

Our Ref: LTA/DBC/R70.018.001

Date: 9 March 2022

CIRCULAR TO PROFESSIONAL INSTITUTIONS

Who should know

Building owners, Developers, Architects, Engineers, Transport/Traffic Consultants and Builders.

PUBLICATION OF LTA'S QUICK GUIDE SERIES FOR DEVELOPMENT RELATED PROPOSALS – 'LODGEMENT SUBMISSION FOR VEHICLE PARKING'

1. LTA has released a quick guide on 'Lodgement Submission for Vehicle Parking' under our 'Quick Guide Series for Development Related Proposals'. In this quick guide, we will cover LTA's lodgement criteria for vehicle parking submissions, including an overview of the submission process, guidelines on the computation of parking spaces as well as key design considerations. The quick guide can be found on LTA's corporate website, under *Industry & Innovations > Industry Matters > Development & Construction Resources > Guidelines*.
2. The 'Quick Guide Series for Development Related Proposals' was launched in April 2020, and 8 publications have been released to date covering street works, vehicle parking and rail & road structural protection proposals. The series complements existing resources by highlighting the common issues encountered in these proposals and the recommended solution.

Survey

3. We would like to hear your views on the 'Quick Guide Series for Development Related Proposals' to help us continue to generate relevant contents for the industry.
4. Please take some time to complete a short online survey at <https://forms.gle/VuiVnTcne7HaJ7mQ9>. The survey can also be accessed by scanning the following QR code:



Dissemination & Feedback

5. We would greatly appreciate that you can disseminate this circular to the members of your organisation or any other persons who you think will find the information useful. We can be reached at lta-dbc_registry@lta.gov.sg if there is any feedback or suggestions on the Quick Guide Series.

Chan Chin Kai

Director

Development & Building Control



Lodgement Submission for Vehicle Parking

Land Transport Authority
We Keep Your World *Moving*

MARCH 2022
ISSUE 8

WHAT IS LODGEMENT?

A self-declaration scheme where Building Plans are checked and declared by a Qualified Person (QP) to be in full compliance with the prevailing Parking Places (Provision of Parking Places and Parking Lots) Rules and guidelines. Upon successful submission, the QP will receive an Acknowledgement of Lodgement from LTA.

WHAT SHALL BE LODGED?

All proposal and plans for provision of parking parking places and parking lots shall be lodged **except** for the following types of development with indoor parking lots:

- Residential developments
- Commercial developments
- Mixed developments (Residential & Commercial)

WHEN TO SUBMIT?

QP shall lodge the proposal and plans for the provision of parking place and parking lots immediately after obtaining the approval from the Competent Authority (URA) for the proposed development.

WHAT TO SUBMIT?

Lodgement is to be submitted via CORENET. The following documents are to be submitted:

- E-submission Form LTA-DBC_VEHICLE PARKING.XFD under Application Type 2.
- A set of Building Plans (site / location plan, floor plans, sections and elevations).
- Copy of URA's Written Permission or Acknowledgement of URA Plan Lodgement Submission.
- Form LTA-VP-FORM.

SUBMISSIONS FOR VEHICLE PARKING	
Date :	20/02/2022
To :	Land Transport Authority Development & Building Control 251 North Bridge Road Singapore 179102
Instructions	
1. This form is to be completed and digitally signed by the Qualified Person.	
2. It may take you 3 to 5 minutes to complete this form and the attachments.	
3. Payment can be made via https://oneway.onemotoring.com.sg/oneway/fees/listFees.do	
4. This form MUST be attached for all ES and CR submissions.	
5. This form MUST NOT be re-named.	
Application Type (Please choose only one application)	
1	Application For Approval Of Proposal And Plans For Provision Of Parking Places And Parking Lots <input type="radio"/>
2	Lodgement For Approval Of Proposal and Plans for Provision of Parking Places and Parking Lots <input checked="" type="radio"/>
3	Application For Certificate Of Statutory Completion Clearance <input type="radio"/>
4	Application For Review of Requirement on Layout Arrangement, Dimensions or Design of Parking Facilities. <input type="radio"/>
5	Application For Review of Requirement on Number of Parking Lots to be Provided. <input type="radio"/>
Section I Application Information	
Project Reference Number	
Project Title	
Location Description	
Development Submission Type	Industry
Building Plan Reference Number	
3D BIM Submission	<input type="checkbox"/>
Section II Particulars of Sender	
Name	Please Select

LODgement FOR APPROVAL OF PROPOSAL AND PLANS FOR PROVISION OF PARKING PLACES AND PARKING LOTS	
Section III Declaration	
2.1	I declare that the particulars of the proposed development given in this lodgement are true and correct. <input checked="" type="checkbox"/>
2.2	I declare that the proposal and plans of the parking place/s and parking lot/s of the proposed development comply fully with the prevailing Parking Places (Provision of Parking Places and Parking Lots) Rules and other relevant guidelines of the Authority. Waiver/Modification of parking requirements (if any) has been approved by LTA. <input checked="" type="checkbox"/>
2.3	I certify that I have obtained a Letter of Undertaking from the applicant/developer to sign this form on behalf of the applicant/developer. <input checked="" type="checkbox"/>
2.4	The attach plans and information given are similar to that approved by Competent Authority (CEO, URA). A copy of URA's approval is attached. <input checked="" type="checkbox"/>
2.5	I attach the following documents: <ul style="list-style-type: none"> - A copy of the Competent Authority's approval for the proposed development - A set of building plans - Form LTA-VP-FORM <input checked="" type="checkbox"/>
2.6	I attach the receipt for the car park plan processing fees paid @ \$10 per 100 sq m of the GFA involved in the proposal, subject to minimum \$120. Receipt no. OPH-20220220-0220 for \$ 120 <input checked="" type="checkbox"/>
2.7	Remarks/Comments

INCOMPLETE SUBMISSION

Any submission that does not have any of the documents mentioned in the previous section will be deemed incomplete and will not be processed.

- The processing fee is based on the GFA involved in the proposal.
- For new erections, it is based on the total GFA of the proposed development.
- For amendments to approved plans, additions & alterations, re-lodgement and change of use proposals, only the additional or affected GFA is to be considered.
- The processing fee will be rounded down to the nearest 5 cents. Examples of the rounding off are as follows:

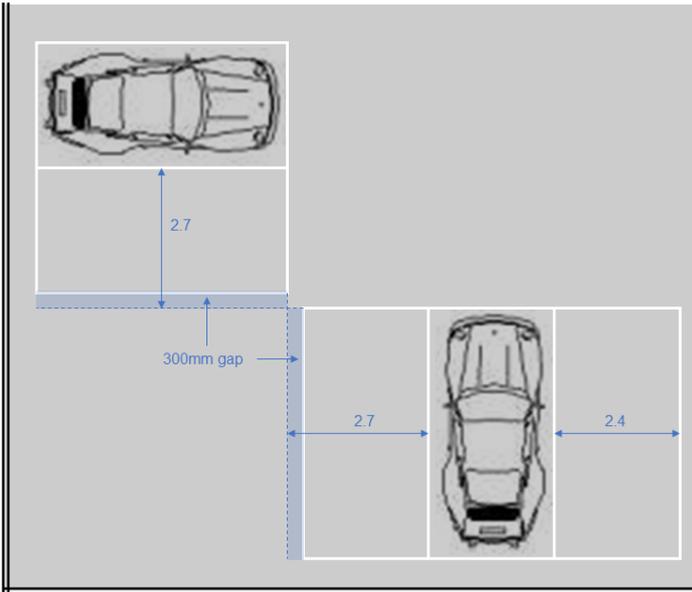
<u>Computed Fee</u>	<u>Fee Payable</u>
\$342.47	\$342.45
\$342.43	\$342.40

PROCESSING FEE

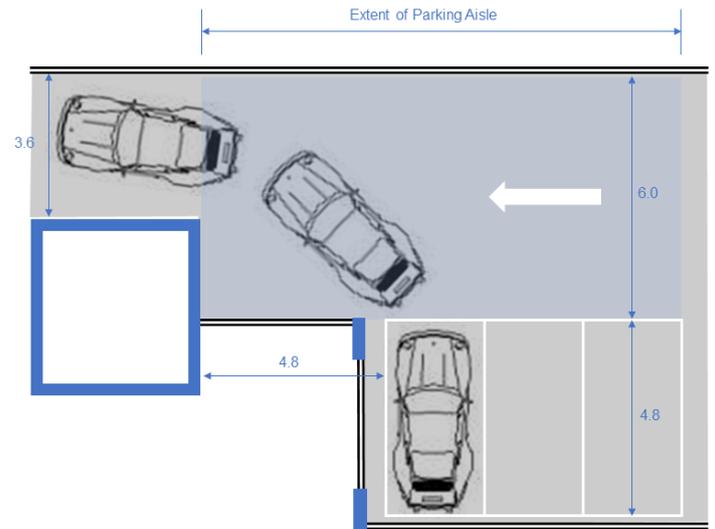
PARKING COMPUTATION

- GFA details provided in Form LTA-VP-FORM should tally with the GFA submitted and approved by URA.
- Ancillary or common areas defined as GFA should be included in the parking computation.
- Ancillary or common areas shared by two or more uses should be computed together with the main use of the development.
- The correct parking provision standard should be applied. The parking standard for the different uses can be found in Appendix A of the [Code of Practice on Vehicle Parking Provision in Development Proposals](#).
- The correct parking standards zone should be applied. The boundaries of Zone 1, 2 and 4 can be found in [OneMap](#) (go to Nearby > Transport > LTA Parking Standards Zone).
- The number of parking lots required should be rounded to the nearest integer. The rounding off is done for each use before adding up to obtain the total requirement for the development.
- The total number of parking lots provided should be within the specified range, defined by the lower and upper bound requirement. Developers who wish to deviate from the specified range (i.e. provide parking provision below the lower bound or above the upper bound) will be subjected to a process of waiver evaluation. Waiver approval should be obtained prior to the lodgement submission.
- For industrial developments, the ancillary office (up to max. 25% of total GFA) and ancillary storage space should be added to the factory GFA and computed under factory standard. Ancillary office in excess of 25% should be computed separately based on office standard.

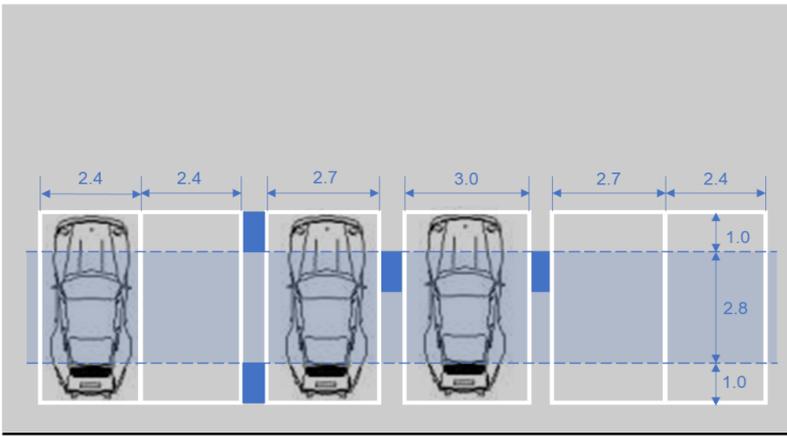
COMMON MISTAKES - CAR PARKING



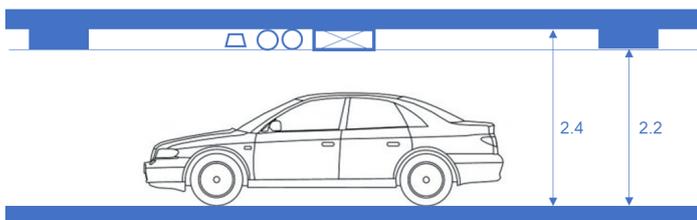
In areas where parking lots are designed perpendicularly to each other, the parking lots shall have 300mm gaps vertically and horizontally.



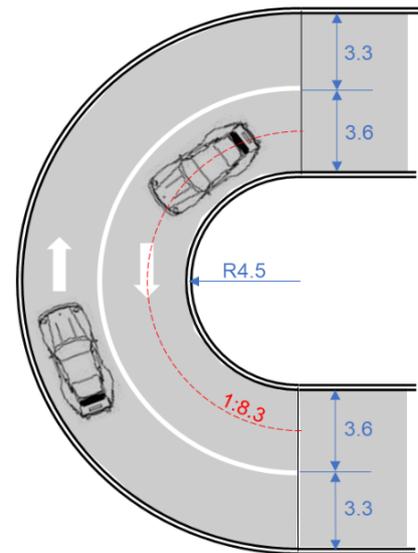
The required parking aisle width should be extended to at least one car lot length.



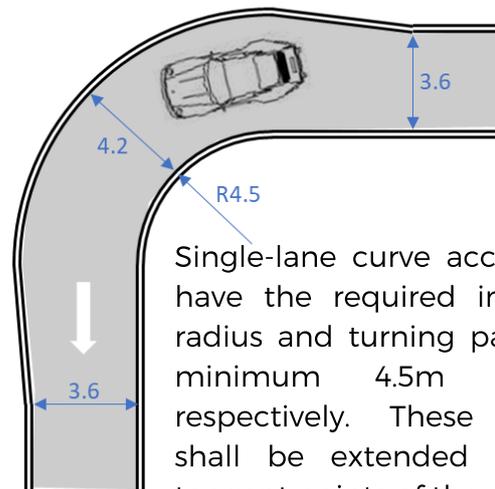
Where there is an obstruction adjacent to a car lot, located within the middle 2.8m of the parking length, the car lot shall be widened to 2.7m if the obstruction is on one side and 3.0m if the obstruction is on both sides.



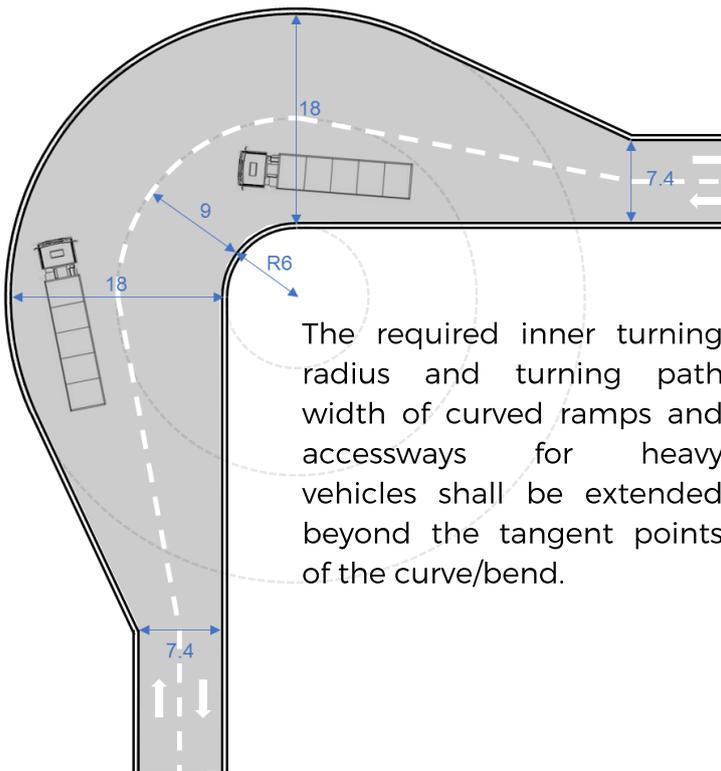
Minimum headroom or height clearance from floor level to the underside of any projections including beams, direction signs, sprinkler heads, electrical fittings, etc. shall be 2.2m.



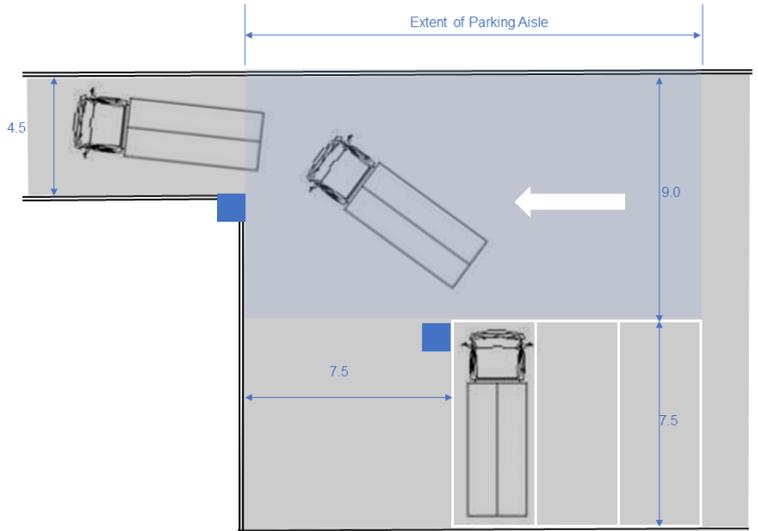
For multi-lane, the inner and outer lanes of the curve ramp/accessway shall be minimum 3.6m and 3.3m respectively. These dimensions shall be extended beyond the tangent points of the curve. The maximum gradient is measured along the centre-line of inner lane.



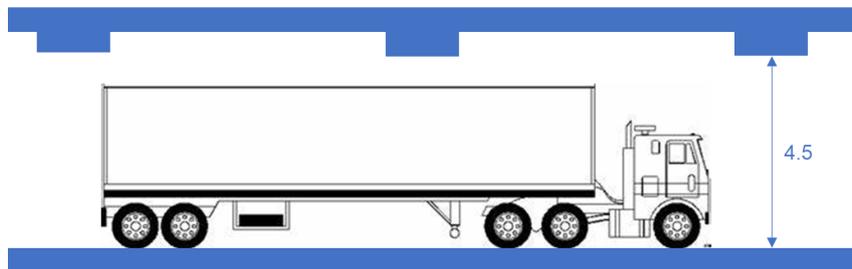
Single-lane curve accessway shall have the required inner turning radius and turning path width of minimum 4.5m and 4.2m respectively. These dimensions shall be extended beyond the tangent points of the curve.



The required inner turning radius and turning path width of curved ramps and accessways for heavy vehicles shall be extended beyond the tangent points of the curve/bend.

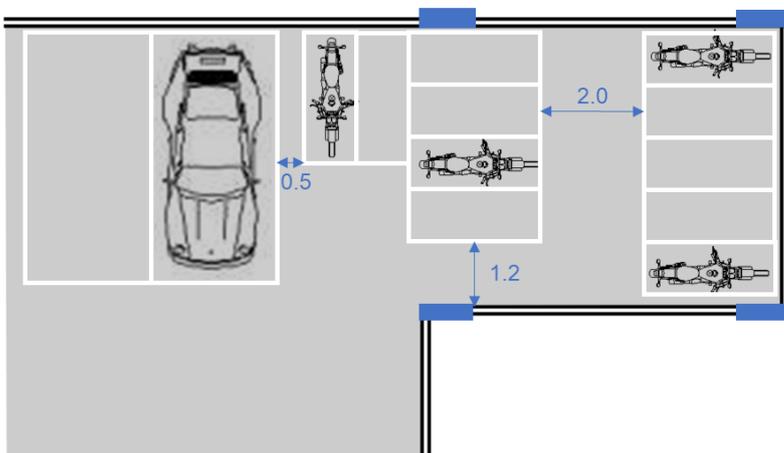


The required parking aisle width should be extended to at least one lorry lot length.



Minimum headroom or height clearance for articulated vehicles measured from floor level to the underside of any projections including beams, direction signs, sprinkler heads, electrical fittings, etc. shall be 4.5m (on flat) and 4.75m (on ramp).

COMMON MISTAKES - MOTORCYCLE PARKING



A gap of 500mm should be provided between motorcycle and car lot. Accessway of 1.2m and parking aisle of 2.0m wide should be provided for access to motorcycle lots.

ABOUT THIS SERIES

Since 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 Industry & Innovations > Industry Matters > Development & Construction resources.

INCLUSIVE STREETS: DESIGNING TACTILE INDICATORS FOR SAFE TRAVEL

Objectives of tactile indicators

The use of tactile indicators plays an important role in building inclusive streets for visually impaired pedestrians. The correct placement of tactile indicators for various situations paves the way for safe travel for the visually impaired pedestrians. Generally, required placement of tactile indicators can lead to repetitive situations. This quick guide helps architects, engineers and builders to identify the correct placement of tactile indicators for various situations. There are also illustrations of common errors to be avoided.

Tactile indicators are required where footpaths intersect with driveway of developments and at-grade pedestrian crossings to guide the visually impaired pedestrians to cross these crossings safely. Tactile indicators are also required around road information to its users and no application must be required around all the applications of tactile indicators with certain frequency and consistent in all situations. This quick guide helps architects, engineers and builders to identify the correct placement of tactile indicators for various situations. There are also illustrations of common errors to be avoided.

Positioning tactile indicators correctly

- Determine whether the footpath is intersecting the driveway on a straight, angled or curved portion of the development.
- Help in the placement of the tactile indicators, you may draw a straight line offset by 300 mm from the edge of the driveway.
- 2 rows of tactile indicators leading into driveway line as shown in Figure 1.
- Ensure that the width of the tactile indicators covers the entire width of the crossing area.

2.2 Critical Design Elements for Low Covered Linkways

The key design criteria for low covered linkways are:

- Design Criteria
- Design Elements

Access Arrangements for Residential Developments

Objectives

Within any development, the design, position and arrangement of access points are critical. They ensure that vehicles can enter or leave the development safely, and do not adversely affect traffic along the public street to which it connects.

About this series

Since April 2020, LTA has been publishing 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.

1. Location of Access Points

- Generally, vehicular access points shall be suitably located to ensure safe vehicular movements and vehicle traffic. The location of an access point, the following requirements shall be complied with:
 - Access point shall be located at least 30m away from any low slope / overhead pedestrian bridge.
 - Access point shall be located at least 30m away from any road junction or the edge of the development boundary.
 - Where a development is accessible from two public streets, it shall be designed to have access from the road which is classified as a lower category in the Road Line Plan (RLP) and not with cycling path where possible.
 - Access point shall be designed with opposite access of other developments, if any.
 - Access point shall be designed/positioned to a Left-In, Left-Out (LLO) arrangement if it is located along a category 1 road down road.
- Direct access from adjacent roads is prohibited or can be taken from the rear service road.

2.3 Common Mistakes in Low I

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 end-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.

2.0 Design Criteria for Residential Delivery Spaces in Mixed Developments

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 protracted layout changes in downstream submissions to LTA. This quick guide also share good practices of mixed developments with strategically positioned LULU bays and optimized driveway layouts for bulky deliveries.

S/N	Design Criteria in Residential Component	Criteria to meet
1	Minimum clearance from access road to LULU bay	4.2 metres (min)
2	Min. W of LULU bay	At least 1.5m dedicated to serve Residential users (Minimum width)
3	Location of LULU bay	To be in accordance to prevailing Police Parking COP Edition 2018 for LULU bays
4	LULU bay size	Minimum gradient of accessibility ramp leading to LULU bay
5	Accessing width leading to LULU bay	
6	Clearance height of accessibility leading to LULU bay	

Managing Manholes Displaced by Road Widening/Improvements

11 Jun 2021

Preface:

As part of development requirements, private works sometimes affect existing utility located beneath the public streets. To safety and comfort of road users, manhole shall be situated outside of the carriageway possible.

This quick guide seeks to clarify LTA's re-pertaining to service manholes displaced road carriageway due to road improvement works. In this guide, we've required processes and outline the options that should be explored by the practitioner (QP) as part of h/w development.

Introduction:

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

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

Figure 1: Depiction of a typical road layout for a divided 2-way road

DESIGN REQUIREMENTS FOR RTI INTEGRATED DEVELOPMENTS

Issue 6

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 precinct. However, it is subjected to the review and approval by the Authority. It may stipulated in Urban Redevelopment Authority (URA)'s Government Land Sales (GLS) agreements for developer to provide direct access from the proposed developments to RTS stations.

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

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

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 manoeuvre 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 drop-off points of developments, better appreciate the principles behind these requirements, and avoid making common mistakes.

Access our guides by scanning this QR code and then navigating to the 'Guideline' tab:

