



QUICK GUIDES FOR DEVELOPMENT PROPOSALS

DESIGNING SAFE DROP-OFF POINTS IN DEVELOPMENTS

NOVEMBER 2021, ISSUE 7

OBJECTIVES

Within a development proposal, the design, position and arrangement of the drop-off points are critical. They ensure that sufficient space and sight distance are catered for vehicles to maneuver safely in and out of the development.

This quick guide aims to help Architects, Engineers and Builders to identify the critical design elements for the access points of residential developments, better appreciate the principles behind these requirements, and avoid making common mistakes.

LOCATION OF ACCESS TO DROP OFF POINTS

Generally, vehicular drop-off points shall be suitably located to ensure smooth flow of traffic in roads. In determining the location of a drop-off point, the following requirements shall be complied with:

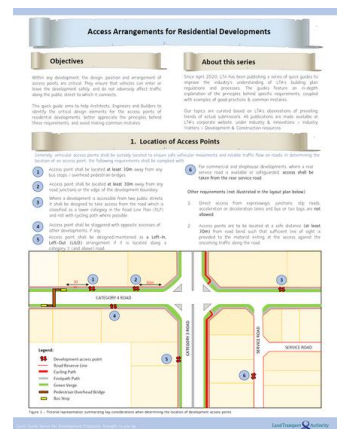
- Access to drop-off points are at least 30m away from bus stops, pedestrian overhead bridges, at-grade crossing facilities, road junctions & road bends.
- Access to drop-off points are maintained as a Left-In, Left-Out (LILO) arrangement if it is located along major arterial road.



Figure 1: Access of a Residential Drop-Off point located at least 30m from a road junction

- Direct access from expressways, slip roads, acceleration or deceleration lanes & bus / taxi bays is not allowed.
- For developments where a rear service road is available or safeguarded, access shall be taken from the rear service road.

Do refer to Quick Guide 3 - 'Access Arrangements for Residential Developments' for further reference details.



CRITICAL DIMENSION OF DROP-OFF POINTS

Drop-off points facilitate the passage and (temporary) stoppage of passenger and goods delivery vehicles. The dimensions of drop off points take reference from the prevailing dimensions of vehicle parking lots and driveways.



Typical vehicle lot size for parallel parking shall be adopted for drop-off points

**Passenger car : 2.4m by 5.4m
Motorcycle : 1.0m by 2.5m**

Turning Radius: Typical dimensions are -

- i Passenger Car : 3m to 5m**
- ii. Van : 3m- 5m**
- iii. Heavy Vehicles : 6m -8m**



Driveway width/ No. of lanes

- i. Driveway width - min 6m.**
- ii. Min 2 lanes to be provided to allow vehicle to pass by**

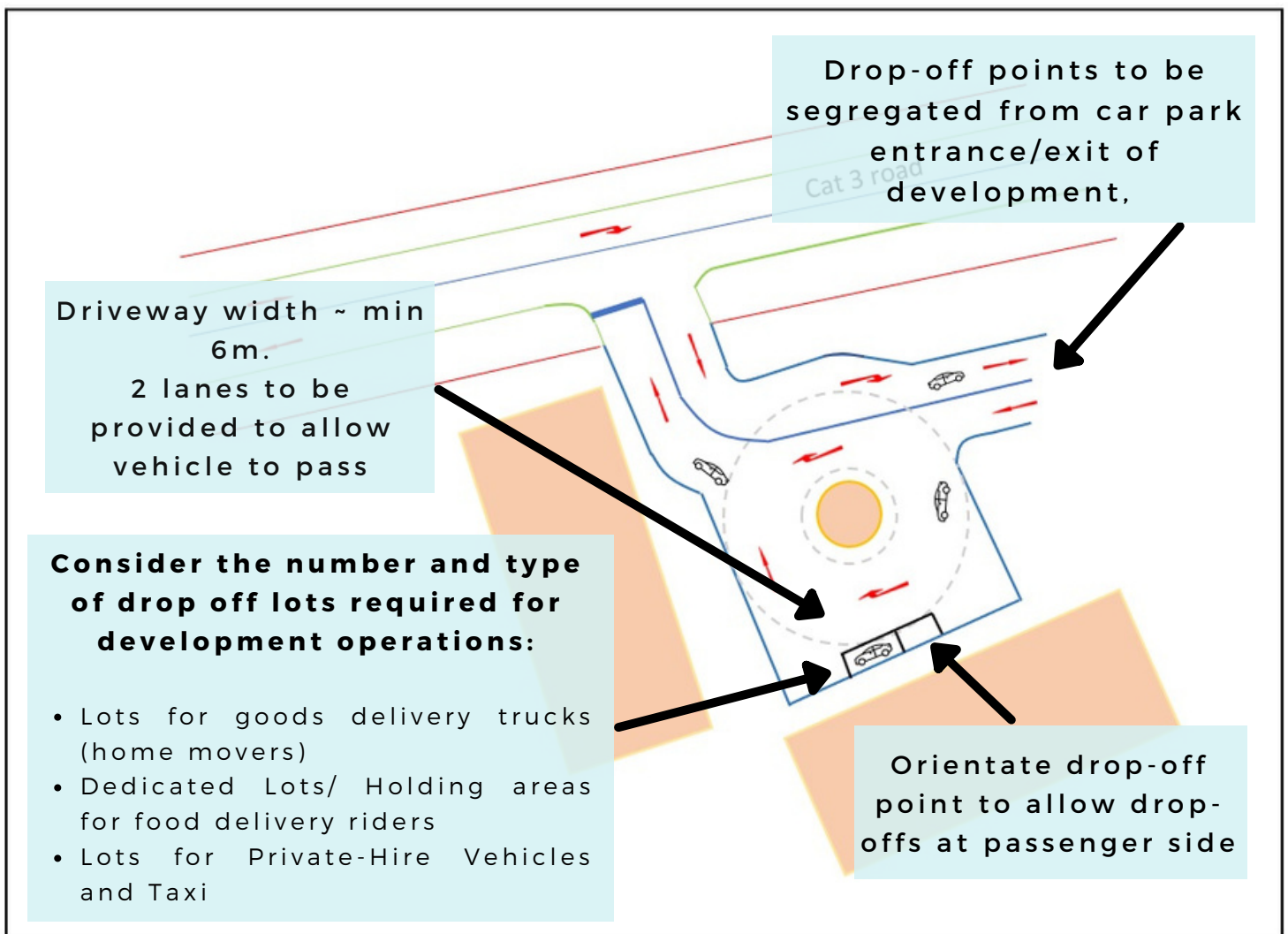
Refer to LTA's 2019 Code of Practice for Vehicle Parking Provide for development proposals for further reference details

ARRANGEMENT FOR DEVELOPMENT DROP-OFF POINTS

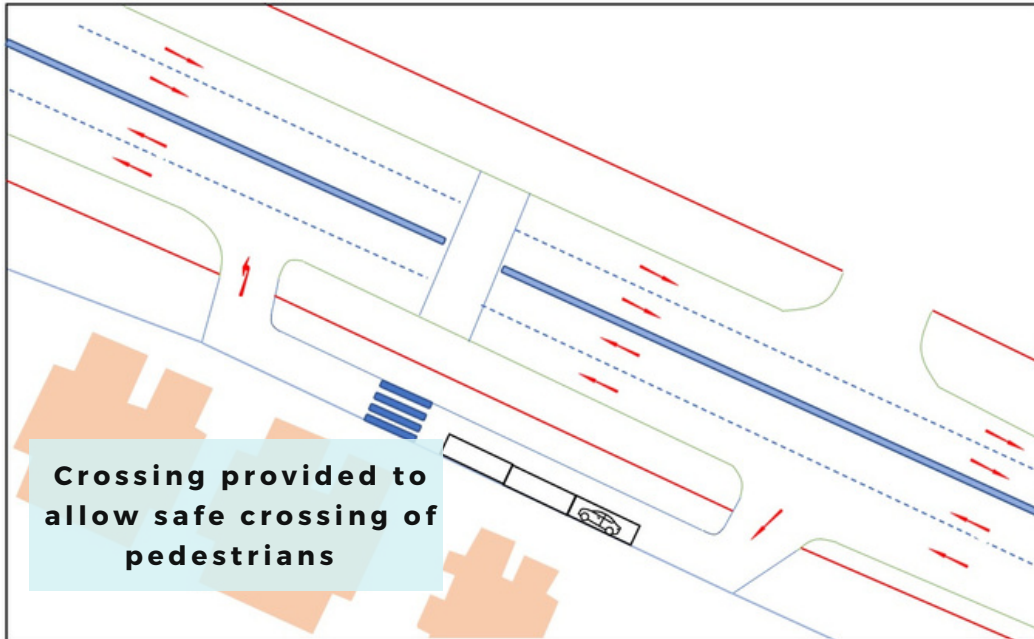
WHERE THE ACCESS POINTS ARE SHARED, THE FOLLOWING ILLUSTRATES SOME BEST PRACTICES FOR THE IMPLEMENTATION OF DROP-OFF POINTS.

DISCUSS WITH DEVELOPER ON THE NEED TO ACCOMMODATE ADDITIONAL QUEUE LENGTH (AND TO MARSHAL TRAFFIC) DURING EVENTS, I.E. :

- Openings of the retail mall - goods delivery, etc
- Weekend long queue into the mall
- First weeks of residents moving into condominium

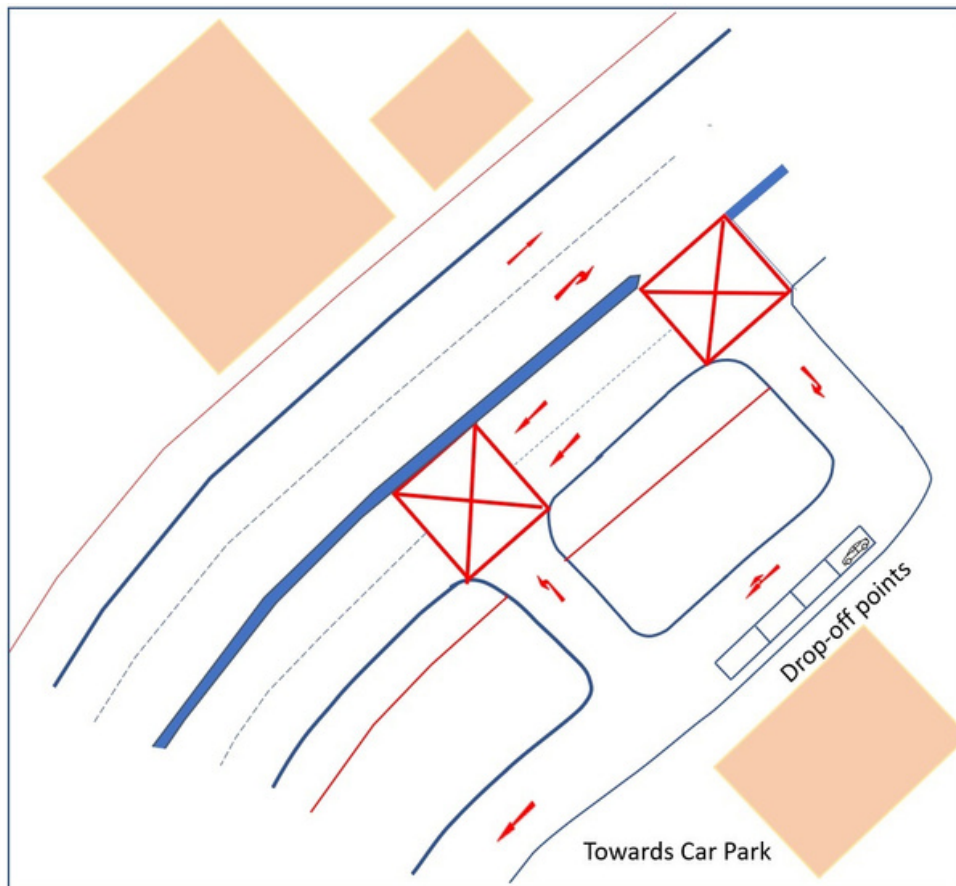


EXAMPLES OF DROP-OFF ARRANGEMENT FOR DEVELOPMENTS



DEDICATED DROP-OFF

The drop-off point is located at the frontage of the development, typically within commercial buildings where the car park access is located at another frontage.



SHARED DROP-OFF / CAR PARK ACCESS

The drop-off point shares the access with the car park entrance.

ABOUT THIS SERIES

With effect from April 2020, LTA has published a series of quick guides to broaden and consolidate understanding of LTA's building plan regulations and processes. The guides feature in-depth explanation of the principles behind specific requirements, coupled with examples of good practices & common mistakes.

Topics for each guide are carefully curated based on LTA's observations of prevailing trends. All publications are made available at LTA's corporate website, under Who We Are > Statistics & Publications > Journals & Newsletters > Quick Guides for Development Proposals.

Objectives of tactile indicators

The use of tactile indicators plays an important role in building pedestrian safety for visually impaired pedestrians. The correct placement of tactile indicators for tactile indicators can help to guide the way for sight users to the tactile indicators. Correctly placed tactile indicators can help to guide the way for sight users to the tactile indicators. Correctly placed tactile indicators can help to guide the way for sight users to the tactile indicators.

Positioning tactile indicators correctly

- Identify the location of the tactile indicators on the road surface.
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Objectives of Covered Linkways

The use of covered linkways plays an important role in enhancing pedestrian connectivity, the pedestrian and community, thereby creating covered linkways, which are essential for pedestrian connectivity, between development and transport nodes. The use of covered linkways can help to enhance pedestrian connectivity, between development and transport nodes.

2.0 Low Covered Linkway

2.1 Typical Plan Presentation for a Low Covered Linkway

2.2 Critical Design Elements for Low Covered Linkways

The key design criteria for low covered linkways are as follows:

Design Criteria	Criteria Detail
1. Clear height	Minimum 2.2 metres
2. Clear width	Minimum 2.0 metres
3. Slope	Maximum 1:100
4. Surface finish	Slip-resistant
5. Lighting	Minimum 0.5 lux
6. Ventilation	Minimum 0.5 air changes per hour
7. Fire safety	Minimum 0.5 air changes per hour

Access Arrangements for Residential Developments

Objectives

The objectives of this guide are to provide guidance on the design and implementation of access arrangements for residential developments, ensuring that the design meets the needs of all users, including those with mobility impairments.

About this series

This series of guides provides a comprehensive overview of LTA's building plan regulations and processes, covering various aspects of development proposals, from site planning to construction requirements.

1. Location of Access Points

The location of access points is a critical consideration in the design of residential developments, as it directly impacts the accessibility and usability of the development for all users.

Managing Manholes Displaced by Road Widening/Improvements

As part of development requirements, proposed cut works sometimes affect existing utility services located beneath the public streets. To ensure the safety and comfort of road users, manholes should be situated outside of the carriageway where possible.

This quick guide seeks to clarify LTA's requirements pertaining to service manholes displaced onto the road carriageway due to road widening/ improvement works. In this guide, we will explain the required processes and outline the possible options that should be followed by the qualified practitioner (QP) as part of his/her design development.

Introduction

Under the standard road typology (refer to Figure 1), side-table space is safeguarded for tree planting and to house the relevant services and utilities. As this available space is limited, it is unreasonable for services to run below the road carriageway.

LTA allows the use of carriageway space within the public streets to house services and utilities. However, the implemented services need to comply with technical specifications, and must not affect the proper design of road elements.

QUICK GUIDE SERIES FOR DEVELOPMENT PROPOSALS

INCLUSIVE DEVELOPMENTS: DESIGNING DELIVERY SPACES WITHIN MIXED DEVELOPMENTS

1.0 Objectives of Residential Delivery Spaces in Mixed Developments

There is an increasing trend of mixed or integrated developments incorporating a residential component, partly accelerated by the COVID situation. There is also a higher demand for food, grocery and furniture deliveries to such consumers. Designers have to adapt and cater to these trends. Designing for delivery spaces in a pure residential development is straightforward. However, designing for such spaces within mixed developments is more complex and careful planning is required to minimize causing disamenities downstream.

This quick guide helps Architects, Engineers and Builders to design spaces for bulky deliveries to residential units within the mixed developments. Such design considerations can be incorporated into early stages of design, before the issuance of the DC clearance. This helps to prevent potential layout changes in downstream submissions to LTA. This quick guide also shows good practices of mixed developments with strategically positioned LTA bays and optimized driveway layouts for bulky deliveries.

2.0 Design Criteria for Residential Delivery Spaces in Mixed Developments

2.1 Critical Design Elements to Follow

The key design criteria for delivery spaces (i.e. LTA bays) for residential component in all new mixed developments are as follows:

Design Criteria for Residential Delivery Spaces	Criteria Detail
1. Clear height	Minimum 2.2 metres
2. Clear width	Minimum 2.0 metres
3. Slope	Maximum 1:100
4. Surface finish	Slip-resistant
5. Lighting	Minimum 0.5 lux
6. Ventilation	Minimum 0.5 air changes per hour
7. Fire safety	Minimum 0.5 air changes per hour

LAND TRANSPORT AUTHORITY

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QUICK GUIDE SERIES FOR DEVELOPMENT PROPOSALS

Issue 6

Design Requirements for RTS-Integrated Developments

Brought to you by Infrastructure Protection Division, Development & Building Control Sub-Group in collaboration with:

1. PREFACE

This quick guide clarifies LTA's design requirements for developments integrated with Rapid Transit Systems (RTS). Proposed developments integrated with existing RTS may be initiated by the Developer to enhance the connectivity of the projects. However, it is subjected to the review and approval by the Authority. It may be stipulated in Urban Redevelopment Authority (URA)'s Government Land Sales (GLS) agreements for developer to provide direct access from the proposed development to RTS stations.

The case studies presented in this series aim to explain and guide you on the basic design requirements to be incorporated in your proposal:

1. UPL connection at station concourse level via station knock-out panels
2. EPL connection to elevated station
3. At-grade connection to station entrance via covered linkways
4. General Mechanical & Electrical (M&E) provision at the interface

Access our guides by scanning this QR code and navigating to the 'Quick Guides for Development Proposals' tab:



https://go.gov.sg/ita-quick-guides