritize safety, minimize conflicts, and foster a harmonious coexistence between drivers, cyclists, and pedestrians. This approach aligns with the Code of Practice on Vehicle Parking Provision and enhances the overall functionality and safety of the parking areas.

Examples are shown in **Figures 3.4 & 3.5**

Figure. 1.0 Minimum dimensions for car parking

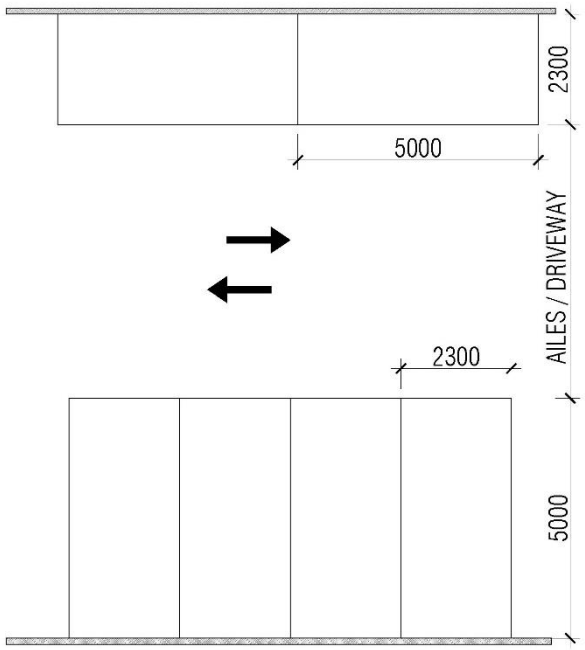


Figure. 1.1 Parking lots with adjacent obstructions

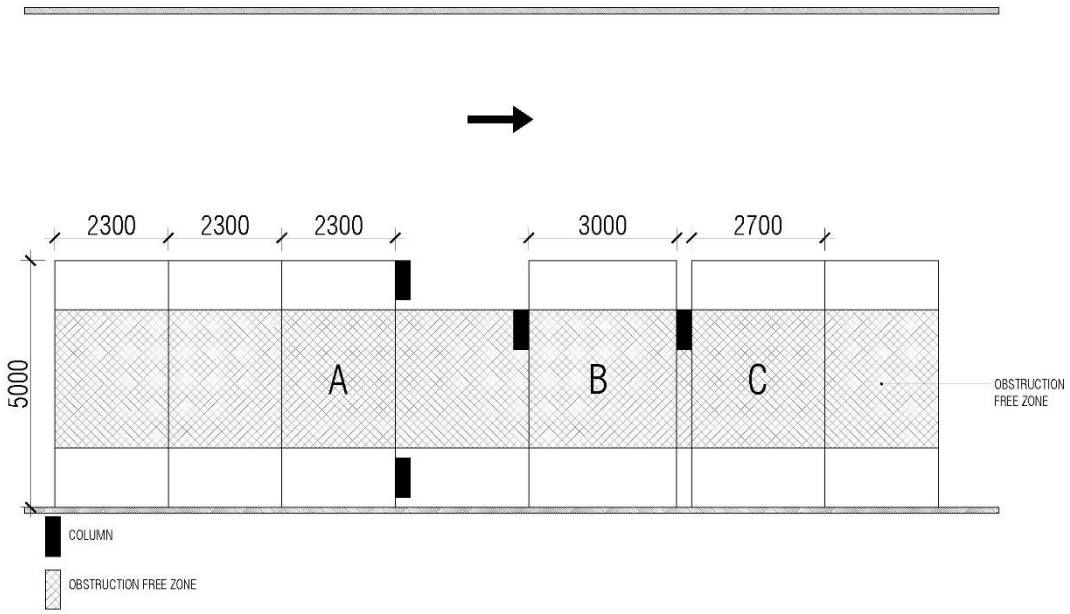


Figure. 1.2 Minimum headroom clearance

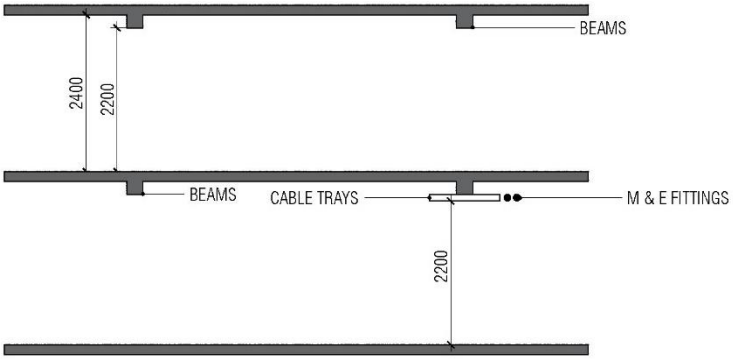


Figure. 1.3 Width of Parallel parking lots

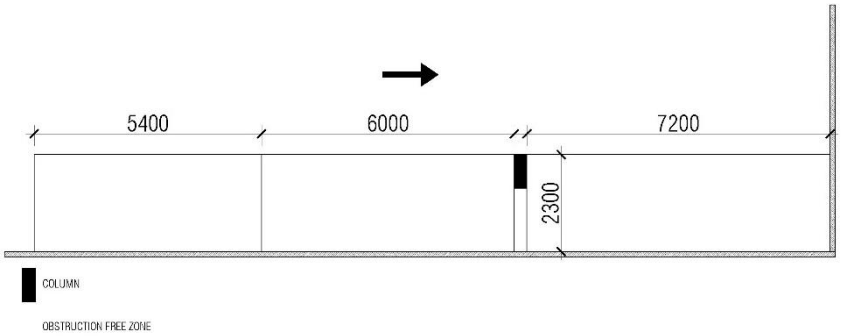


Figure. 1.4 Plan showing increase in width of perpendicular lots

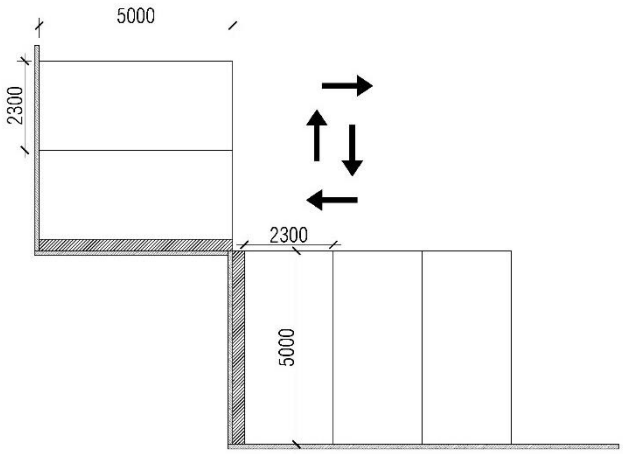


Figure. 1.5 Increase width of end-lot two way

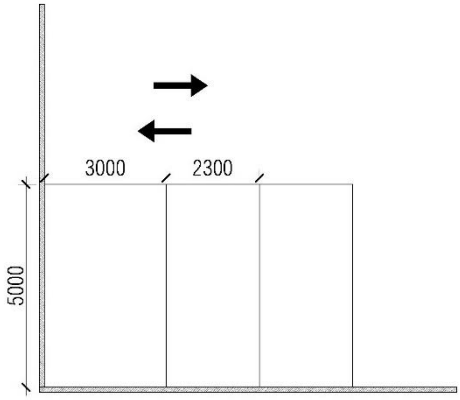


Figure. 1.6 Increase width of end-lot one way

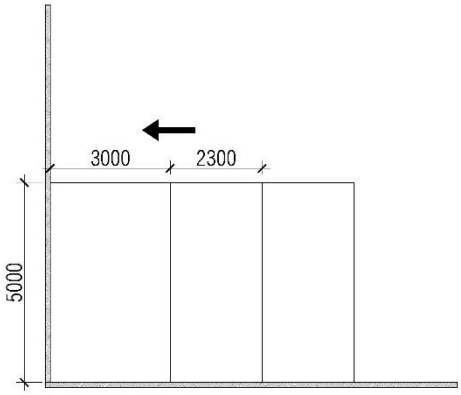


Figure. 1.7 parallel parking dimensions one-way

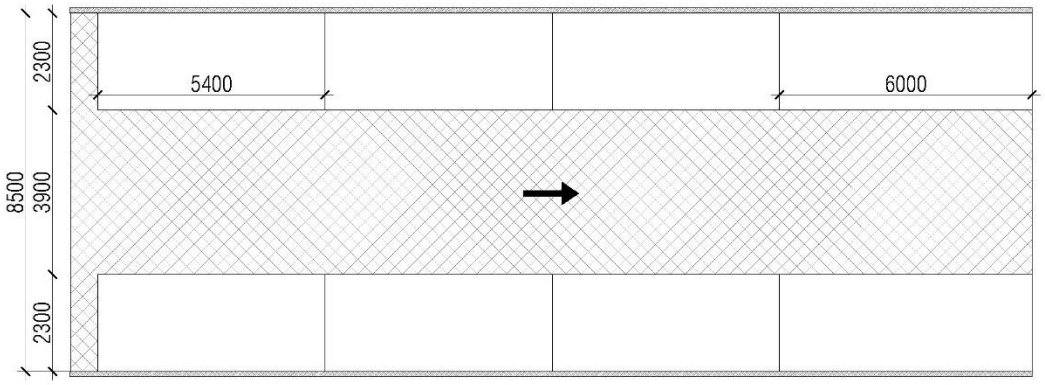


Figure. 1.8 Parallel parking dimensions two-way

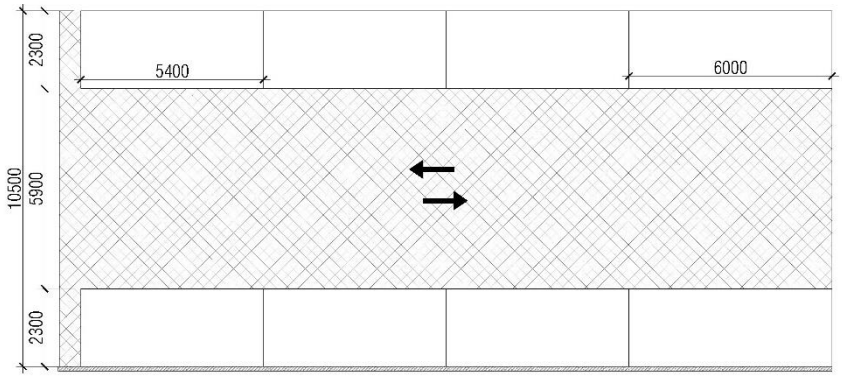


Figure. 1.9 30° angled parking one-way

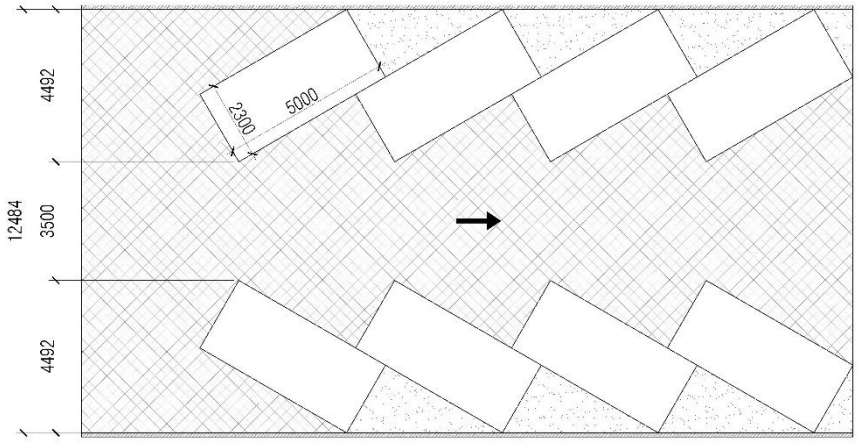


Figure. 1.10 30° angled parking two-way

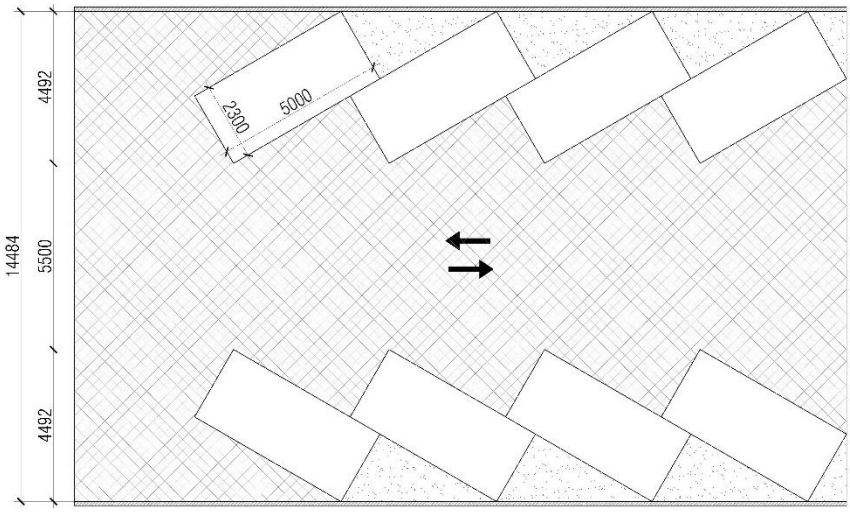


Figure. 1.11 45° angled parking one-way

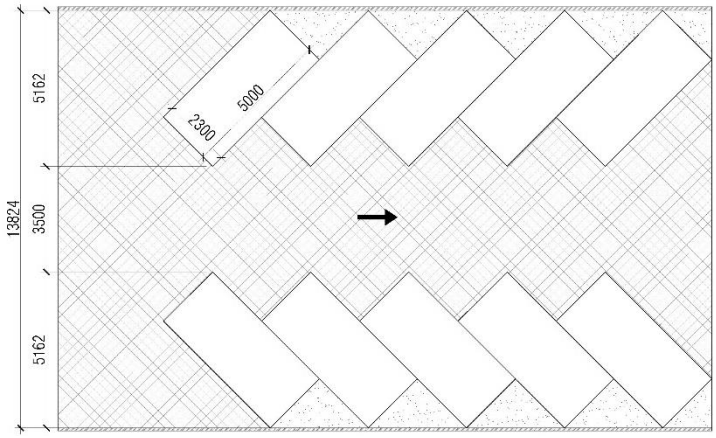


Figure. 1.12 45° angled parking two-way

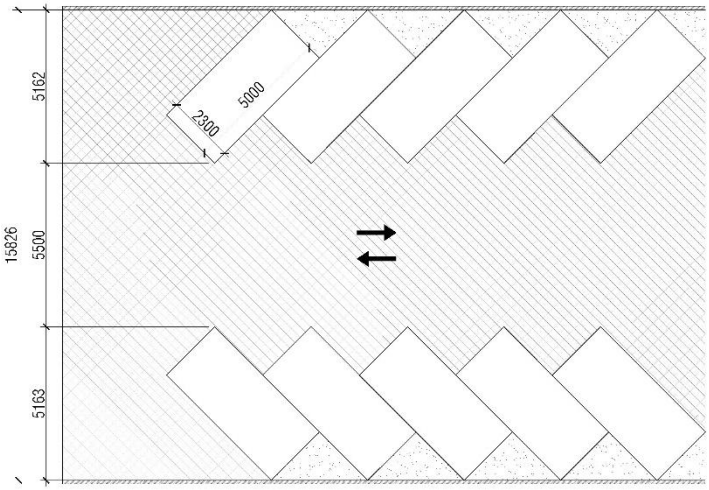


Figure. 1.13 60° angled parking one-way

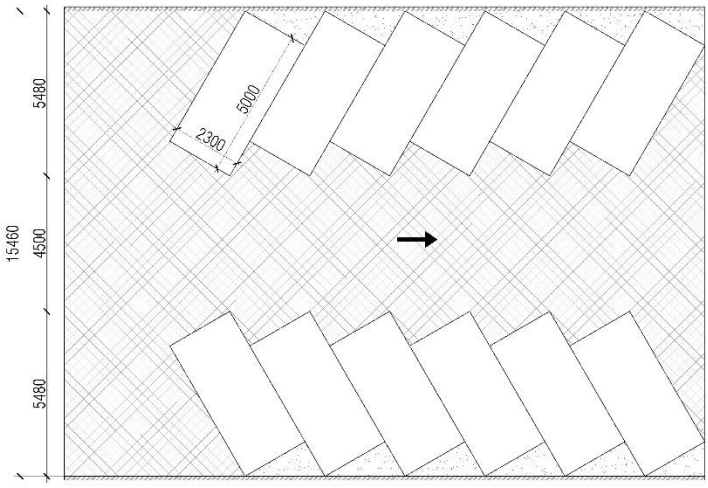


Figure. 1.14 60° angled parking two-way

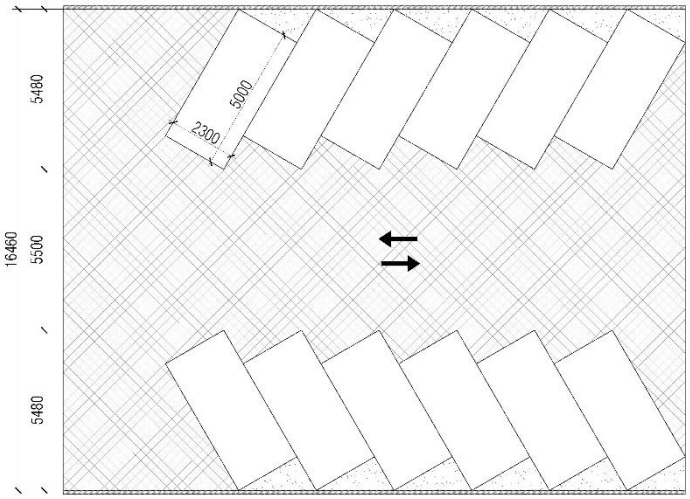


Figure. 1.15 90° angled parking one-way

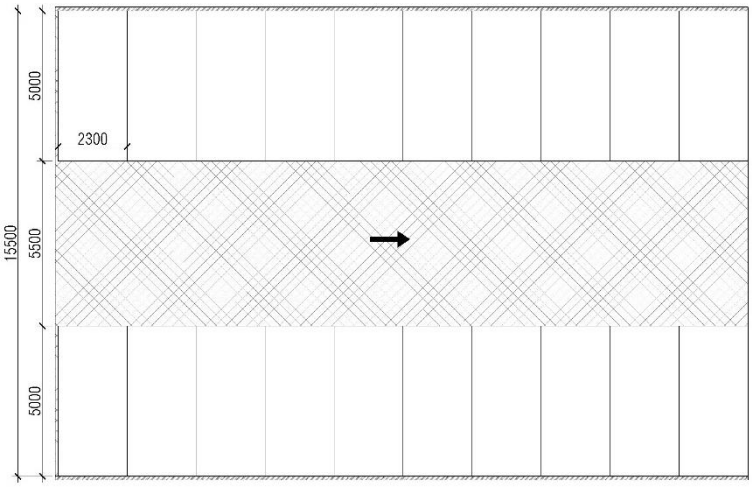


Figure. 1.16 90° angled parking two-way

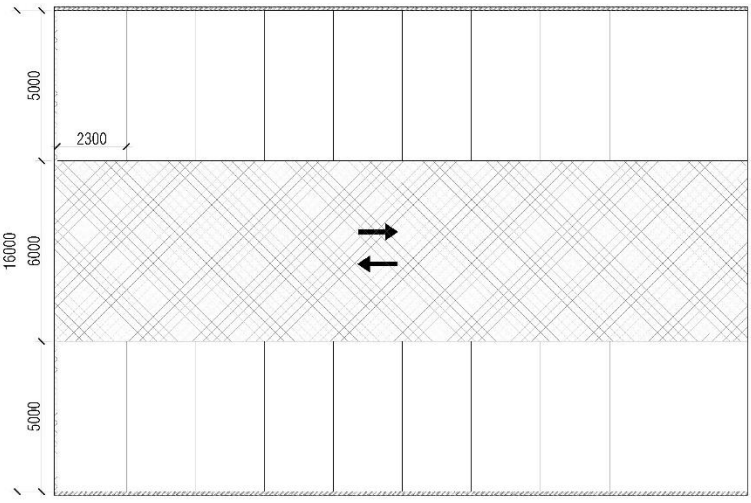


Figure. 1.17 Extent of parking aisle

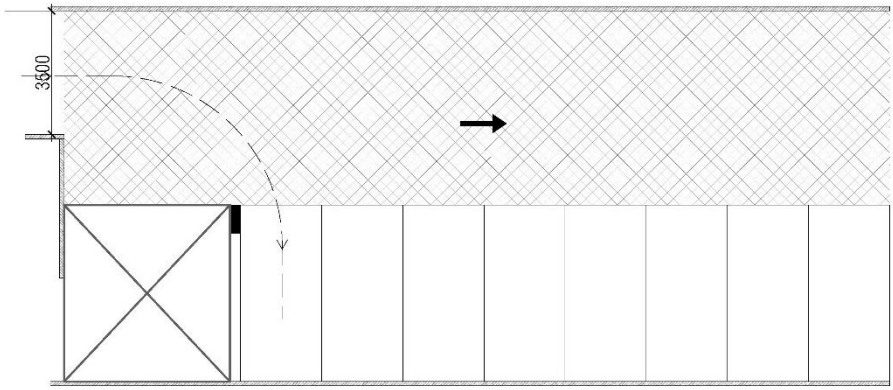


Figure. 1.18 Extent of parking aisle

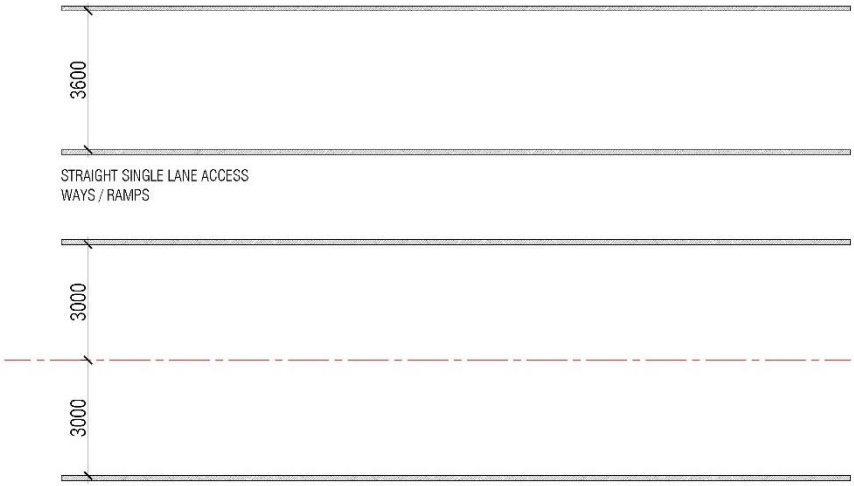


Figure. 1.19 Minimum dimensions for 90° motorbike parking one-way

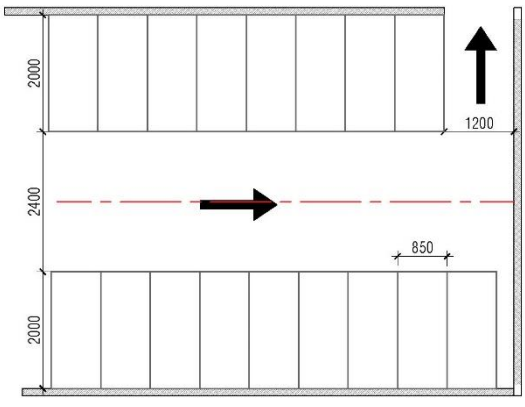


Figure. 1.20 Minimum dimensions for 90° motorbike parking two-way

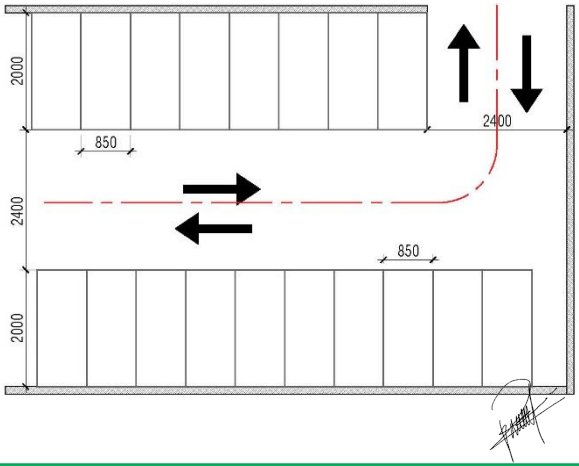


Figure. 1.21 Minimum dimensions for parallel motorbike parking one-way

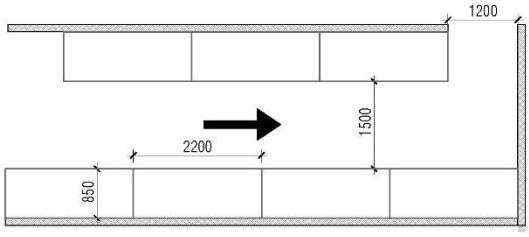


Figure. 1.22 Minimum dimensions for parallel motorbike parking two -way

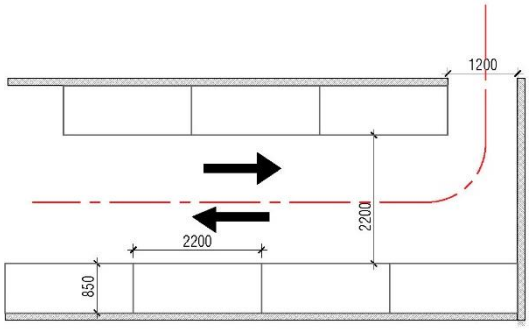


Figure. 1.23 Single-tier bicycle parking layout

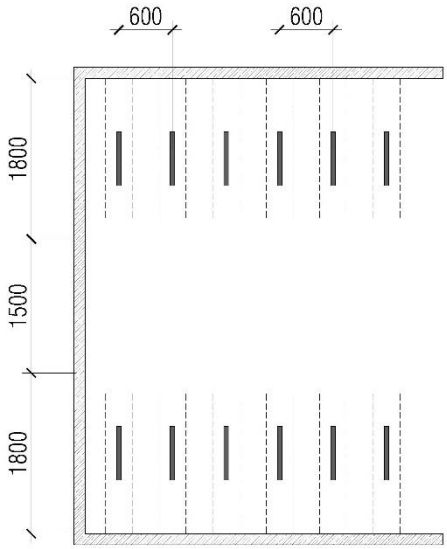


Figure. 1.24 Double-tier bicycle parking layout

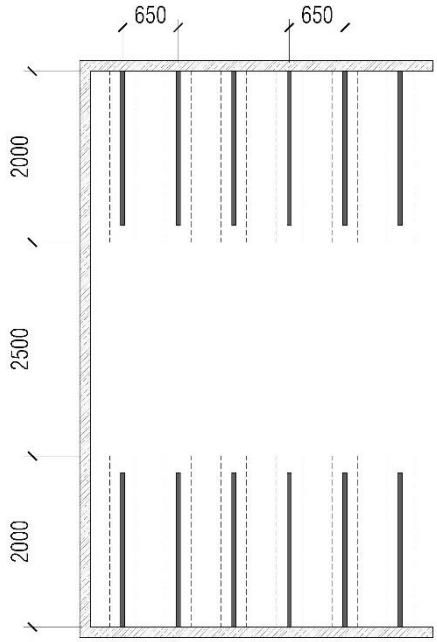


Figure. 1.25 Example of double-tier bicycle rack

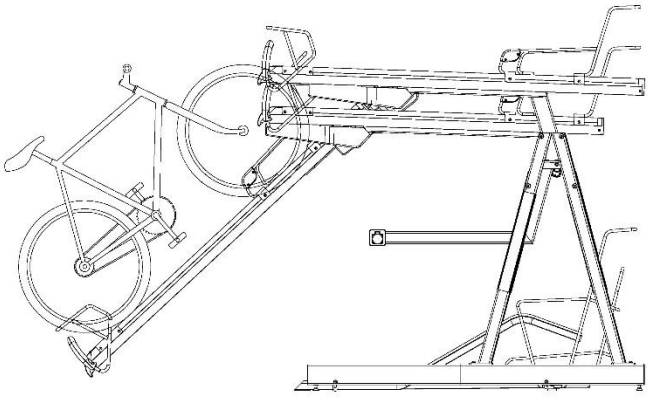


Figure. 1.26, 1.27 Ways to demarcate parking lots & numbering

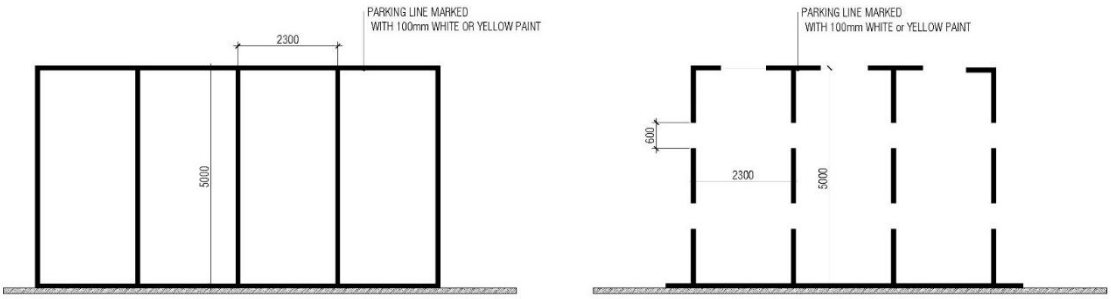


Figure. 1.28 PWD parking lot dimensions

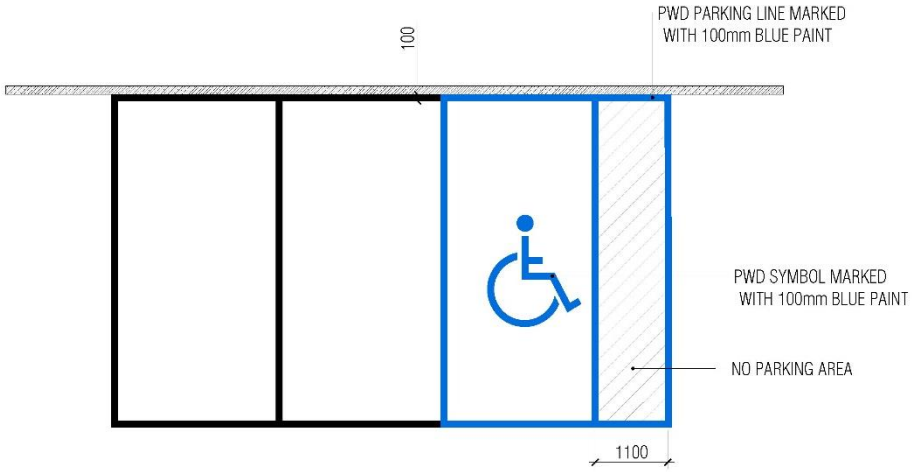


Figure. 1.29 Ramp details

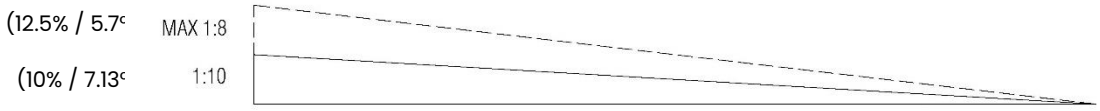


Figure. 1.30 Example of clearway ramp and accessway

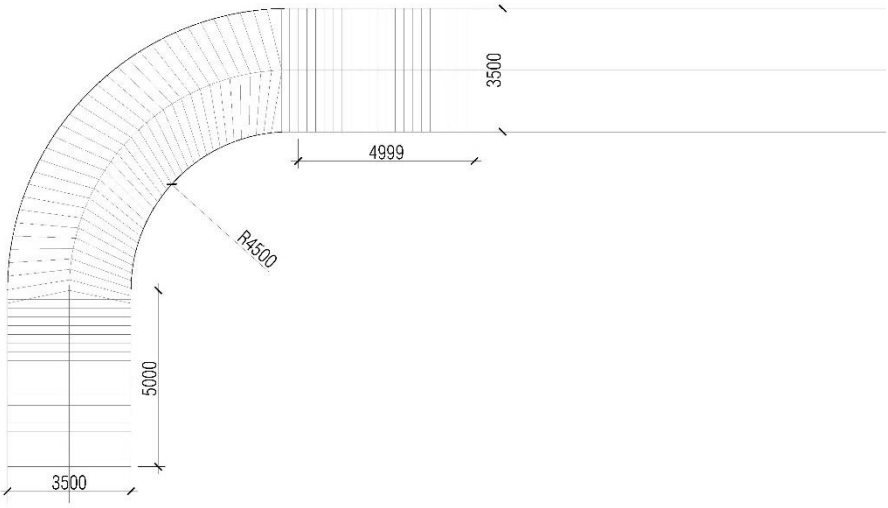


Figure. 1.31 Multi lane curved accessways & ramps without physical divider

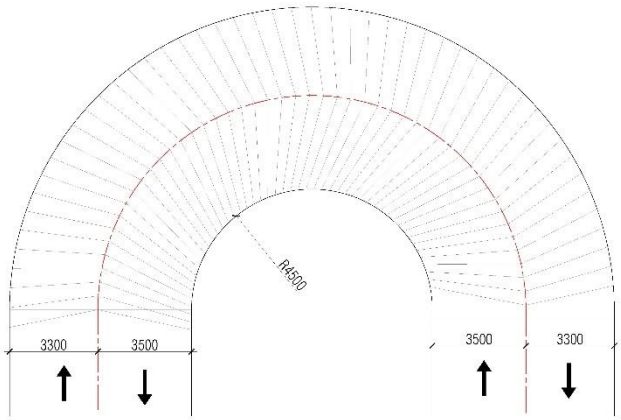


Figure. 1.32 Multi lane curved accessways & ramps with physical divider

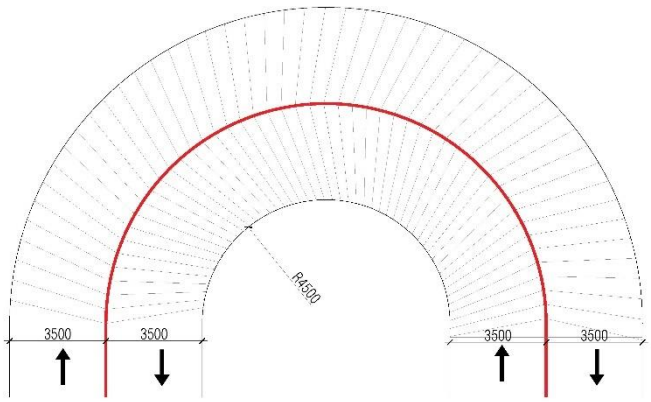


Figure. 1.33 Provide a continuous line at bends and corners of multi-lane driveways

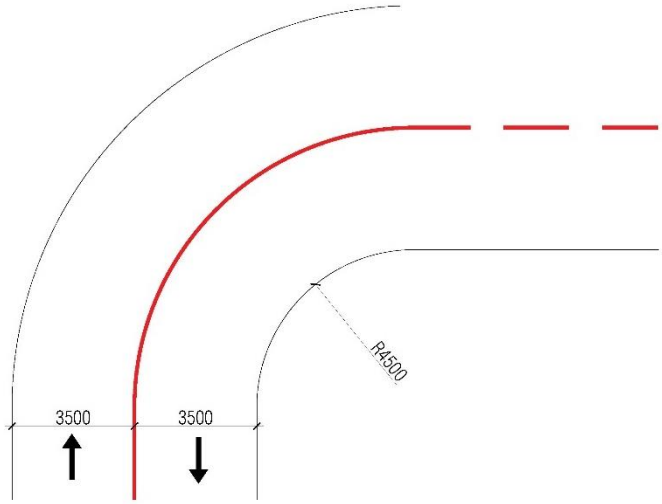


Figure. 2.1 Parking availability sign

Figure. 2.2 Height clearance bar and height limits

Figure. 2.3 Convex mirror can be provided at corners and blind spot areas to provide better visibility for motorists and pedestrian.

Figure. 2.4 Improve visibility at car park exit

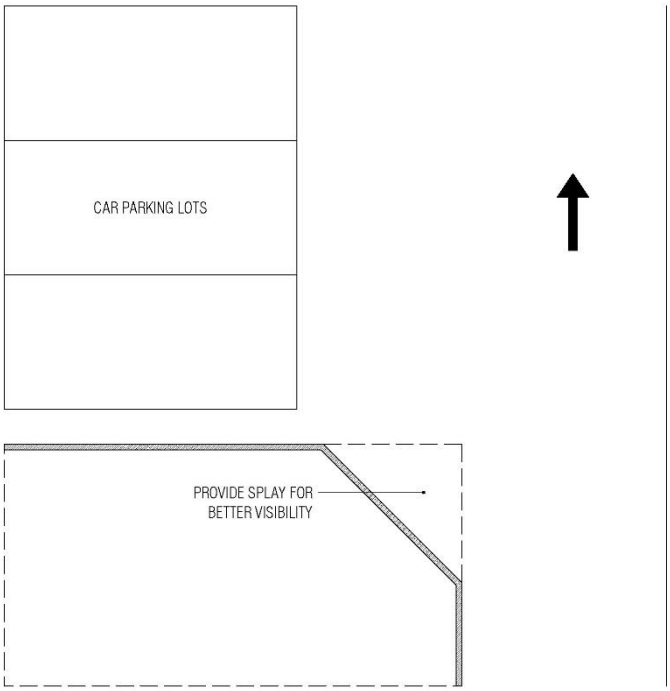
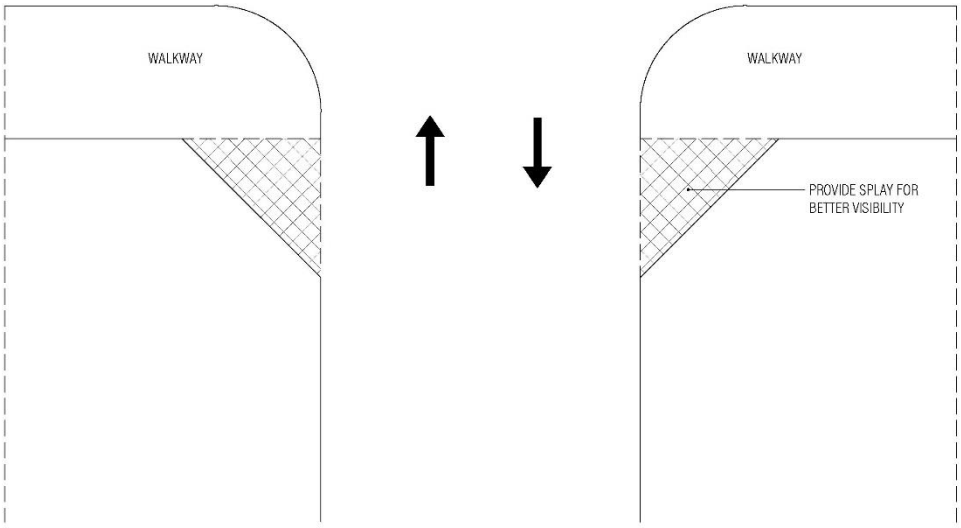
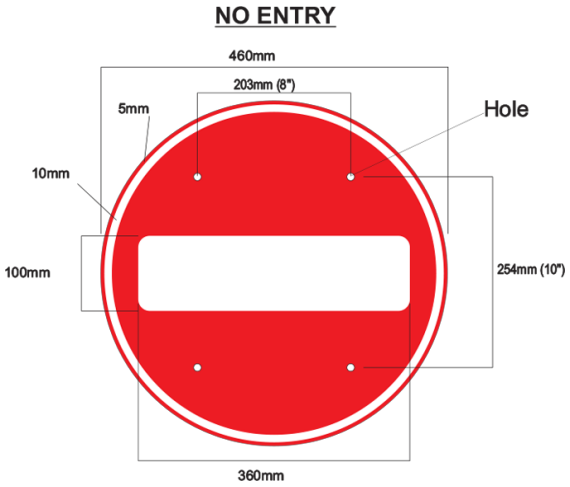


Figure. 2.5 Improve visibility where there are walls



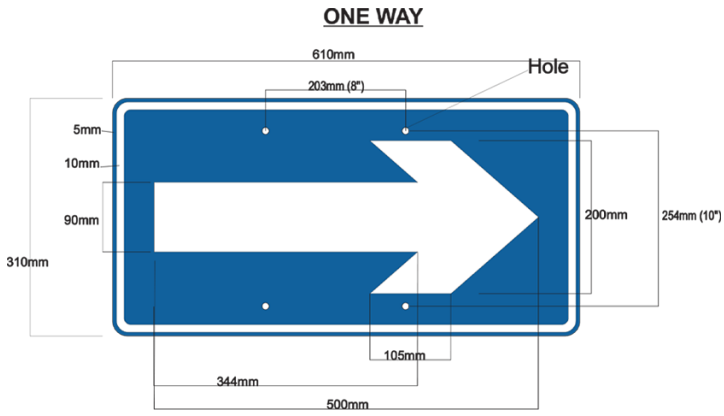


COLOR

Reflective Signal Red
Reflective White
Solid Dark Gret in the rear side

USE

Exit areas only

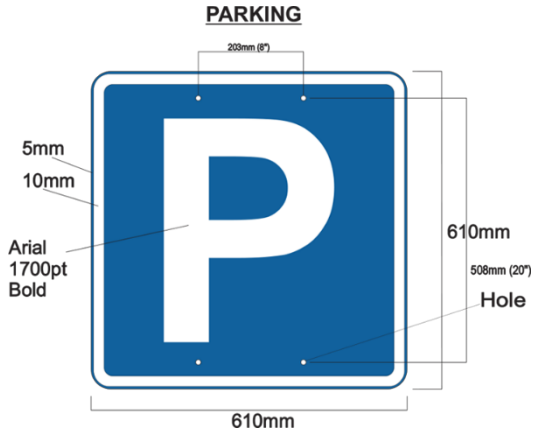


COLOR

Reflective Blue
Reflective White
Solid Dark Gret in the rear side

USE

One-way roads



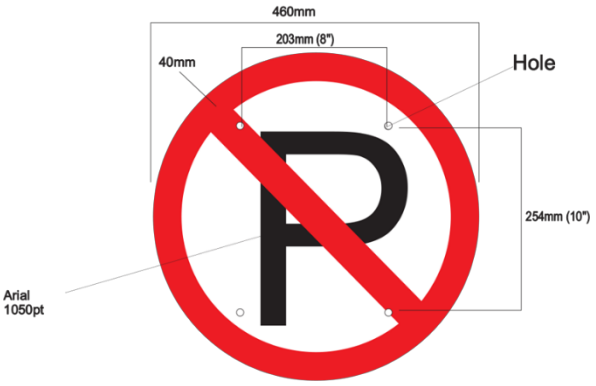
COLOR

Reflective Blue
Reflective White
Solid Dark Gret in the rear side

USE

Parking zones

NO PARKING



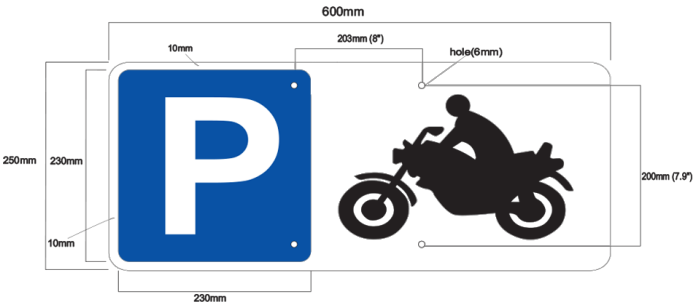
COLOR

Reflective Signal Red
Reflective White
Solid Black
Solid Dark Gret in the rear side

USE

Parking prohibited areas

MOTORBIKE PARKING



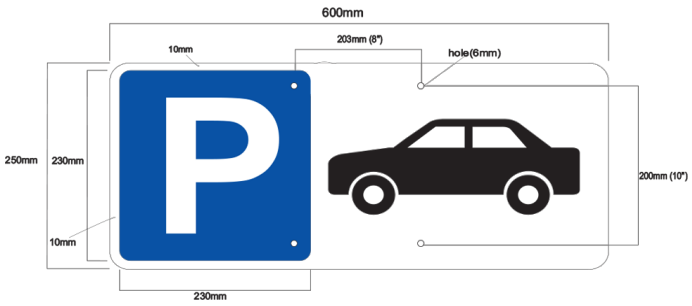
COLOR

Reflective Blue
Reflective White
Solid Black
Solid Dark Gret in the rear side

USE

Only motorbike parking zone

CAR PARKING



COLOR

Reflective Blue
Reflective White
Solid Black
Solid Dark Gret in the rear side

USE

Only carparking zone

COLOR

Reflective Blue
Reflective White
Solid Black
Solid Dark Gret in the rear side

USE

Only reserved parking / PWD parking zone

COLOR

Reflective Signal Red
Reflective Blue
Reflective White
Solid Black
Solid Dark Gret in the rear side

USE

Pickup-up & drop off only areas