



CHANGI
airport group

AIRSIDE DRIVING THEORY HANDBOOK



4TH EDITION



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COMMON COMMERCIAL AIRCRAFT 121

APPENDIX A: CHANGI AIRPORT AIRSIDE MAP Back Cover Fold-out

A grayscale photograph of a large commercial airplane, likely a Boeing 777, viewed from the front. The aircraft is on a tarmac, and a ground crew member in a white uniform is visible near the nose landing gear. A white service vehicle is also present. The background shows airport infrastructure and trees. A large blue graphic element is overlaid at the bottom of the image.

INTRODUCTION

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1 INTRODUCTION

1.1. Purpose

The Airside Driving Theory Handbook (ADTH) sets out the rules and regulations governing driving in the airside of Changi Airport. The contents of this handbook apply to all drivers who operate any vehicle within the airside. For the safety of drivers, passengers onboard aircraft and any other personnel operating in the airside, the rules and regulations set out in this handbook shall be complied with.

All drivers operating in the airside shall possess a valid Airfield Driving Permit. Driving without a valid Airfield Driving Permit is an infringement of Civil Aviation Authority of Singapore By-Laws.

1.2. Review and Revision of Contents

The contents of this handbook will be reviewed on an as-required basis. Any supplement or revision to the contents of this handbook can be found on the Changi Airport Group website.

CAG ADC Website: <https://tinyurl.com/ycqbn4lq>

An Airside Operations Notice (AON) and Airside Safety Notice (ASN) will also be published to inform the airside community of any supplement or revision.

Drivers shall comply with all rules and regulations including any supplement or revision.

1.3. Legislation

All personnel operating in the airside are governed by the following rules and regulations including any subsequent amendments:

- 1.3.1.** The Civil Aviation Authority of Singapore Act 2009.
- 1.3.2.** The Civil Aviation Authority of Singapore (Changi Airport) By-Laws 2009, in particular By-Laws 67 and 64 for Airfield Driving Permit and Airfield Vehicle Permit, respectively.
- 1.3.3.** Civil Aviation Authority of Singapore (Composition of Offences) Regulations 2009.

1.3.4. Protected Areas and Protected Places Act (Chapter 256)
(Note: In addition, the Penal Code is applicable in certain traffic accidents determined by the State Police).

1.3.5. Workplace Safety and Health Act.

1.4. Jurisdiction

All vehicles and handling operations at the airside, apron, and designated roadways are under the control and jurisdiction of Changi Airport Group (S) Pte Ltd ("CAG"), the airport licensee.

The control of aircraft taxiing from runways to aircraft stands and vice versa by Changi Tower is under the control and jurisdiction of the Civil Aviation Authority of Singapore (CAAS).

1.5. Traffic Control

All drivers entering the airside shall present their valid Airfield Driving Permit (ADP), and display their valid Airfield Vehicle Permit (AVP) on the windshield or a conspicuous location to the Auxiliary Police Officer at the entry point without request.

1.6. Suspension or Cancellation of Airfield Driving Permits

CAG may suspend or cancel an ADP if

- (a) There has been a contravention of any condition of the permit;
- (b) The person to whom the permit has been issued is not competent to drive the relevant vehicle;
- (c) It would not be in the interest of public safety for him to hold a driving permit.

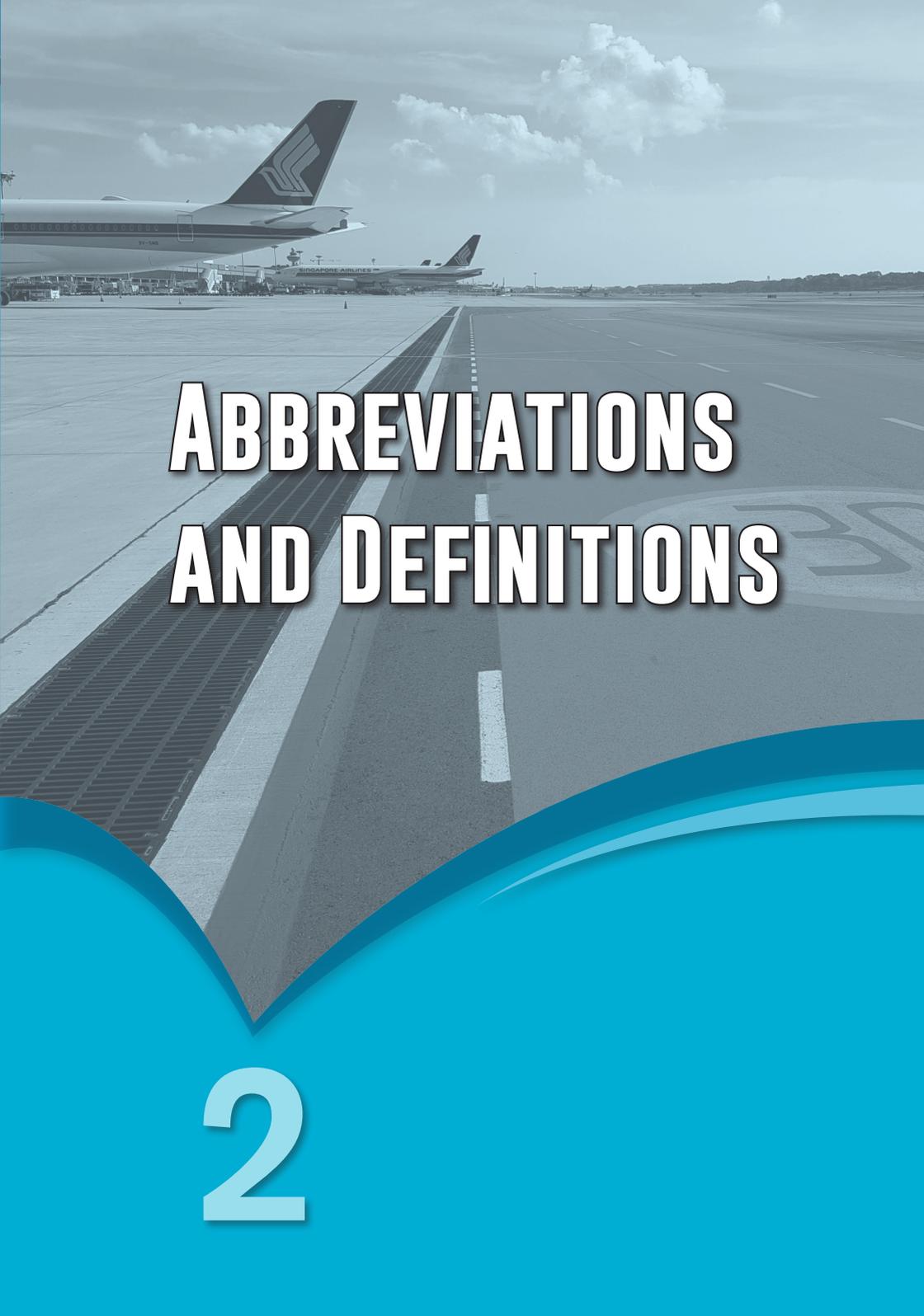
CAG may at any time in its discretion cancel any AVP or ADP without assigning any reason therefore under By-Law 79 and 80 or the CAAS (Changi Airport) By-Laws 2009.

1.7. Surrender of Airfield Driving Permits

The ADP holder must return the ADP to CAG Airside Driving Centre (ADC) upon cessation of driving duties for his employer. The vehicle operator must also ensure that the ADP holder complies with this clause.

1.8. Notice of Offence (NOO)

Any person who contravenes the CAAS (Changi Airport) By-Laws 2009 or fails to comply with the conditions of any permit or pass issued under the CAAS (Changi Airport) By-Laws 2009 will be issued a Notice of Offence. See Section 10 of this handbook. The regulations do not restrict CAG from suspending an ADP when it is deemed necessary.

A grayscale photograph of an airport tarmac. In the foreground, a runway with white dashed lines and a drainage grate runs towards the background. In the mid-ground, a Singapore Airlines aircraft is visible, with its tail fin featuring the airline's logo. Another smaller aircraft is parked further back. The sky is filled with scattered white clouds.

ABBREVIATIONS AND DEFINITIONS

2

2

ABBREVIATIONS AND DEFINITIONS

| | |
|---------------------------------------|--|
| ACC | means Airside Control Centre. |
| Accident | means an occurrence associated with the operation or handling of an aircraft in which a person is fatally or seriously injured, or the aircraft sustains damage (adapted from the definition in ICAO Annex 13). |
| ABL | means Apron Boundary Line. |
| ADC | means Changi Airport Group (S) Pte Ltd Airside Driving Centre. |
| ADP or Airfield Driving Permit | means an airfield driving permit issued by the airport licensee. |
| ADSCT | means Airfield Driving and Safety Compliance Test. |
| Aerodrome | means the Changi Aerodrome managed by the Authority and includes any road or uncovered area which is within the limits of the aerodrome, but does not include any road or uncovered area to which the public has access. |
| AES | means Airport Emergency Service. |
| Aircraft Stand | means an area on an apron for parking of aircraft. |
| Airside | means the movement area of the airport and the adjacent terrain and buildings or parts thereof, access to which is controlled, but does not include the cargo handling area. |
| AMC | means Airside Management Centre. |
| APD | means Airport Police Division. |
| Apron | means the part of the airport, other than the manoeuvring area, to be used for accommodating aircraft for the purposes of embarkation or disembarkation of passengers, loading or unloading of mail or cargo, or fuelling, parking or maintenance of aircraft. |
| ARRC | means Airfield Rules and Regulations Course. |

| | |
|---|--|
| ARRRC | means Airfield Rules and Regulations Refresher Course. |
| ART | means Airfield Rules Test. |
| ASM | means Airside Management. |
| Authorised Person | means: (a) Any other officer or employee of the airport licensee; or (b) Any person duly authorised by the airport licensee to act on its behalf. |
| AVP or Airfield Vehicle Permit | means an airfield vehicle permit issued by the airport authority. |
| BHA | means Baggage Handling Area. |
| CAAS | means Civil Aviation Authority of Singapore. |
| CAG | means Changi Airport Group (S) Pte Ltd. |
| Category One Airfield Driving Permit | is the airfield driving permit which allows the holder to enter the runways and taxiways, subject to approval from Changi Tower. Refer to the Category One Airside Driving Theory Handbook for more details. |
| Category One Airfield Vehicle Permit | is the vehicle permit which allows the vehicle to enter the runways and taxiways, subject to approval from Changi Tower. Refer to the Category One Airside Driving Theory Handbook for more details. |
| Driver | means: (a) In relation to any towed object, includes a driver of a vehicle by which the towed object is drawn; (b) Where a separate person acts as a steersman of a vehicle, includes that person as well as any other person engaged in the driving of the vehicle; and The word “drive” shall be construed accordingly. |
| EPA | means Equipment Parking Area. |
| ERA | means Equipment Restraint Area. |
| ESA | means Equipment Staging Area. |

| | |
|----------------------------|--|
| “Follow Me” Vehicle | means a vehicle used to guide aircraft or other vehicles. |
| GP | means Glide Path. |
| Incident | means an occurrence, other than an accident as described above, associated with the operation or handling of an aircraft, which affects or could affect the safety of operations. |
| ILS | means Instrument Landing System. |
| Keep Clear Zone | means zones in aircraft stands that are marked with white hatched lines and “No Parking” signs painted on the ground. These zones shall be kept clear of personnel, vehicles, and equipment prior to arrival of aircraft and after departure of aircraft. |
| Manoeuvring Area | means the part of the airport to be used for the taking off, landing and taxiing of aircraft, but does not include areas set aside to accommodate aircraft, for the embarkation and disembarkation of passengers, for the loading or unloading of mail or cargo, or for fuelling, parking or maintenance of aircraft (i.e. the Apron). |
| Movement Area | means the part of the airport that includes both the Apron and the Manoeuvring Area . |
| NOO | means Notice of Offence, referring to Notice of Composition of Offences, which is a report of any violations of the Civil Aviation Authority of Singapore (Composition of Offences) Regulations 2009 . |
| Perimeter Roadway | means roadways within the airside that allow vehicles to move around the airport clear of the Apron and Manoeuvring Area . |
| PLB | means Passenger Loading Bridge. |
| Primary Roadway | means roadways in front of all aircraft parking stands and baggage handling areas meant for movement of vehicles and equipment. |
| Runway | means a defined rectangular area prepared for the landing and taking-off of aircraft. |

| | |
|---------------------------------|---|
| <p>Secondary Roadway</p> | <p>means roadways behind all aircraft parking stands meant for movement of vehicles and equipment that are not allowed to use the primary roadways or unable to access the primary roadways due to height limit restrictions.</p> |
| <p>Taxiway</p> | <p>means a defined path established for the taxiing of aircraft and to provide a link between one part of the aerodrome and another, including</p> <ul style="list-style-type: none"> (a) Aircraft stand taxi-lane, where a portion of the apron designated as a taxiway and to provide access to aircraft stands only; (b) Apron taxiway, where a portion of the taxiway system located on the apron for the purposes of providing a through taxi route across the apron; (c) Parallel taxiway, where a portion of the taxiway system used for the purposes of providing a through taxi route to other parts of the aerodrome; (d) Exit taxiway, where a taxiway is connected to a runway for the purposes of providing a through taxi route into the runway; and (e) Rapid exit taxiway, where a taxiway is connected to a runway at an acute angle and is designed to allow landing aircraft to turn off at higher speeds than may be achieved on other exit taxiways, thereby minimising runway occupancy times. |
| <p>TEP</p> | <p>means Temporary Entry Permit.</p> |

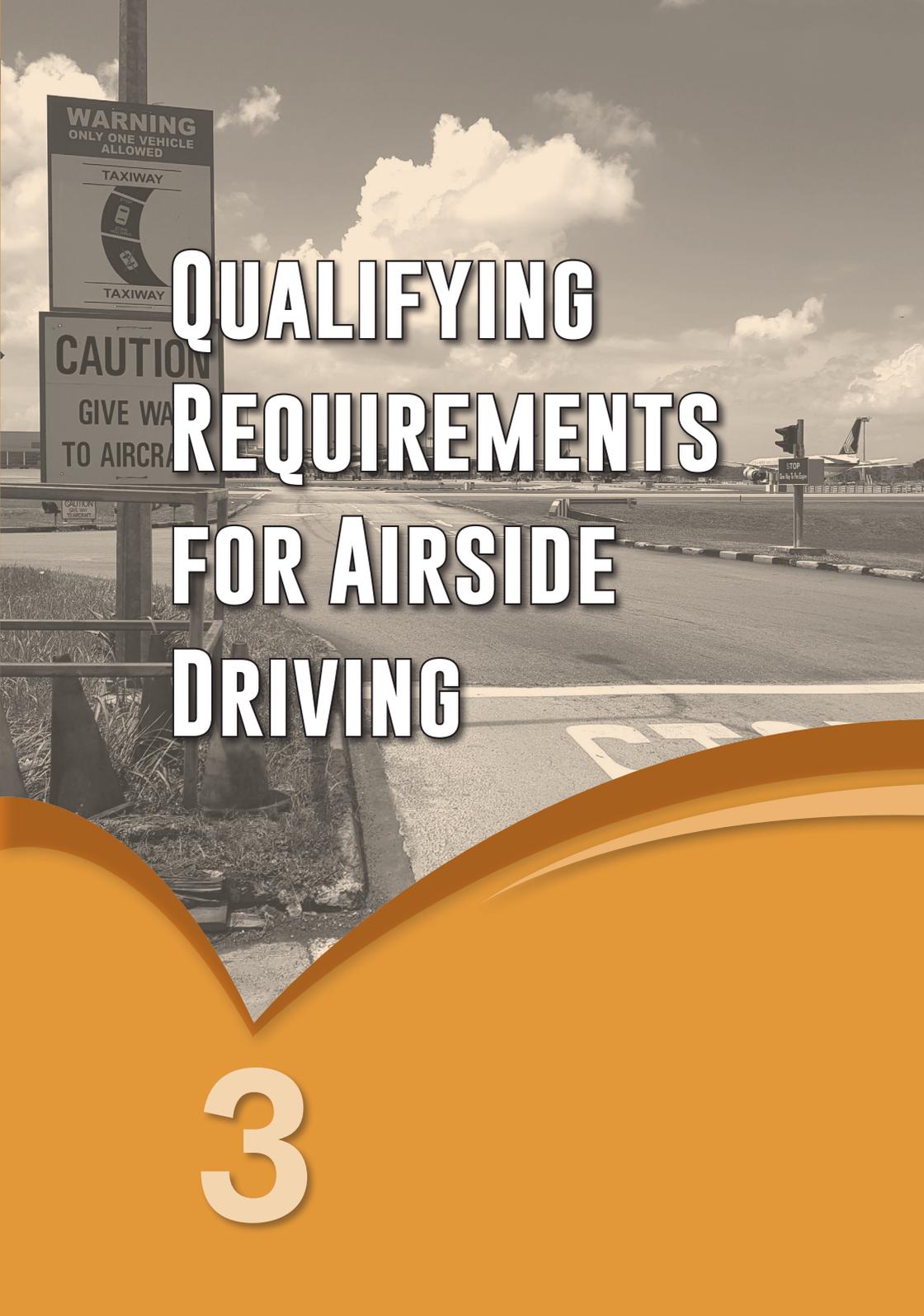
USEFUL CONTACT DETAILS

CHANGI AIRPORT GROUP (S) PTE LTD

| | |
|---------------------------------|---------------------------|
| Airside Control Centre (ACC) | 6541 2257 / 6541 2258 |
| Airside Management Centre (AMC) | 6541 2275 |
| Airport Emergency Service (AES) | 6541 2525 |
| Airside Driving Centre (ADC) | asm.adc@changiairport.com |

AIRPORT ORGANISATIONS

| | |
|--|-----------|
| Medical Emergency Hotline | 6543 2223 |
| Airport Police Division (APD) | 6546 0000 |
| Airport Police (Operations Room) | |
| Changi Airport Fuel Hydrant Installation (CAFHI) | 6546 4316 |



QUALIFYING REQUIREMENTS FOR AIRSIDE DRIVING

3

3 QUALIFYING REQUIREMENTS FOR AIRSIDE DRIVING

3.1. Requirements for Drivers

3.1.1. Eligibility for Airside Driving

Personnel who are required to drive in the airside shall:

- (a) Possess a valid seasonal Airport Pass from Airport Police Division for access to the airside.



- (b) Possess a valid Class 3 Driving License issued by the Singapore Traffic Police (TP) or state licensing authority (outside Singapore), or an International Driving Permit equivalent to Class 3. Damaged or defaced licenses are not acceptable.



Licenses and supporting documents not in English shall be supported by translation from recognised authorities.



- (c) Possess an Airfield Driving Permit (ADP) issued by Changi Airport Group (CAG) Airside Driving Centre (ADC) with authorised vehicle classes* displayed.



| *VEHICLE/EQUIPMENT CLASSIFICATION | |
|-----------------------------------|--|
| A | Passenger Loading Bridge (PLB) |
| B | Passenger Loading Bridge (PLB) – For cleaning and maintenance contractors. |
| F | Forklift/Fork Truck |
| 3 | Motor Vehicle (Unladen weight ≤ 2,500kg). |
| 3A | Motor Vehicle with automatic transmission (Unladen weight ≤ 2,500kg). |
| 3C | Issued only to foreigners who wish to drive Class 3 vehicles after converting their foreign driving licence. Not valid for driving light goods vehicles, mini vans and small buses. |
| 3CA | Issued only to foreigners who wish to drive Class 3C vehicles with an automatic transmission. Not valid for Class 3 vehicles with manual gear transmission, light goods vehicles, mini vans and small buses. |
| 4/4D | Motor Vehicle (Unladen weight > 2,500kg but < 7,250kg), except Motor Tractors. |
| 4T | Motor Tractor Only (Unladen weight > 2,500kg but < 7,250kg). |
| 5/5S | Motor Vehicles not constructed to carry any load (Unladen weight > 7,250kg). |

Note: Class 4D, 4T and 5S are internal vehicle classes certified by SATS, dnata and SIAEC only.

3.1.2. Passenger Loading Bridge (PLB) Operator License

In order to operate a Passenger Loading Bridge, an operator must pass a PLB practical test conducted by CAG ADC. Before submitting an Application for Passenger Loading Bridge (PLB) Permit, operators shall complete PLB courses provided by SATS or dnata. Operators shall then submit the application form together with the course certificate and associated training records to arrange for a PLB practical test.

Upon passing the PLB practical test, operators will be issued with a PLB operator permit. If an operator already possesses an

Airfield Driving Permit, the respective class (A or B) and effective date will be printed on the back of his existing ADP.

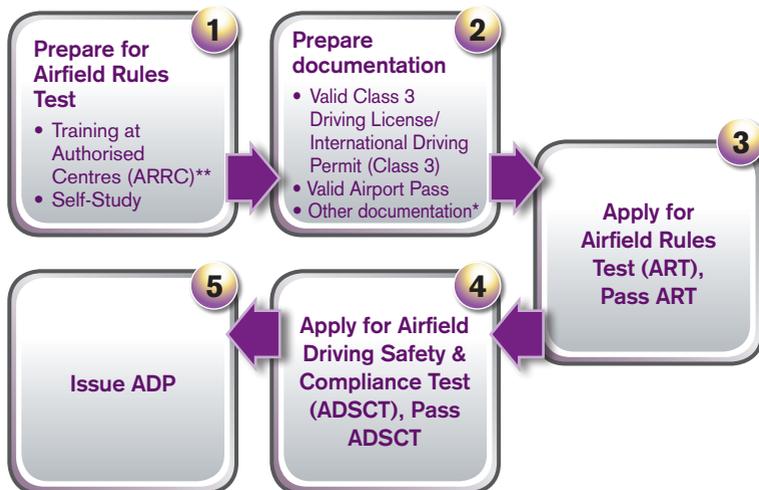
3.1.3. Access Zones

ADP holders are only allowed to drive within the apron areas and airside roadways. A Category 1 or Category 1R ADP is required to drive in the manoeuvring area, which consists of the runway, taxiway, and taxi-lanes. Refer to the Appendix for roadways accessible by non-CAT1 drivers. For more information on qualifying requirements for Category 1 and Category 1R ADP, please contact CAG ADC or refer to the Category One (CAT 1) Airside Driving Theory Handbook.

3.1.4. Airfield Driving Permit (ADP) Application Process

To register for a new ADP, an application form along with all necessary documentation shall be submitted at CAG ADC. For full details on application requirements, please refer to the **Application for Airfield Driving Permit** form available on the CAG ADC website or in hardcopy at CAG ADC.

The general qualification process is described below:



* For details on documentation required, refer to **Application for Airfield Driving Permit** form available on CAG website, or in hardcopy at CAG Airside Driving Centre (ADC).

**SATS and DNATA Training Centres (refer to Page 25).

Details of the process are described in the sections below.

3.1.4.1. Medical Declaration

All drivers aged 65 years and above shall produce a medical declaration/certificate from any general practitioner stating that he or she is **fit to drive**. This declaration/certificate shall be produced when applying for a new ADP or renewing an existing ADP.

3.1.4.2. Airfield Rules Test (ART)

The ART is a computerised theory test to assess drivers on airside driving safety and regulations learnt from this ADTH. The test consists of multiple choice questions to be completed in one hour. The ART is offered in four languages: English, Mandarin, Malay and Tamil.

3.1.4.3. Airfield Driving and Safety Compliance Test (ADSCT)

The ADSCT is a practical driving test to assess drivers on their competency to drive in the airside and adherence to airside driving safety and regulations. The test duration is approximately one hour.



3.1.4.4. Preparation/Training

There are two ways to prepare for the ART and ADSCT:

(a) Self-study of this Airside Driving Theory Handbook (ADTH)

If the candidate chooses to self-study, he shall attach to the Application for Airfield Driving Permit form, an official company letter signed by an authorised person stating that he will be performing self-study.



- (b) Attend the Airside Rules and Regulation Course (ARRC) conducted by training centres authorised by CAG.

If the candidate chooses to attend the ARRC, he shall attach the original course certificate to the Application for Airfield Driving Permit form. The authorised training centres are as follows:

| TRAINING CENTRE | ADDRESS | CONTACT NUMBER |
|--|---|----------------|
| Singapore Airport Terminal Services Limited (SATS) | SATS Maintenance Centre 34 Changi North Crescent Singapore 499614 | +65 6548 2011 |
| DNATA Singapore Pte Ltd | 50 Airport Boulevard Singapore Changi Airport Singapore 819658 | +65 6511 0152 |

The authorised training centres also conduct the Airside Rules and Regulations Refresher Course (ARRRC), which drivers are required to attend before renewal of ADP.

3.1.5. Issuance of ADP

Upon passing the ART and ADSCT, drivers shall be issued with an ADP valid for driving in the apron areas and airside roadways. **This ADP is not valid for driving on manoeuvring areas, which require a CAT 1 ADP.**

For more information on driving in the manoeuvring areas, refer to the Category One (CAT 1) Airside Driving Theory Handbook.

3.1.6. SWEET

SWEET is a mobile application derived from CAG’s Service Workforce Empowerment and Experience Transformation initiative. It seeks to enhance airport Safety Management Systems and bring everyone in the airport community on board Changi Airport’s Safety Culture.



Drivers may use the SWEET app to view useful information related to airside driving and safety such as the aerodrome map, Airside Operations Notices (AONs), Airside Safety Notices (ASNs) and pushback procedures. Drivers may also use SWEET to report hazards via the iFeedback module.

Upon issuance of the ADP, it is mandatory for all drivers possessing smart mobile devices to download the SWEET app.

3.1.7. Validity of ADP and Renewal Process

3.1.7.1. ADP Validity Period

Drivers may choose an ADP validity period of one or two years from the date of issuance, subject to prevailing CAG policy and/or regulations. Corresponding fees apply.

3.1.7.2. Refresher Training

The Airfield Rules and Regulation Refresher Course (ARRRC) is conducted by authorised training centres and CAG ADC. Upon completion of the ARRC, drivers shall produce a copy of the refresher course certificate for ADP renewal at the ADC. The certificate is valid for a period of three (3) months.

3.1.7.3. Renewal of Airfield Driving Permit

If a driver wishes to renew his ADP, he shall attend the Airfield Rules and Regulation Refresher Course (ARRRC) and fulfill other requirements as may be required by CAG within three months before the ADP expiry date. Drivers shall submit the Application for Renewal of Airfield Driving Permit form at CAG ADC with the necessary documents.

Drivers who do not fulfill all necessary requirements for ADP renewal and do not renew their ADP by the expiry date shall have their ADP voided. Drivers are advised to renew their ADP in a timely manner to avoid disruption of their daily duties.

For example, if a driver’s ADP is issued on 31 Dec 2016 and expires on 31 December 2018, he should fulfill all necessary requirements for ADP renewal and renew his permit between October 2018 and December 2018.

An example of the renewal process is as follows:



3.1.7.4. Renewal of PLB Operator Permit

If a PLB operator wishes to renew his PLB operator permit, he shall submit the refresher course certificate within three months before the permit expiry date. Drivers shall submit the Application for Renewal of Airfield Driving Permit form at CAG ADC with the necessary documents.

Operators who do not fulfill all necessary requirements for PLB permit renewal and do not renew their PLB permit by the expiry date shall have their PLB permit voided, or PLB class removed from their ADP. Operators are advised to renew their permits in a timely manner to avoid disruption of their daily duties.

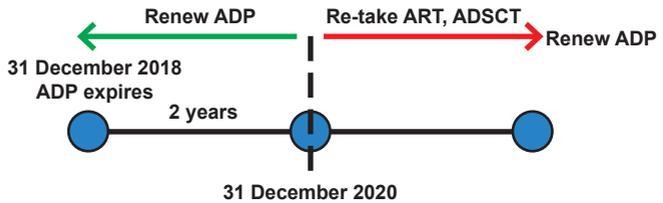
3.1.7.5. Change of Employment

- (a) The ADP is not transferable. Upon leaving his employer, the driver shall return his ADP to CAG ADC either personally or through his employer. Failure to do so is a violation of CAAS By-Laws.
- (b) If the driver is required to drive in the airside by his new employer, he shall proceed to CAG ADC and produce a proof-of-employment letter from his new employer as a supporting document to have his ADP details updated.

3.1.7.6. Expiry of ADP

If a driver does not renew his ADP within two years of the ADP expiry date, he shall retake the ART and ADSCT to qualify for a new ADP.

Example: ADP expires on 31 December 2018;



3.1.7.7. Replacement of ADP

Drivers who wish to replace their ADP (due to defacement or loss) may do so at CAG ADC. Corresponding fees apply.

3.2. Requirements for Vehicles

3.2.1. Airfield Vehicle Permit (AVP)

Vehicles operating in the airside must be issued an AVP.

For short-term operation of less than 60 days per calendar year, a Temporary Entry Permit (TEP) shall be obtained, subject to ADC discretion. The AVP/TEP shall be displayed clearly on the windscreen or in a clearly visible external location.

(a) AVP (More than 60 Days)

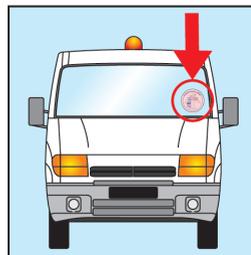


(b) TEP (Less than 60 Days)

Vehicles with TEP must be escorted by an ADP holder driving a separate vehicle. Both the escorting and escorted vehicles must follow proper escort procedures. Refer to **Section 5: Escorting Vehicles in Airside** for more information.



(c) AVP/TEP shall be displayed clearly on the vehicle windscreen. For vehicles without a windscreen, the AVP/TEP is to be displayed in a clearly visible external location.

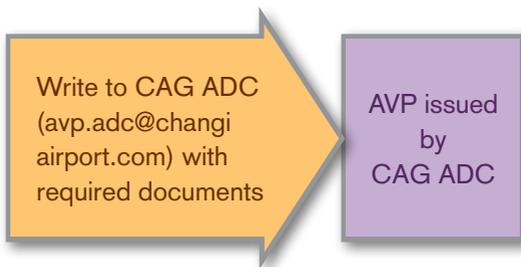


3.2.3. AVP Application and Vehicle Safety Requirements

3.2.3.1. AVP Application

To register for a new AVP or renew an existing AVP, an application form along with all necessary documentation shall be submitted via email.

The application process for registration of a new AVP is as follows:



For full details on application requirements, please refer to the **Application to Register New/Renew Airfield Vehicle Permit** form available on the CAG website or in hardcopy at CAG ADC.

3.2.3.2. Vehicle Requirements

To be issued with an AVP, vehicles shall comply with the requirements below:

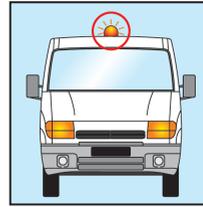
(a) Vehicle Examination

Vehicles shall undergo physical examination at the LTA authorised inspection centres (e.g. VICOM and STA) and produce a copy of the inspection certificate.

(b) Designated Parking Area

The designated vehicle parking area shall be clearly stated in the application form.

(c) Flashing Yellow Lights



A flashing yellow light shall be installed on the highest point of the vehicle. This light shall be switched on at all times when the vehicle is in operation. The light shall meet the following specifications (refer to **Application to Register New/Renew Airfield Vehicle Permit** form for full details):

| Light Type | Color | Signal Type/ Flash Rate | Peak Intensity (CD) at Given Background Luminance | | | Light Distribution Table | | | |
|---|--------|--------------------------------------|---|--|-------------------------------|--------------------------|-------------------|----------------------|-----------|
| | | | Day (>500cd/m ²) | Twilight (50 to 500cd/m ²) | Night (<50cd/m ²) | Minimum Intensity | Maximum Intensity | Vertical Beam Spread | |
| | | | | | | | | Minimum Beam Spread | Intensity |
| Low-Intensity, Type C (Mobile Obstacle) | Yellow | Flashing 60-90 flashes per minute | N/A | 40 400 max | 40 400 max | 40cd | 400cd | 12° | 20cd |

(d) Vehicle Markings



The entire vehicle body down to the waist and front shall be painted white and the horizontal surface shall reflect the company's logo. This requirement does not apply to vehicles belonging to government agencies.

For construction vehicles with TEP, white body paint may be exempted if a chequered flag of minimum dimensions 900mm by 900mm in red and white is displayed at the highest point of the vehicle.

(e) Signage

'No Smoking' sign shall be displayed in the vehicle.



(f) Insurance

All vehicles operating in the airside shall have insurance coverage for activities conducted in Changi airside. The insurance policy number shall be indicated in the application form.

(g) Registration

All vehicles operating in the airside shall be registered with the Land Transport Authority of Singapore (LTA). The vehicle registration number shall be indicated in the application form.

(h) Seat Belts

Unless exempted by the airport licensee, all vehicles shall be installed with seat belts for the driver and front seat passenger.



The following Ground Support Equipment are exempted from installation of seat belts:

- Air Tug
- Joint Container Pallet Loader (JCPL) & Lower Deck Loader (LDL)
- Main Deck Loader (MDL)
- Skyloader / Conveyor Belt Loader
- Tractor
- Transporter

Notwithstanding the above exemptions, if any vehicle is fitted with seat belts, the driver and front passenger must wear them.

3.2.3.3. Fire Safety

All vehicles operating in the airside shall comply with fire safety rules as stipulated below:

(a) Flame Proofing of Petrol Engine

- i. Exhaust pipe explosions shall not occur when throttle is suddenly closed.
- ii. Carburetor shall be fitted with flame trap/arrestor. A standard automotive-type oil bath air cleaner shall be used. Alternatives shall be approved by CAG Airport Emergency Service (AES).
- iii. Gasket between induction manifold and cylinder block shall have gas-tight seal.

(b) Exhaust System

- i. Exhaust manifold and adjacent section of exhaust pipe shall be covered with metal to prevent petrol/oil/other combustible material from coming into contact with them. Otherwise, drip tray shall be provided under the carburetor, with a pipe to drain waste petrol from the manifold and exhaust pipe.
- ii. Exhaust pipe of petrol engine vehicle without catalytic converter shall be fitted with approved spark arrestor. Screen-type arrestors shall be serviced regularly to ensure there is no carbon build-up.



(c) Electrical System

- i. Spark plugs shall be covered and protected.
- ii. Vehicle battery shall be ventilated. Terminals shall be covered.
- iii. Fuse box shall be enclosed and protected by cover.
- iv. Wiring connections shall not be loose. Wiring insulation shall not be cracked or damaged.

(d) Fire Extinguishers



- i. All vehicles operating in the airside shall carry at least one 1kg ABC Dry Powder Extinguisher fitted in an easily accessible location, unless otherwise mandated by CAG.
- ii. All Airfield Refueling Vehicles shall carry at least two 9kg ABC Dry Powder Extinguishers fitted in easily accessible locations, unless otherwise mandated by CAG.
- iii. All fire extinguishers shall be checked for correct working pressure, servicing period validity, and overall serviceability.

A photograph of an airport airside area. In the foreground, a white forklift with the identification number 'WC5748E/GWL28' is driving on a paved road. To the left, a sign on a metal post reads 'BEWARE OF REVERSING TRACTORS'. The background shows a large, modern airport building with a glass facade and a cloudy sky. The bottom half of the image is overlaid with a large orange graphic element.

DRIVING IN THE AIRSIDE

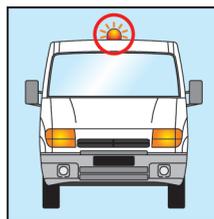
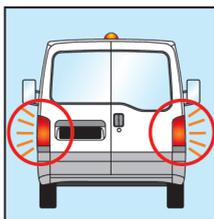
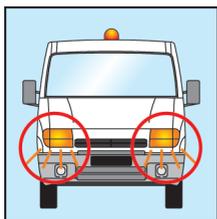
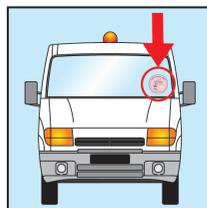
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4 DRIVING IN THE AIRSIDE

4.1. Pre-Driving Checks

Before starting driving duties, drivers shall conduct pre-driving checks. This is to ensure that the vehicle is safe for driving. Several examples of pre-driving checks are as follows:

- ✓ Valid AVP/TEP displayed clearly on the windscreen. If the vehicle does not have a windscreen, the AVP/TEP shall be displayed in a clearly visible external location. Defaced AVP or TEP shall be replaced at CAG ADC.
- ✓ Check tires are in good condition and inflated to correct pressure.
- ✓ Check steering and brakes are working normally.
- ✓ Ensure no warning lights (engine light, brake light, etc.) are on.
- ✓ Ensure headlights, brake lights, signal lights, and flashing yellow lights are working normally.



- ✓ Ensure serviceable fire extinguisher(s) is/are in easily accessible location.

Vehicles experiencing any abnormal or unsafe operating conditions shall not be used.

4.2. Passenger Load

- 4.2.1. Passengers shall be seated in a passenger seat provided in the vehicle or standing in a section constructed for standing passengers.

- 4.2.2.** Maximum Passenger Capacity (MPC) label shall be displayed on the vehicle to indicate the maximum number of passengers that can be transported. Lorries shall not carry more workers than approved by LTA.



4.3. High Visibility Vest/Raincoat Specifications

4.3.1. High Visibility Safety Vest

High visibility safety vest shall be worn and properly fastened when operating in the airside, unless the company uniform incorporates safety vest requirements. Vests shall have the following specifications:

- Bright coloured (yellow, orange, lime green are recommended).
- Meets Class 2 per EN ISO 20471:2013, with minimum 0.5m^2 fluorescent surface and 0.13m^2 reflective surfaces.
- Imprinted with company logo for easy identification.



4.3.2. High Visibility Raincoat/Suit

High visibility raincoat/suit shall be worn and properly fastened during inclement weather. If raincoat/suit does not meet the below requirements, a Class 2 high visibility vest shall be worn over the raincoat/suit. Raincoats shall have the following specifications:

- Meets Class 3 per EN ISO 20471:2013, with minimum 0.8m^2 fluorescent surface and 0.2m^2 reflective surfaces.
- Cover torso and have, as a minimum, either sleeves with retro reflective bands or full length trouser legs with retro reflective bands.



4.4. General Driving Conduct (Dos and Don'ts)

(a) Always Carry Valid ADP and State License

All drivers shall carry their ADP and state license and show them upon request by CAG authorised personnel.



(b) Always Wear High-Visibility Vest or Raincoat

All drivers shall wear a properly fastened high visibility vest/raincoat (during wet weather) when driving in the airside.



(c) Always Fasten Seatbelt

All drivers and front seat passengers shall fasten their seatbelt when the vehicle is in motion.



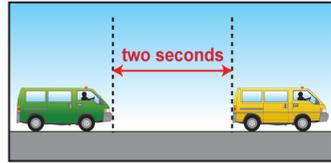
(d) Always Exercise Care and Vigilance When Driving

All drivers shall be alert when driving in the airside.



(e) Always Maintain a Safe Following Distance

All drivers shall maintain a safe following distance from the vehicle in front. The recommended following distance is at least a two-second gap.



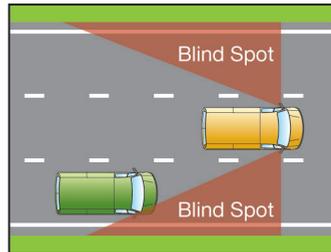
(f) Always Check Before Reversing

All drivers shall check their surroundings and ensure area is clear before reversing.



(g) Always Check Blind Spots Before Moving Off/Changing Lanes

All vehicles have blind spots which are not visible using the rear view/side mirrors. Drivers shall check blind spots and ensure the vicinity is clear before moving off or changing lanes.



(h) Always Secure Loads Properly

To minimise risk of damage to infrastructure and vehicles and injury to persons, drivers shall ensure all loads and covers are properly secured, such as vehicle and baggage container tarps.



(i) Always Follow Road Markings and Signs

All drivers shall follow road markings and signs in the airside.

**(j) No Alcohol and Drugs**

Drivers under the influence of alcohol, drugs, and medicine causing drowsiness shall not operate a vehicle in the airside.

**(k) No Eating and Drinking**

Consumption of food and drinks in any form in the airside is strictly prohibited.

**(l) Hand-Held Communication Devices**

While driving in the airside, use of mobile phones without hands-free devices (for example, holding a mobile phone with one hand while driving with the other hand) when the vehicle is in motion is strictly prohibited.

**(m) Driving Over Fuel Hydrant Pit**

Driving over fuel hydrant pits is strictly prohibited.



4.5. Speed Limits Around the Airside (Kilometres per hour)



Within Aircraft Stand



Within Baggage Handling Area



Roadways in Within 15m of Aircraft Stand



Roadways in Front of Baggage Handling Area



Roadways Beyond 15m of Aircraft Stand



Tunnel Roadways

In addition to the general speed limits in the areas indicated above, drivers shall adhere to speed limits displayed on the speed limit signs throughout the airside. Where speed limits indicated on signs and general speed limits indicated above are different, speed limits indicated on signs installed throughout the airside shall be adhered to.

Drivers shall not operate vehicles with faulty speedometers, as they must be aware of the speed at which they are travelling.

4.6. Right of Way

4.6.1. Giving Way to Aircraft and Emergency Vehicles

Drivers shall always **look out for and give way to**:

- (a) Aircraft taxiing, on tow, or on push-back.



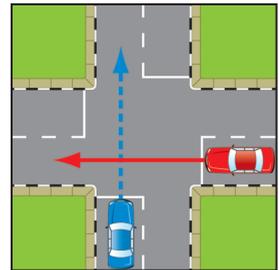
- (b) Emergency Vehicles responding to emergencies.



4.6.2. Giving Way at Junctions

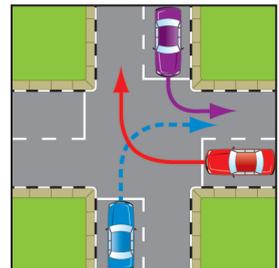
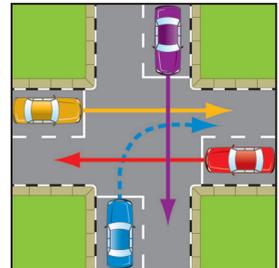
There are unsignalled junctions in the airside. These refer to junctions where traffic flow is not controlled by traffic lights. At these junctions, drivers shall exercise safe driving and judgment, and give way to other vehicles in accordance with basic driving rules:

- (a) If going straight, driver shall give way to vehicle going straight from the right.

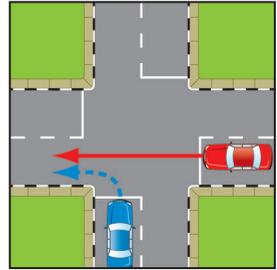


- (b) If turning right, driver shall give way to:

- Traffic going straight from all directions;
- Traffic turning right from the right;
- Traffic turning left from the opposite direction.



- (c) If turning left, driver shall give way to traffic going straight from the right.



4.7. Driving On Airside Roadways

4.7.1. Ground Markings

Drivers shall only proceed in the directions shown by the road markings, unless the vehicle is operating inside an aircraft stand.



Proceed



Turn left



Turn right



Proceed or
turn left



Proceed or
turn right



Turn left or
right



Proceed, turn
left or turn right

4.7.2. Height Restrictions

Refer to the Appendix for height limits in the airside. In addition to height limits in areas indicated in the Appendix, drivers shall look out for height limit, vehicle restriction signs and gantries in the airside.

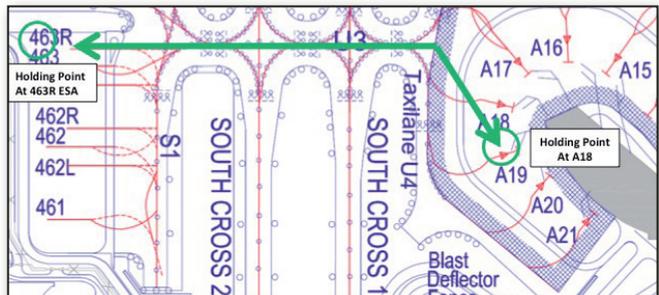
Drivers of tall vehicles or towing tall equipment (for example A-Frame, Pax Step, Maintenance Step, A380 Catering Truck) shall:

- ✓ Be aware of overall height of vehicle being driven.
- ✓ Observe height limit signs displayed in the airside.
- ✓ Plan driving route and avoid roads with height limit lower than vehicle or towed equipment height.



Only drivers of vehicles that exceed the height limits on primary roadways shall use the secondary roadways to complete their trip.

4.7.2.1. Movement of Vehicle/Equipment Exceeding 4.5m in Height To and From South Apron Aircraft Stands



For vehicles and equipment more than 4.5m in height, there is no roadway access between South Apron and Terminal 3. These vehicles and equipment shall use the Airside Operations Follow-Me-Service (FMS) to travel between South Apron and Terminal 3 using Taxiway U3.

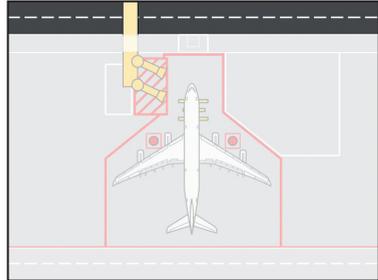
Request for FMS shall be made to the Airside Duty Manager at the Airside Management Centre at least 60 minutes before the intended crossing time.

The designated holding points for FMS are:

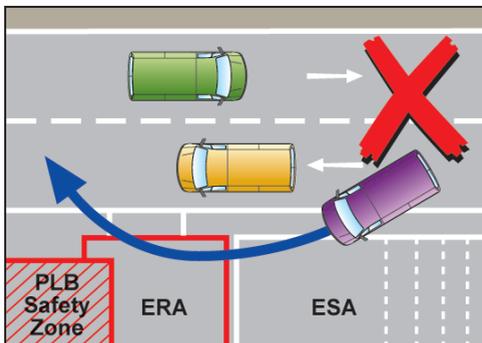
- 463R ESA
- A18 ESA

4.7.3. Primary Roadways

Primary roadways are located in front of aircraft stands.



- (a) Drivers shall not enter an aircraft stand as a short cut or to overtake vehicles.



- (b) Drivers shall observe height restrictions at aerobridges and other fixed structures at all times.

4.7.3.1. Primary Roadways in Front of Baggage Handling Areas

There are primary roadways which are located in front of baggage handling areas. Drivers are to observe the speed limit and look out for tractors entering and exiting the baggage handling areas.

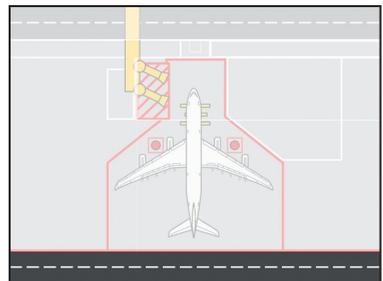


Tow-tugs and heavy tractors weighing >45 tonnes (45,000kg) are not allowed to use the primary roadway in front of Terminal 3 baggage handling area. Drivers shall use an alternative route.

4.7.4. Secondary Roadways

Secondary roadways are located behind aircraft stands. Because the secondary roadway lies in the path of aircraft taxiing in and out of the aircraft stands, vehicles using the secondary roadway are exposed to the risk of collision with aircraft.

Therefore, secondary roadways shall only be used by vehicles or vehicles towing equipment (for example, maintenance steps) that exceed the height limits on primary roadways, except vehicles that are authorised by CAG.



Misuse of secondary roadways is an offence and offenders will be subject to issuance of NOO and may have their ADP suspended.

When driving on secondary roadways, drivers shall:

- ✓ Look out, stop and give way to aircraft entering or exiting aircraft stands.
- ✓ Visually check that area is clear of aircraft movement before proceeding.

4.7.4.1. Secondary Roadways at Remote Aircraft Stands

There are secondary roadways at remote aircraft stands away from the terminal buildings. To reduce the risk of collision with aircraft, drivers shall access the aircraft stands using the primary roadways unless absolutely necessary or if authorised by CAG.

4.7.4.2. Giving Way To Aircraft



Drivers travelling on secondary roadways shall exercise vigilance and give way to aircraft moving in and out of aircraft stands. Failure to give way to aircraft may result in serious accidents. The figure above shows an aircraft on pushback moving across the secondary roadway.

Aircraft **ready for pushback out of the aircraft stand** may have the following features:

- ✓ Aircraft anti-collision light is on.



- ✓ Passenger Loading Bridge (PLB) is not connected to aircraft.
- ✓ Ground Support Equipment (GSE) removed from aircraft.
- ✓ Safety cones removed.
- ✓ Tow-tug attached to aircraft.

If an aircraft is about to taxi into an aircraft stand, the following may be observed:

- ✓ Wheel chock placed next to stop line.
- ✓ Ground Support Equipment (GSE) staged in the Equipment Staging Area (ESA).
- ✓ Apron staff, including ADGS operator on standby near PLB plinth.
- ✓ ADGS pilot display panel lit up.

If any of the above conditions is met, drivers travelling on the secondary roadway behind the aircraft stands shall stop and move to the edge of the nearest available aircraft stand to give way to the aircraft.

4.7.5. Perimeter Roadways

Perimeter roadways are located near the perimeter fences surrounding the aerodrome boundary. As perimeter roadways contain taxiway crossings at various points and pass by the entrance and exit to Fire Stations, drivers shall exercise vigilance when travelling on perimeter roadways.

Drivers shall obey speed limits as stipulated by the speed limit signs located along the roadways.



4.7.6. Tunnel Roadways

Tunnel roadways allow drivers to traverse between Terminal 1 and the Cargo terminals. Drivers using the tunnel roadways shall observe the following:

- (a) Check the gantry at the tunnel entrance. Tunnel roadways shall not be used when the red light is on.
- (b) Height limit of tunnel roadways is 4.5m.
- (c) Waiting, parking, making a U-turn or reversing are strictly prohibited.



There are certain vehicles which are not allowed to use the tunnel roadways; these vehicles and vehicles which exceed the tunnel height limit shall use the taxiway crossings instead.

The following vehicles are **not allowed** in tunnel roadways:

- (a) Joint Container Pallet Loaders (JCPL).



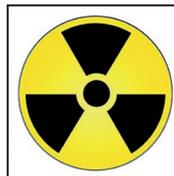
- (b) Main Deck Loaders.



- (c) Tankers/bowsers carrying flammable liquid with flash point $\leq 61^{\circ}\text{C}$ (Jet A-1 fuel, Avgas, Petrol).



- (d) Vehicles transporting radioactive materials, chemicals, and explosive items.

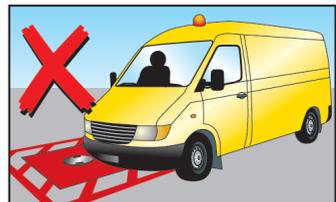


4.8. Driving In Aircraft Stands

4.8.1. General Driving Conduct

Drivers operating in the aircraft stands shall observe the following:

- (a) Vehicle shall possess valid AVP with aircraft stand access.
- (b) Vehicles required for servicing and maintenance of aircraft, but without valid AVP including aircraft stand access, shall be parked at the Holding Strip.
- (c) Drivers waiting in the ESA to service an arriving aircraft shall park in an orderly manner with handbrake engaged. Vehicles shall not park in the EPA unless authorised to do so.
- (d) Drivers shall stay clear of the ERA when an aircraft is entering or exiting the aircraft stand.
- (e) Drivers shall not park vehicles or equipment within the overlapping ERA and "Keep Clear" zones at all times.
- (f) Drivers shall approach the aircraft at an angle.
- (g) Drivers shall not drive over any hose or bonding cable used for refueling of aircraft.
- (h) Drivers shall not reverse towards aircraft unless under the direction of a vehicle marshaller.
- (i) Unless it is required for refueling/maintenance services, drivers shall not park vehicle under the aircraft wings or fuselage.
- (j) Drivers shall not drive over fuel hydrant pits.

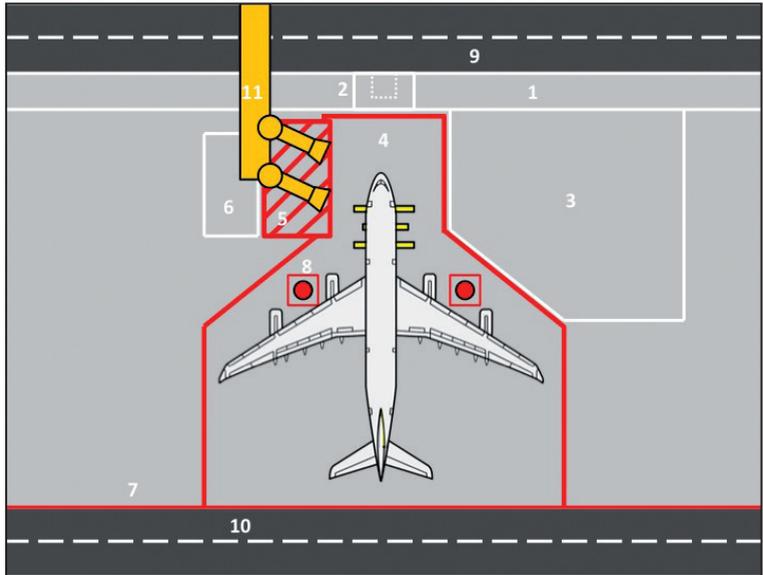


(k) Drivers shall observe the speed limit of 5km/h.



(l) Drivers shall not drive through an aircraft stand to reach other aircraft stands. Aircraft stands shall be accessed using the roadways only.

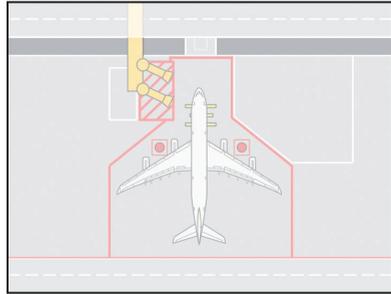
4.8.2. Layout of an Aircraft Stand



| | | | |
|---|--|----|--------------------------------|
| 1 | Holding Strip | 7 | Apron Boundary Line (ABL) |
| 2 | No Parking Area | 8 | Fuel Hydrant Pit |
| 3 | Equipment Staging Area (ESA) | 9 | Primary Roadway |
| 4 | Equipment Restraint Area (ERA) | 10 | Secondary Roadway |
| 5 | Passenger Loading Bridge (PLB) Safety Zone | 11 | Passenger Loading Bridge (PLB) |
| 6 | Equipment Parking Area (EPA) | | |

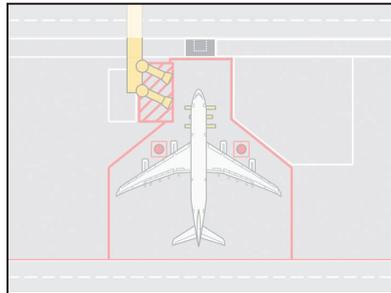
4.8.3. Holding Strip

The holding strip is used for vehicles conducting aircraft servicing, but do not have a valid AVP with aircraft stand access. Vehicles shall not be parked in the holding strip more than 20 minutes before arrival of aircraft.



4.8.4. No Parking Area

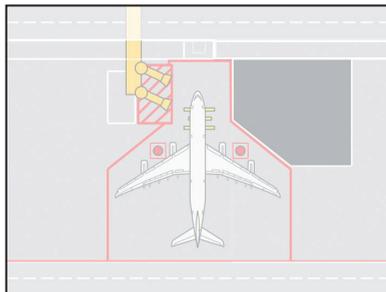
This area is used for tow-tugs to manoeuvre and connect to aircraft preparing for pushback. Other vehicles shall not park here at all times.



4.8.5. Equipment Staging Area (ESA)

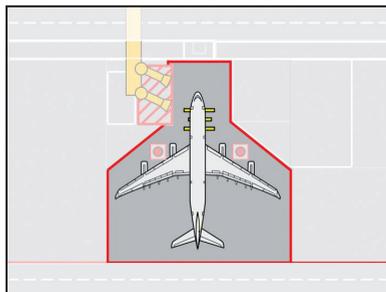
The equipment staging area is for staging of ground handling equipment or vehicles conducting aircraft servicing. All vehicles and equipment shall:

- (a) Be positioned in the ESA at least 20 minutes before aircraft arrival.
- (b) Be staged in an orderly manner at all times.



4.8.6. Equipment Restraint Area (ERA)

The ERA is defined as the area of the apron bordered by a red line. It shall be kept clear at all times for the safe movement of an aircraft in and out of the stand. Personnel, vehicles and/or GSE are only allowed to enter when servicing the aircraft or for other work purposes.



Drivers shall enter the ERA only when it is safe to do so.

4.8.6.1. Procedure for Entering ERA

The ERA shall be kept clear before an aircraft arrives or after an aircraft departs. After an aircraft has entered the aircraft stand, drivers shall confirm the following before entering the ERA:

- (1) Aircraft has come to a complete stop.
- (2) Aircraft engines switched off and are spooling down.
- (3) Aircraft anti-collision lights switched off.

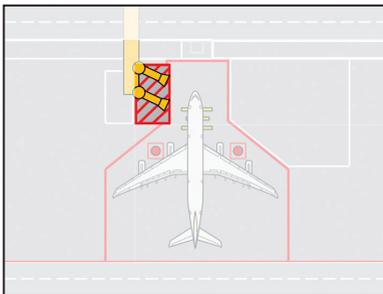
- (4) Aircraft wheel chocks and grounding cables positioned.



- (5) Headset Man gives 'thumbs-up' signal.
- (6) Safety cones placed.



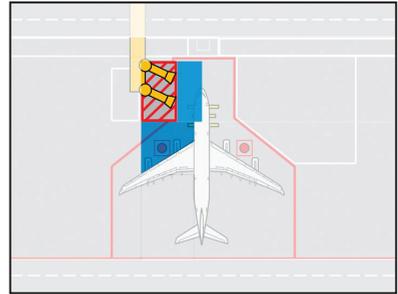
4.8.7. Passenger Loading Bridge (PLB) Safety Zone



The PLB safety zone is demarcated by the red hatched area. Drivers operating in the aircraft stand shall observe the following:

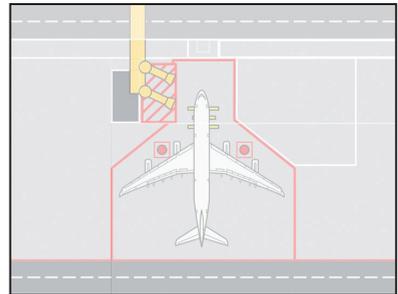
- (a) Keep clear of the PLB safety zone at all times.
- (b) After PLB has docked to aircraft, only vehicles and equipment authorised by CAG may be positioned in the PLB safety zone.
- (c) Alert the PLB operator if there is any obstruction in the PLB safety zone before PLB operations begin.

In addition to the above, PLB operators shall not dock or retract the PLB when there is any obstruction between the parked aircraft and the PLB (refer to the blue area in the diagram).



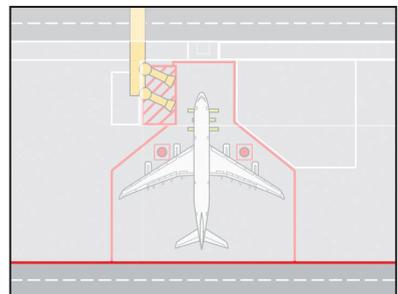
4.8.8. Equipment Parking Area (EPA)

The equipment parking area is reserved (via lease) for parking of vehicles and ground handling equipment.

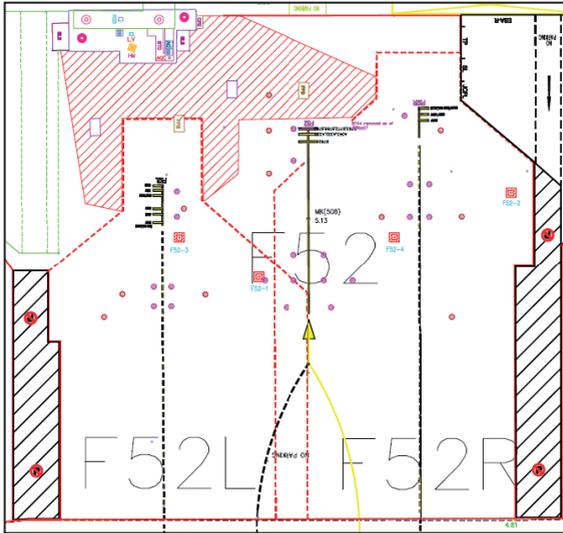


4.8.9. Apron Boundary Line

The apron boundary line demarcates the boundary between the aircraft stand and the secondary roadway behind the aircraft stand.

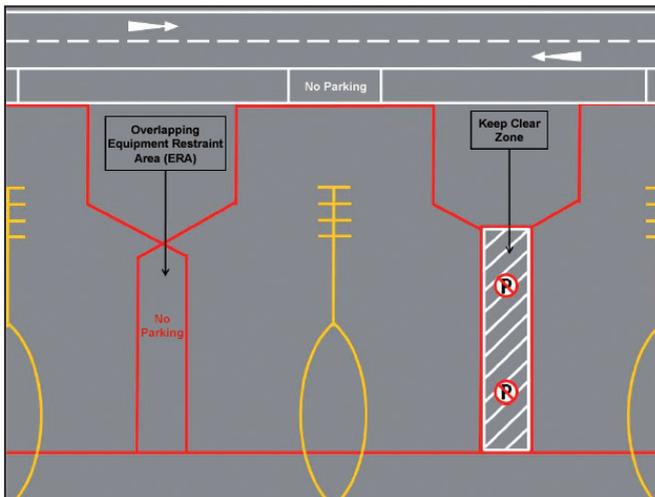


4.8.10. Layout of Multiple Aircraft Receiving Stand (MARS)



MARS stands are configured to receive either one wide-body (large) aircraft or two narrow-body (smaller) aircraft. Where ERA in MARS stands overlap, **drivers shall not park vehicles or equipment within the overlapping ERA (for example, between F52L and F52R above) at all times.**

4.8.11. Overlapping ERA and “Keep Clear” Zones



For some aircraft stands, the ERA of stands beside each other overlap. The overlapping area shall be treated in the same way as an ERA; **vehicles or equipment shall not be parked or staged in this area at all times.**

Overlapping ERA lines are progressively being converted into “Keep Clear” zones. These zones are marked with white hatched lines and “No Parking” signs painted on the ground. **These zones shall be kept clear of personnel, vehicles, and equipment at all times.**

4.9. Baggage Handling Areas (BHA)

Vehicles operating in the Baggage Handling Areas shall observe the following:

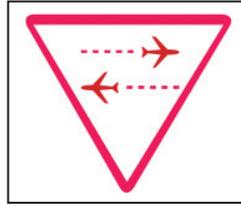
- (a) Only vehicles authorised by CAG Airside Management (ASM) are allowed to operate in the BHA.
- (b) Height limit in the BHAs is 2.3m.
- (c) Vehicles or towed equipment parked in the BHA shall not obstruct traffic flow.
- (d) Where ‘Electric Tractors Only’ signs are displayed, only electric tractors are allowed in the BHA. Non-electric or hybrid vehicles are strictly prohibited in these areas.



4.10. Taxiway Crossings

Drivers shall exercise extra vigilance when driving on roadways that cross taxiways, due to potential aircraft movement. Drivers shall give way to aircraft at all times and give maximum clearance to aircraft. The locations of taxiway crossings are shown in the Appendix.

The 'Give Way to Aircraft' ground marking warns drivers of taxiway crossing ahead.



When approaching taxiway crossings, drivers shall:

- (1) Slow down.
- (2) Stop at the stop line.

In this picture, the red warning light is on. This means that aircraft may be approaching ahead.

Do not proceed until the red warning light is turned OFF.
Remember, NEVER PROCEED ON RED.



- (3) Check and confirm that taxiway crossing warning lights are NOT RED.
- (4) Visually check for aircraft movement on the taxiway. Look left, right, left.

Even if taxiway crossing warning lights are not red, DO NOT PROCEED if an aircraft is approaching the crossing.



- (5) Confirm that the roadway ahead is not obstructed.
- (6) Proceed to cross within the speed limit.

When crossing taxiways, drivers **shall not**:

- ✗ Stop on any part of the crossing.
- ✗ Overtake other vehicles.
- ✗ Attempt to cross in front of approaching aircraft.
- ✗ Attempt to cross within 250m behind a taxiing aircraft.

4.10.1 Dual Coloured Taxiway Warning Traffic Lights

Dual coloured traffic lights are being installed in several locations to assist drivers performing taxiway crossings. The lights operate in two modes:

- (1) **Flashing Amber:** Stop at stop line, look out for taxiing aircraft and aircraft on pushback before crossing.



- (2) **Fixed Red:** Stop at the stop line. Do not cross.

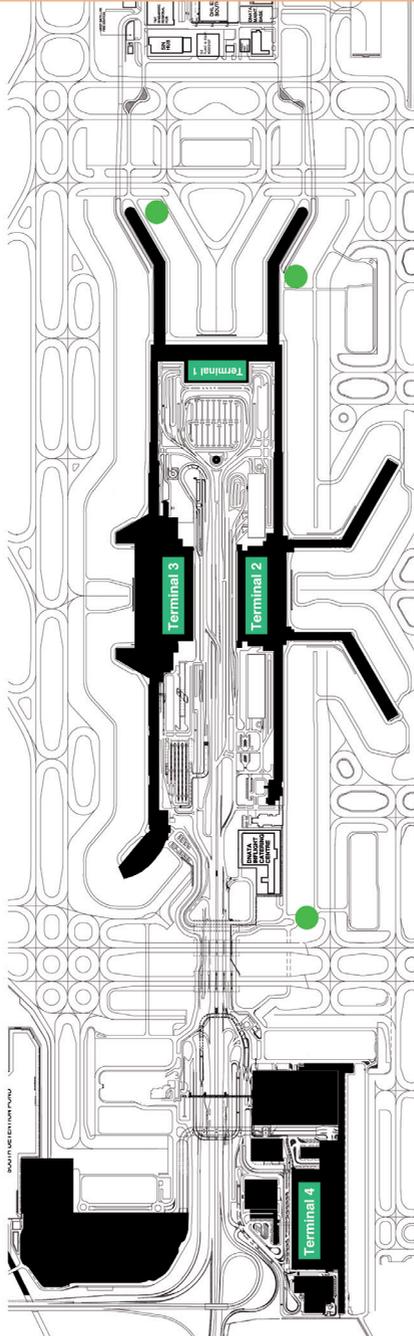


4.10.2 Mobile Enforcement Camera Locations

To mitigate incidents where drivers fail to stop at designated taxiway crossing stop lines and perform proper scanning of aircraft before crossing taxiways, mobile cameras have been deployed at various locations. The aim is to deter drivers from failing to stop at designated stop lines.



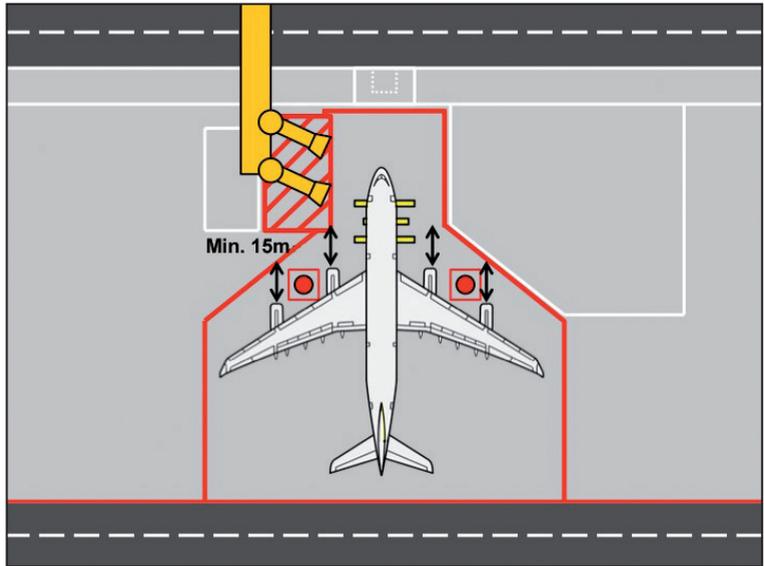
TAXIWAY CROSSING MOBILE ENFORCEMENT CAMERA LOCATIONS



● Mobile Enforcement Cameras

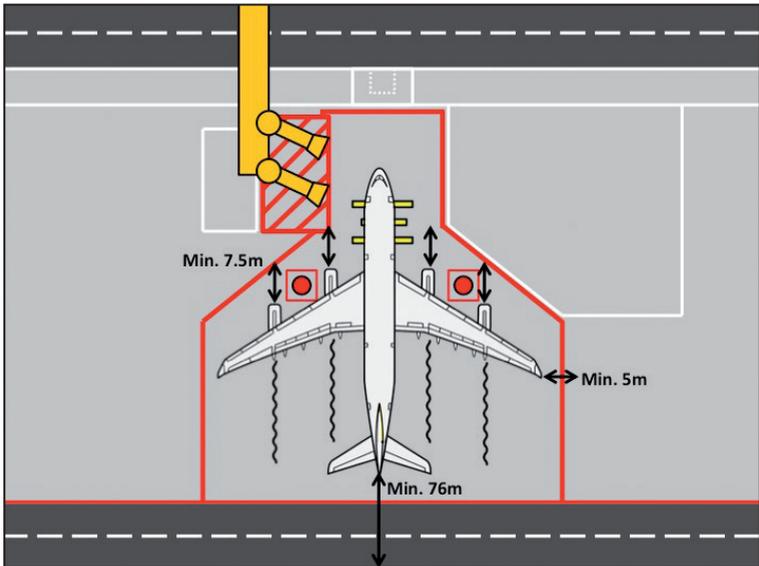
4.11. Safety Distances from Aircraft

4.11.1. Stationary Aircraft Being Refueled



Drivers shall not start vehicle engines within 15m of any refueling point or fuel vent of an aircraft being refueled.

4.11.2. Stationary Aircraft with Engine Running



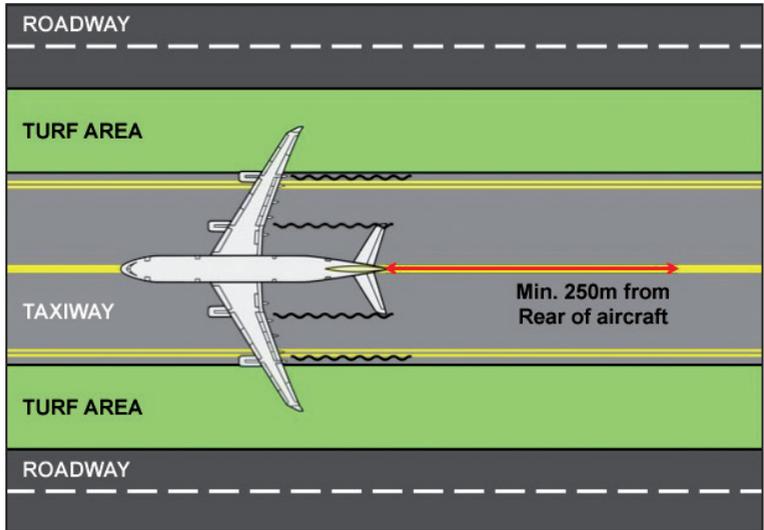
Drivers and airside personnel must be aware of the dangerous effects of jet/prop blast injuries that could be caused by being behind rotating propellers and jet/turbofan engines. There is also potential for engine ingestion when in close proximity to aircraft with its engines running.

No driver shall drive a vehicle towards an aircraft when its engines are running.

When an aircraft is stationary with its engines running, the following clear distances shall be adhered to:

- (a) 7.5m from front of aircraft engine.
- (b) 76m from rear of aircraft.
- (c) 5m from wingtip.

4.11.3. Taxiing Aircraft



When an aircraft is taxiing or being towed, the following clear distance shall be adhered to:

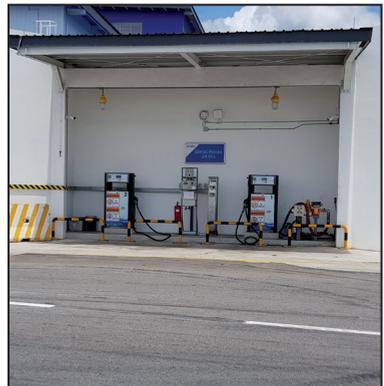
- (a) Minimum 250m from the rear of an aircraft.

Drivers shall exercise due care to adhere to the above minimum clearance distance, especially when driving on roadways that cross taxiways.

4.12. Vehicle Refueling

If a vehicle runs out of fuel while operating, it shall be towed to a designated refueling location for refueling. Refueling shall only be done at designated refueling locations declared to AES.

Fuel spillages shall be cleaned immediately. Spillages larger than 4m² shall be reported to Airport Emergency Service at 6541 2525 and Airside Control Centre at 6541 2257/2258.



4.12.1. Vehicle-to-Vehicle (V2V) Refueling

Vehicle-to-Vehicle refueling using mobile bowser trucks is allowed in the airside subject to the following conditions:

- (a) Drivers of mobile refueling trucks shall have undergone fire patroller/Hazmat Transport Driver Permit (HTDP) training.
- (b) Mobile refueling trucks shall be equipped with firefighting equipment such as fire extinguisher(s) and spillage prevention kit, as a minimum.
- (c) Refueling of vehicles is not allowed within an aircraft stand (including holding strip) if an aircraft is parked within the stand or adjacent to the stand.

4.13. Electric Vehicle Charging Facilities

Electric charging stations and charging bays are situated throughout the airside for charging of electric vehicles. Only vehicles being charged shall be parked at these bays. Vehicles shall be parked for charging purposes only and shall vacate the bays once charging is complete.



Some charging bays are located next to primary roadways. Drivers are to exercise care when approaching these facilities and look out for vehicles reversing out of electric charging bays.

4.14. Driving in Low Visibility Conditions

4.14.1. Vehicle Lighting

During periods of low visibility (e.g. haze, heavy rain, at night), drivers shall observe the following:



- (a) Slow down to a safe speed.
- (b) Switch on headlights at low beam at all times.
- (c) Ensure flashing yellow lights at the highest point of the vehicle are switched on.

4.14.2. Category II Instrument Landing System (ILS) Operations

In the event of prolonged low visibility (for example, haze), Changi Tower may declare CAT II ILS Operations to aid aircraft landings. Vehicle movement restrictions will take effect:

- (a) Vehicles shall keep clear of CAT II ILS Critical and Sensitive Areas (LSA) and CAT II ILS Out of Bound Area, unless instructed to enter those areas by Changi Tower. **Failure to do so may result in interference with aircraft navigation systems and potentially serious aircraft incidents/accidents.**
- (b) Vehicles including tow tractors shall turn on flashing yellow lights and/or headlights at all times.
- (c) Non-essential airside activities and vehicle movements shall be minimised.

Refer to the Appendix for location of CATII ILS Out-of-Bound areas.

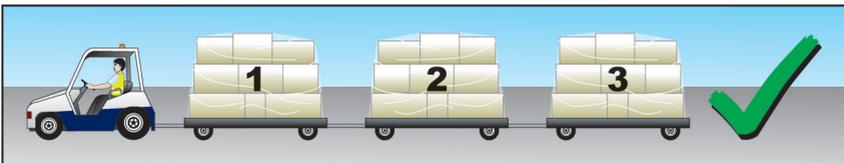
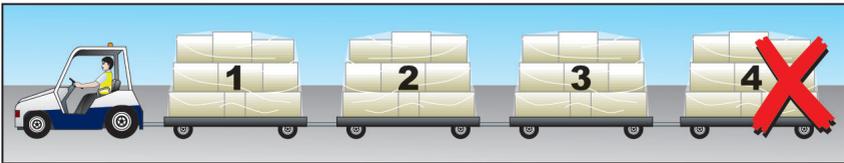
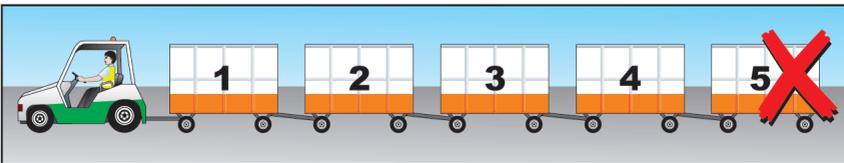
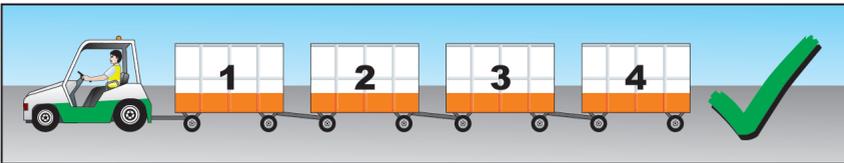
4.15. Towing

Drivers shall ensure that all towed loads are properly secured and covers or tarps are securely lashed before moving off. If the towed loads cannot be properly secured, driver shall stop operations and notify his control centre for maintenance.

Drivers shall also observe the following towing restrictions:

| Type of Towed Load | Maximum No. of Towed Units |
|--|----------------------------|
| Container Trailers or Baggage Trolleys | 4 |
| Pallet Dollies | 3* |

* On designated routes, towing of 4 pallet dollies may be allowed subject to prior approval of CAG Airside Management.



If problems are encountered during towing, drivers shall stop at a location that will not obstruct aircraft operations and traffic flow.

4.16. Operation of Forklifts

Forklift drivers shall observe the following guidelines:

- ✓ Drivers shall be Workforce Singapore (WSG) certified.
- ✓ Conduct pre-driving checks to ensure forklift is fully operational.
- ✓ Lower tyres to the ground as far as possible.
- ✓ When approaching blind corners or intersections with obstructed view, stop and proceed with caution.
- ✓ Observe the height limits of the surrounding structures.
- ✗ Forklifts shall not be driven along airside roadways unless authorised by CAG.



4.17. Operation of Boom Lifts and Scissors Lifts



Boom lift (left) and scissors lift (right) drivers shall observe the following guidelines:

- ✓ Drivers shall be Workforce Singapore (WSG) certified.
- ✓ Vehicles shall be annually certified by an approved person authorised by the Ministry of Manpower (MOM).
- ✓ Drivers without a valid Class 3 ADP shall be escorted by a vehicle with a valid AVP driven by a driver with a valid Class 3 ADP and who is certified for escort duties.
- ✓ Actual height of the boom lift or scissors lift shall be displayed prominently.

- ✓ Conduct pre-driving checks to ensure vehicles are fully operational.
- ✓ When approaching blind corners or intersections with obstructed view, stop and proceed with caution.
- ✓ Observe height limits of the surrounding structures.
- ✓ Drivers shall look out for the height limits of the surrounding structures when operating the boom lift and scissors lift.



4.18. Operation of Baggage Handling Area Buggies

Buggy drivers shall observe the following guidelines:

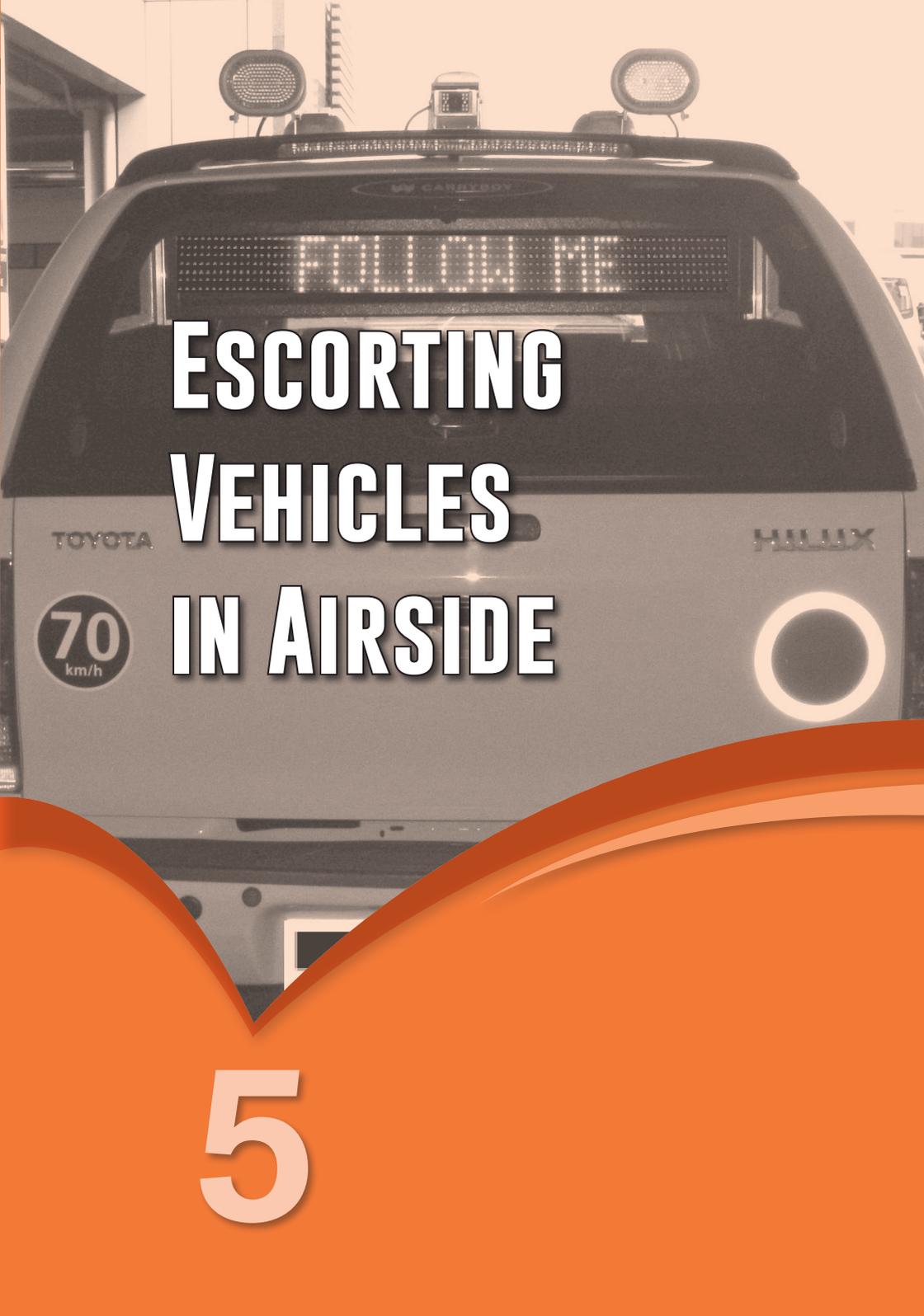
- ✓ Buggy operation is only allowed in the Baggage Handling Areas.
- ✗ **Buggy shall not be driven in the airside.** If required to be transported on the roads, it shall be towed using a trailer or flatbed truck.

4.19. Vehicle Parking in the Airside

When parking vehicles in the airside, drivers shall observe the following:

- (a) Park only in designated parking lots approved by CAG Airside Management.



The image shows the rear of a silver Toyota Hilux. On the roof, there are two circular emergency lights and a central light bar. The rear window has a large LED display showing 'POLICE'. The text 'TOYOTA' is on the left and 'HILUX' is on the right of the rear panel. A circular speed limit sign on the left indicates '70 km/h'. A large orange graphic at the bottom features a white number '5'.

ESCORTING VEHICLES IN AIRSIDE

5

5 ESCORTING VEHICLES IN AIRSIDE

5.1. Objectives

During the course of work vehicles may need to enter the Airside temporarily. These vehicles may possess a valid TEP, but drivers of those vehicles may not possess a valid ADP. In this case, these vehicles must be escorted by drivers with a valid ADP. Only escort drivers briefed and endorsed by CAG Airside Driving Centre (ADC) may perform escort duties.

This section covers procedures for escort in apron roadways only.

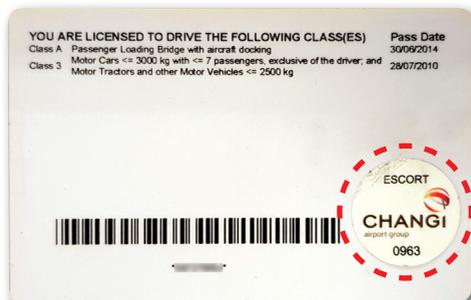
5.2. Requirements for Escort Drivers

Escort briefings are conducted at the Airside Driving Centre. Briefings are conducted in English only. Attendees must sign up personally at the ADC with a valid ADP at least 15 minutes before commencement of the briefing.

To be certified for escort duties, drivers shall:

- ✓ Possess a valid ADP.
- ✓ Successfully complete escort briefing by CAG ADC.
- ✓ Be endorsed by CAG ADC.
- ✓ Vehicles of escort drivers shall possess a valid AVP.

Upon endorsement by CAG ADC, drivers will have their ADP marked with a serialised 'Escort' sticker. This sticker shall be shown on demand by an authorised person.



5.2.1. Renewal of ADP

Validity of the escort endorsement is concurrent with the ADP. Upon renewal of the ADP, drivers shall re-attend the escort briefing to ensure currency with escort procedures to obtain escort re-endorsement.

5.3. General Roles & Responsibilities of Escort Drivers/Drivers Under Escort

Drivers are responsible for the following:

| Escort Drivers | Drivers Being Escorted |
|---|--|
| Have a clear understanding of purpose of escort and number of vehicles being escorted. | Stay close to Escort Lead Driver at all times. |
| Brief the escorted drivers on: <ul style="list-style-type: none"> • Route. • Objective of task. • Escort procedures. • Means of communication. • Airside rules and regulations. • Contingency procedures. | Never drive in the airside without an Escort Driver. |
| Have mobile telephone number(s) of all escorted driver(s) prior to commencement of escort. | Do not: <ul style="list-style-type: none"> • Overtake. • Drive ahead of Escort Lead Driver. • Break away from convoy. |
| Be in a separate vehicle with a valid AVP. | Comply with airside rules and regulations as briefed by the Escort Lead Driver. |
| Be contactable at all times throughout the duration of escort. | Have mobile telephone number of Escort Lead Driver prior to the commencement of escort. |
| Be responsible and liable for safe operations of the driver(s) and vehicle(s) under escort. | In the event of a driver breaking away from the convoy: <ul style="list-style-type: none"> • Flash vehicle headlights. • Sound vehicle horn to alert the Escort Lead Driver. |

| | |
|---|--|
| Each escort driver shall escort a maximum of two (2) vehicles at any time. | |
| Stay close to the escort convoy and observe operations closely. | |
| Should any escorted driver break away from the convoy, the escort driver shall: <ul style="list-style-type: none"> • Steer any remaining vehicle in the convoy to a designated approved holding/parking area. • Contact the break-away driver immediately. • Report incident to Airside Management Centre (6541 2275) by any means of communication. | |

5.4. Escorting Vehicles on Apron Roadways

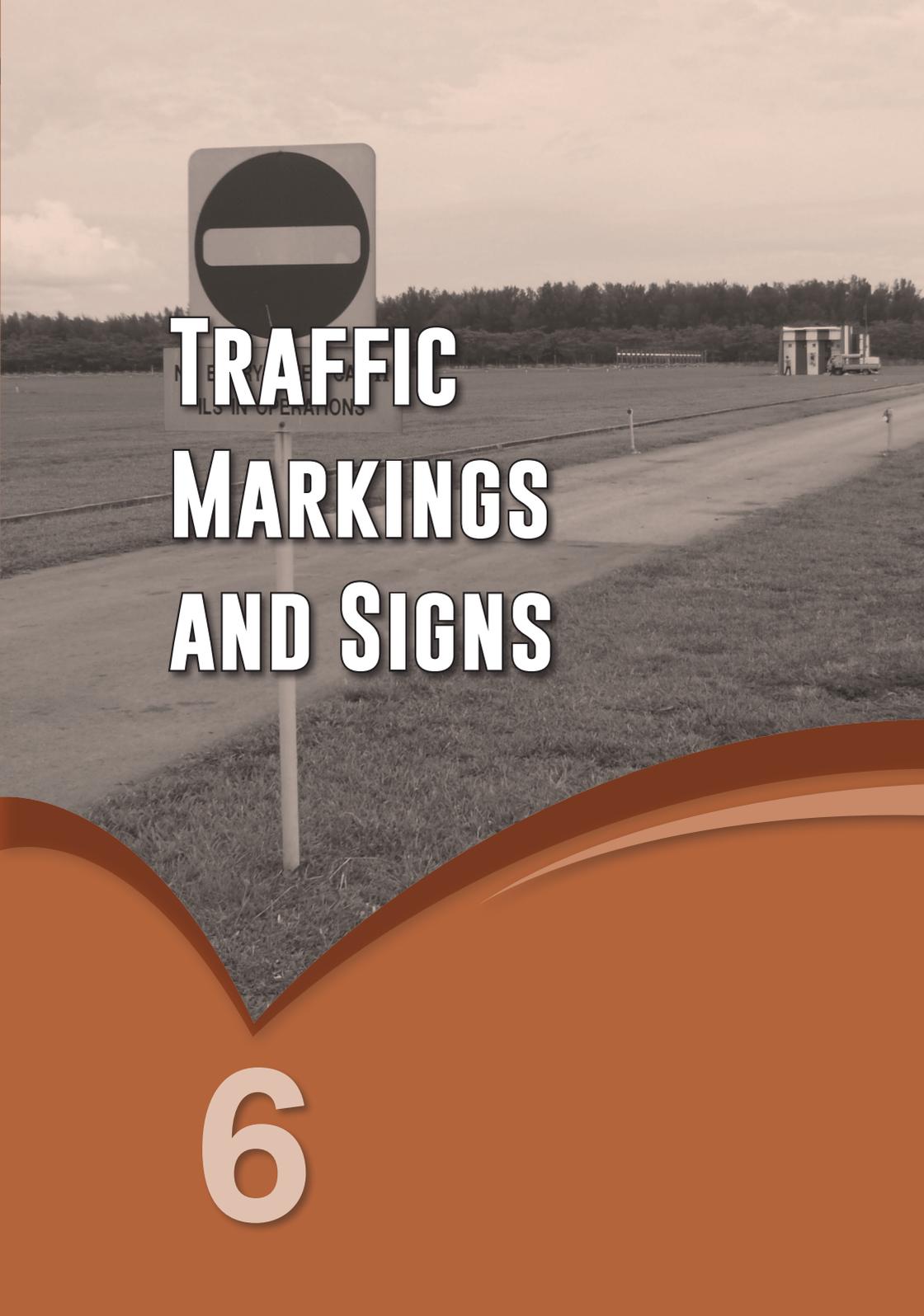
All escort vehicles shall possess a valid AVP. Vehicles under escort shall possess a valid TEP. Each escort vehicle may escort up to two vehicles with a valid TEP, for example:

| Number of Escort Vehicles (with AVP) | Maximum Number of Escorted Vehicles (with TEP) |
|--------------------------------------|--|
| 1 | 2 |
| 2 | 4 |

Vehicles without a valid AVP shall not be driven as a lead escort, even if the driver possesses a valid ADP with serialised ‘Escort’ sticker.

5.5. Briefing by Escort Driver

Before proceeding with the escort, escort drivers shall brief all escorted vehicle drivers on their roles and responsibilities set out in paragraph 5.3.



TRAFFIC MARKINGS AND SIGNS

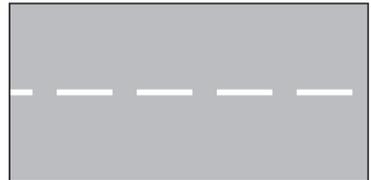
6

6 TRAFFIC MARKINGS AND SIGNS

6.1. Apron Road Markings

(a) Continuous/Broken White Line

Centre of a two-way road. Vehicles shall keep left of this line.



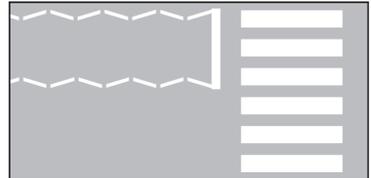
(b) Double Continuous White Line

Centre of a two-way road. Vehicles shall not cross these lines at all times.



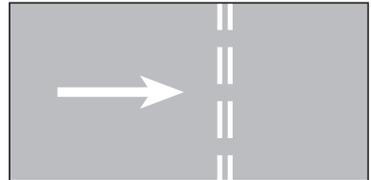
(c) Zig-Zag Lines

Pedestrian crossing ahead. Vehicles shall not overtake, wait, or park within these lines.



(d) Parallel White Broken Lines

Prepare to give way to traffic ahead.



(e) Single White Line

Vehicles shall stop before this line.



6.2. Manoeuvring Area Signs and Roadway Markings

(a) Entry into Taxiway Ahead

Only authorised vehicles may enter.



(b) Give Way to Aircraft

Look out and give way to aircraft.



(c) No Entry Runway Ahead

Only drivers with CAT1 ADP may enter subject to clearance from Changi Tower.



6.3. Traffic Signs



Turn right only



Turn left only



Ahead only



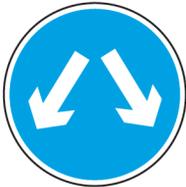
Turn right ahead



Turn left ahead



Keep left



Split traffic
(Vehicles may pass on either side)



Stop
(Stop before the white line.
Give way to traffic from the right and left)



No entry for all vehicles



Give way
(Slow down. Stop if necessary. Give way to traffic on major road)



No stopping



No waiting
(Vehicles may stop to allow boarding or alighting only)



No right turn



No left turn



Height limit
(Vehicle of height 4.5m or vehicle carrying load exceeding height of 4.5m is not allowed to enter)



No entry to Passenger Steps Vehicle



Tunnel ahead
(Slow down and beware of height limit)



Right bend
(Slow down. Keep left. Do not overtake, make a U-turn or park your vehicle)



Left bend
(Slow down. Keep left. Do not overtake, make a U-turn or park your vehicle)



Side road
(Slow down. Beware of vehicles from the right)



Side road
(Slow down. Beware of vehicles from the left)



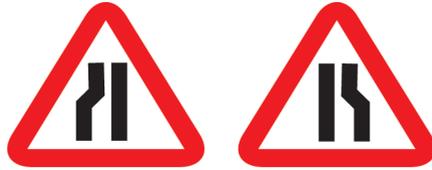
Two-way traffic ahead
(Slow down. Keep left. Beware of oncoming traffic)



Lanes merging
(Slow down. Beware of traffic merging from right or left)



Road narrows on both sides
(Slow down. Do not overtake, make a U-turn or park your vehicle)



Road narrows on one side
 (Slow down. Do not overtake, make a U-turn or park your vehicle)



One-way street



Designated pedestrian crossing



Sharp deviation
 (Slow down and drive in the direction indicated)



Barrier
 (Slow down and drive carefully)



Curve alignment markers
 (Slow down and drive carefully at bends)

6.4. Work Zone Signs



Caution road users



Works ahead

These signs indicate road works ahead. Drivers shall exercise vigilance and obey all traffic instructions and signals.

6.5. Traffic Instruction by Authorised Officer

Drivers must comply with instructions given by an authorised officer. Authorised officers may be from the following organisations:

- (a) Changi Airport Group
- (b) Airport Emergency Services
- (c) Airport Police Division / Auxiliary Police

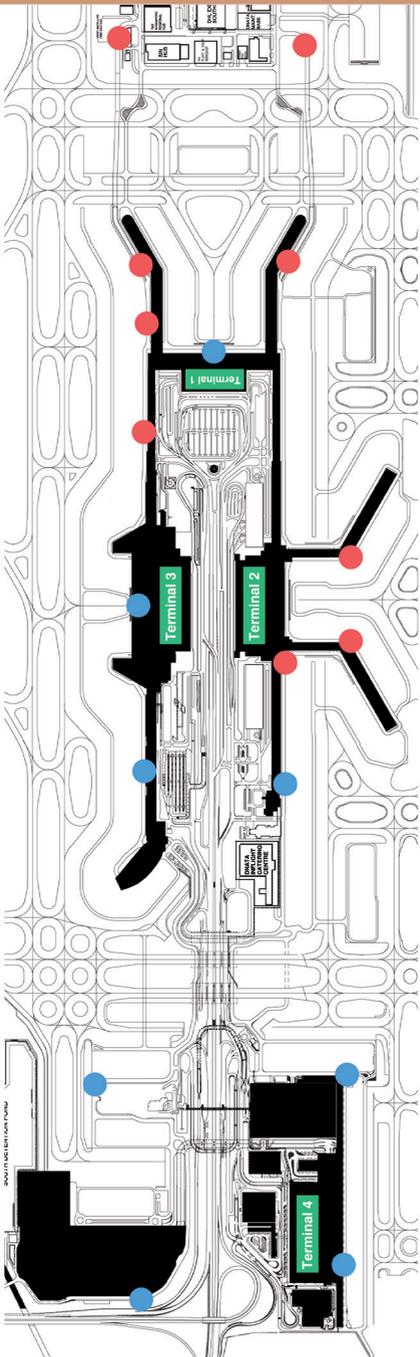
6.6. Speed Regulating Device Locations

To encourage safe driving, speed indicators have been installed at various locations. These display the real-time speed of the vehicle to alert drivers if they are approaching the speed limit. This is to help remind drivers to keep within the speed limits.

To enforce speed limits, speed cameras have been installed at various locations. Drivers found to be exceeding the speed limits shall be issued with a Notice of Offence (NOO).



SPEED CAMERA/INDICATOR LOCATIONS



Speed Cameras



Speed Indicators



INCIDENT REPORTING

7

7 INCIDENT REPORTING

7.1. Vehicle Breakdown

(a) Report

If his vehicle breaks down on the taxiways, taxi-lanes, or any other airside operational areas, the driver shall immediately inform Airside Management Centre (AMC).



(b) Remove

The driver shall contact his company to have the vehicle removed as soon as possible.

(c) Recover

While waiting for vehicle removal, the driver shall observe the following:

- ✓ Try to move the vehicle to the side of the road so that traffic is not obstructed.
- ✗ The driver shall not leave the vehicle unattended.

7.2. Vehicle Accidents

(a) Report

In the event of an accident in the airside, the driver shall immediately inform Airside Management Centre (AMC). Additionally, if there are injuries, the driver shall immediately call the Medical Emergency Hotline.



 **NO INJURY**
 Airside Management Centre
6541 2275

 **INJURY INVOLVED**
 Airside Management Centre
6541 2275
 Airport Police Division
6546 0000
 Medical Emergency Hotline
6543 2223

(b) Remain

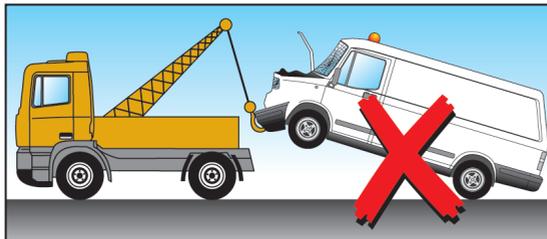
Personnel involved in the accident shall remain at the scene until a CAG authorised person arrives to handle the situation.



(c) Preservation of Accident Scene

In the event of an accident, the drivers shall observe the following:

- ✗** Do not remove the vehicle or equipment involved in the accident until permission is granted by an APD officer or CAG authorised personnel on-site.



Vehicle or equipment may only be moved as far as necessary to:

- ✓** Free/release/extract trapped persons or animals.
- ✓** Remove mail.
- ✓** Prevent fire or damage.
- ✓** Prevent obstruction to other airside users.

7.3. Fuel and Hydraulic Oil Spillages

7.3.1. Aircraft Fuel Spillage

In the event of fuel spillage with spill area more than four square metres, the drivers shall immediately report to:



| | |
|---------------------------|-----------------------|
| Airport Emergency Service | ▶ 6541 2525 |
| Airside Control Centre | ▶ 6541 2257/6541 2258 |
| Airside Management Centre | ▶ 6541 2275 |

7.3.2. Fuel Hydrant Pit Spillage

In the event of fuel spillage from underground fuel hydrant pit, the drivers shall report immediately to:



| | |
|--|-----------------------|
| Airport Emergency Service | ▶ 6541 2525 |
| Airside Control Centre | ▶ 6541 2257/6541 2258 |
| Airside Management Centre | ▶ 6541 2275 |
| Changi Airport Fuel Hydrant Installation (CAFHI) | ▶ 6546 4316 |

7.3.3. Hydraulic Oil Spillage

In the event of large hydraulic oil spillage, the drivers shall report immediately to:



| | |
|--|------------------------|
| Airside Control Centre (if spillage is in aircraft stand) | ▶ 6541 2257/ 6541 2258 |
| Airside Management Centre | ▶ 6541 2275 |

For smaller spillages, driver responsible shall clean the area with an approved absorbent material (sawdust shall not be used).

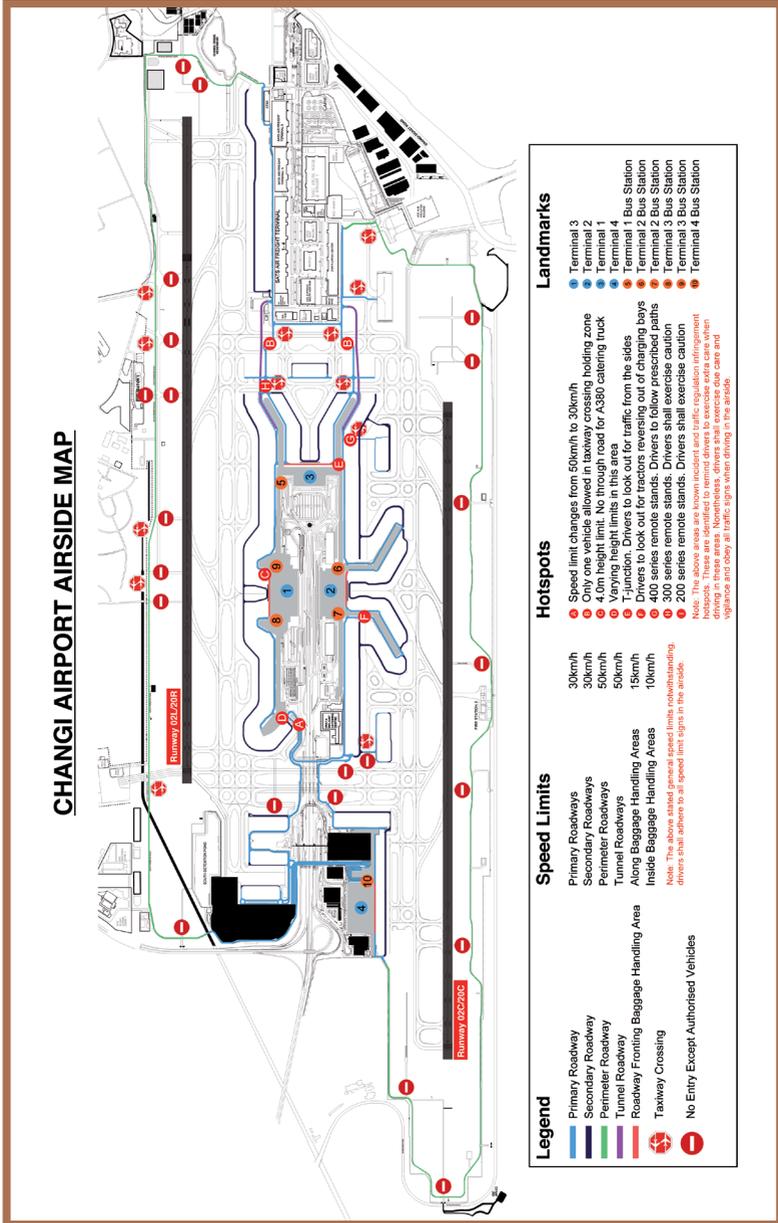
BEWARE
OF
REVERSING
TRACTORS

AIRSIDE HOTSPOTS

8

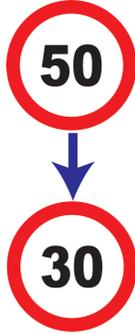
8 AIRSIDE HOTSPOTS

Drivers are advised to exercise extra care at the following known airside driving hotspots.



(a) Terminal 3 Roadways from South Perimeter Road towards T3, near A21

Speed limit changes from 50km/h to 30km/h.



(b) Between Terminal 1 and Cargo Terminals North Cross 2

Only one vehicle is allowed in the holding zone. Drivers intending to cross the taxiway shall ensure that the holding zone is clear before entering.



**(c) Terminal 3
Roadway R1S between B1 and B5, in front of T3 BHA**

No through road for A380 catering truck. A380 catering truck drivers shall obey the signs and turn left to exit the BHA.



**(d) Terminal 3
Roadway near A20, A21**

Varying height limits.



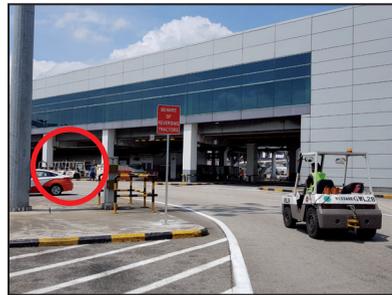
**(e) Terminal 1
Traffic Junction near D41**

T-Junction with traffic approaching from the right. Drivers shall look out for traffic from the front and right.



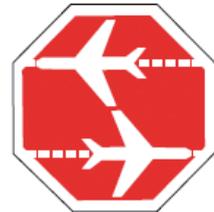
**(f) Terminal 2
South-East Finger Pier near
F40**

Electric vehicle charging stations are located along the terminal building. Drivers shall look out for vehicles moving out of the charging bays.

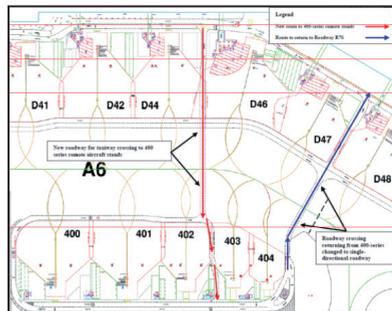


**(g) Terminal 2
400 Series Remote Aircraft Stands**

Access to 400 series remote aircraft stands is one-way only. Drivers shall follow the prescribed paths to (red) and from (blue) 400 series remote aircraft stands.



Drivers shall exercise caution, adhere strictly to the “Give Way to Aircraft” roadway markings, and strictly follow proper taxiway crossing procedures.





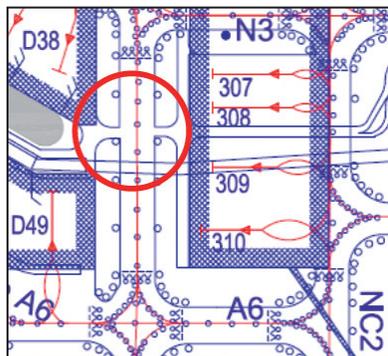
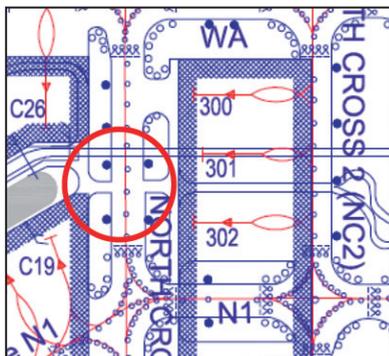
To 400 Series Stands



From 400 Series Stands

**(h) Terminal 1
300 Series Remote Aircraft Stands**

Drivers travelling from the terminal building to 300 series remote aircraft stands shall exercise caution, adhere strictly to the “Give Way to Aircraft” roadway markings, and strictly follow proper taxiway crossing procedures.



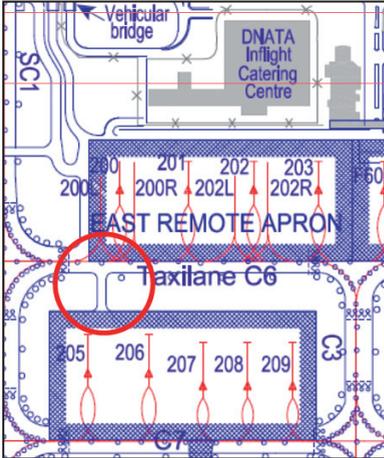
To 300 Series Stands



To 300 Series Stands

(i) Terminal 2
200 Series Remote Aircraft Stands

Drivers travelling from the terminal building to 200 series remote aircraft stands shall exercise caution, adhere strictly to the “Give Way to Aircraft” roadway markings, and strictly follow proper taxiway crossing procedures.



To 200 Series Stands



**YOUR
SPEED**



ENFORCEMENT



9

9

ENFORCEMENT

9.1. Suspension or Cancellation of ADP

CAG may, at any time at its discretion, suspend for such a period as it deems fit or cancel any ADP. CAG may suspend or cancel an ADP if:

- (a) There has been a contravention of any condition of issuance or possession of the permit;
- (b) The person to whom the permit has been issued is deemed not competent to drive the relevant vehicle;
- (c) It would not be in the interest of safety of the airside community for him to hold a driving permit.

9.2. Suspension Framework

Refer to Chapter 10 for a schedule of all offences and their corresponding severity. If the person to whom the ADP has been issued commits offences as specified in the below table, his ADP may be suspended for the corresponding periods:

| Number of High Severity Offences | Duration of ADP Suspension |
|---|---|
| 2 within 12 months | 3 months |
| 3 within 24 months | 6 months |
| 4 within 24 months | ADP revoked and no re-issuance for 1 year |
| Any offences leading to Death/Aircraft Damage | ADP revoked and no re-issuance for 1 year |

Suspended drivers shall retake the ART before being re-issued an ADP at the end of the suspension period.

Drivers whose ADP has been revoked shall not be re-issued with an ADP for a period of one year. After the one year period, drivers shall retake the ART and ADSCT before being re-issued with an ADP.

9.3. Drivers Involved in Incidents

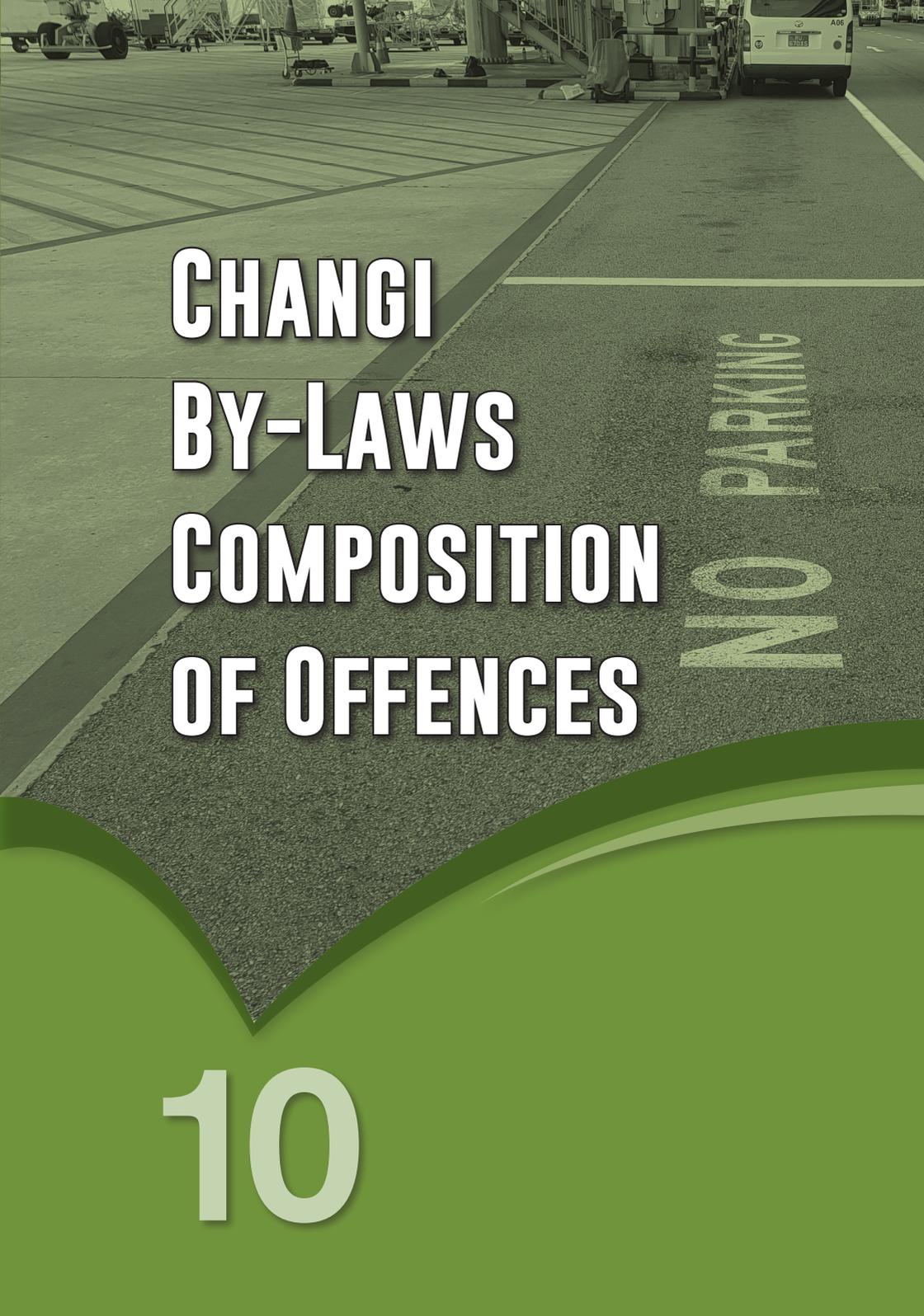
Drivers with less than six months of airside driving experience who are involved in incidents shall have their ADP suspended. To have their ADP returned, drivers shall retake the ART and ADSCT.

During the suspension period, offenders may be required to attend training, counselling, or workshops as CAG deems necessary.

9.4. Surrender of ADP

The ADP holder or his employer shall ensure that the ADP holder immediately surrenders his ADP to CAG ADC upon:

- (a) Being notified by CAG ASM of the suspension or cancellation of the ADP or;
- (b) Upon termination or cessation of his employment.



**CHANGI
BY-LAWS
COMPOSITION
OF OFFENCES**

10

10 CHANGI BY-LAWS COMPOSITION OF OFFENCES

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|---------------------|--|--------------|
| LOW SEVERITY | | |
| 10 | Driver failing to allow free and uninterrupted passage to aircraft passenger within the airside or failing to give precedence to aircraft passenger. | \$50 |
| 19 | Driver failing to keep the vehicle to the right side of the runway or taxiway, in so far as it is practicable, when proceeding along a runway or taxiway. | \$50 |
| 26 | Vehicle towing another vehicle within the airside without the use of a suitable towbar for that purpose. | \$50 |
| 30 | Parking a vehicle anywhere within the airside except within a parking space set out in Part I of the 1 st schedule and in a parking lot in that parking place specifically designated by the airport licensee for the category of vehicles to which the vehicle belongs or failing to pay the parking fee specified in the 2 nd schedule or driver failing to obey traffic signs exhibited in the parking places or parking the vehicle in such a manner causing the vehicle to protrude beyond the boundaries of the parking lot or to obstruct the entrance or exit of a parking lot or parking place set out in Part I of the 1 st schedule. | \$100 |
| 31(2) | Parking a vehicle, or cause or permit a vehicle to remain at rest, in a parking place within the airside in such a condition or circumstances as to appear to the airport licensee to have been abandoned without lawful authority. | \$100 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|------------|--|--------------|
| 36 | Person in charge of any equipment or vehicle used in connection with the servicing of the aircraft failing to immediately remove equipment or vehicle from the aircraft stand and any other related parking space, after the servicing of an aircraft, the aircraft has taxied or been towed away. | \$50 |
| 48(4) | The driver of a vehicle on any road in the cargo handling area or in any part of the cargo handling area shall comply with all the traffic signs placed or erected in the cargo handling area. | \$100 |
| 50(1) | No person shall park a vehicle anywhere in the cargo handling area except – (a) Within a parking place set out in Part II of the 1 st Schedule; and (b) In a parking lot in that parking place specifically designated by the airport licensee for the category of vehicles to which the vehicle belongs. | \$100 |
| 50(2) | Any person who parks a vehicle in a parking place shall pay such parking fee as may be set by the airport licensee and displayed on signs affixed or placed in a conspicuous position at the entrance of the parking place. | \$100 |
| 50(3) | Any person who parks a vehicle in a parking place shall obey all the traffic signs exhibited in the parking place. | \$100 |
| 50(4) | No person shall park a vehicle in such a manner as to cause the vehicle to protrude beyond the boundaries of the parking lot, or to obstruct the entrance or exit of a parking lot or parking place set out in Part II of the 1 st Schedule. | \$100 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|------------|--|--------------|
| 50(5) | No person shall park a vehicle in a season parking lot unless he – (a) Is an authorised person; or (b) Is in possession of, and displays visibly on the vehicle for inspection, a valid season parking label issued by the airport licensee for the use of such parking lot. | \$100 |
| 50(6) | No person shall park a vehicle in a reserved parking lot unless he – (a) Is an authorised person or; (b) Is in possession of, and displays visibly on the vehicle for inspection, a valid reserved parking label issued by the airport licensee for the use of such parking lot. | \$100 |
| 51(2) | No person shall park a vehicle or cause or permit a vehicle to remain at rest in the cargo handling area in such condition or circumstances as to appear to the airport licensee to have been abandoned without lawful authority. | \$100 |
| 40 | Passenger embark onto or disembark from an aircraft entering the airside without being escorted by an employee or agent of an airline. | \$50 |
| 47(1) | No person or vehicle shall enter or leave the cargo handling area except through an entrance or exit designated by the airport licensee. | \$50 |
| 49 | Except with the prior permission of the airport licensee, no person shall park or stop a vehicle in any loading or unloading bay of any warehouse unit in the cargo handling area. | \$100 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|------------|--|-------------|
| 14 | Driver reversing vehicle towards an aircraft in the movement area, except where the vehicle is used for servicing that aircraft and such reversing is carried out under the direction of a vehicle marshaller. | \$50 |
| 16(1) | Driver failing to keep the vehicle at least 5 metres away from any wing-tip of a stationary aircraft (shall not apply where the vehicle is directly below the wing-tip of the aircraft). | \$50 |
| 24 | Driving any vehicle (other than of a type preapproved by the airport licensee for use in Baggage Handling Area) into a baggage handling area within the airside. | \$100 |
| 15 | Driver causing a vehicle to approach an aircraft which has its engines running. | \$50 |
| 25 | Travelling in any vehicle in the airside otherwise than seated in a passenger seat provided in the vehicle or standing in a section of the vehicle which has been constructed for standing passengers. | \$50 |
| 32 | Person walking within or crossing the movement area at any time, unless he is permitted by the airport licensee to do so. | \$50 |
| 33 | Person (other than a member of the maintenance staff working on an aircraft), failing to keep clear of the aircraft's engines and passing within a radius of 7.5 metres from the air intake of the aircraft or within a radius of 76 metres from the rear of a running jet engine of the aircraft. | \$50 |
| 43(1) | Person entering or performing work within the apron, including aircraft stands and compass swing area, failing to wear a high visibility safety vest at all times. | \$50 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|---------------------|--|-------------|
| 43(2) | Person cycling on any roadway within the airside failing to wear a high visibility safety vest. | \$50 |
| 52 | No person other than the driver of a vehicle shall travel in any vehicle in the cargo handling area unless he is seated in a passenger seat provided in the vehicle or standing in a section of the vehicle which has been constructed for standing passengers. | \$50 |
| MID SEVERITY | | |
| 5(1) | Driver failing to comply with the directions or verbal instructions given by an authorised officer regulating traffic within the airside. | \$120 |
| 5(2) | Driver failing to comply with restrictions on and stipulations for vehicle loads (relating to height, weight, distribution, packing, adjustment of vehicle loads and no. of passengers allowed to be carried in vehicles) within the airside. | \$150 |
| 5(4) | Driver failing to obey all traffic signs placed or erected in the movement area, or on or along the road or other part within the airside. | \$120 |
| 7 | Driver leaving broken-down vehicle unattended within the airside, failing to immediately inform Duty Apron Controller (if breakdown occurs in apron) and Duty Tower Controller (if breakdown occurs in manoeuvring area) and the owner of the vehicle and failing to arrange for immediate removal of the vehicle or failing to ensure aircraft or other vehicles are not obstructed by the breakdown. | \$120 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|------------|--|--------------|
| 27 | Owner of vehicle failing to ensure that a vehicle used within the airside is maintained in good working condition and failing to ensure that condition and all its parts and accessories is such that no danger is caused or likely to be caused to any person in or on the vehicle, or any person on any road within the airside. | \$120 |
| 31(1) | Parking a vehicle or causing or permitting a vehicle to remain at rest, on any road within the airside in such a position, condition or circumstances as to be likely to cause danger, obstruction or undue inconvenience to other users of the road or to traffic within the airside. | \$120 |
| 41 | Person driving or employing or permitting any person to drive, any vehicle within the airside unless the person driving the vehicle has been properly trained and certified to meet the standards approved by the airport licensee for driving within the airside. | \$120 |
| 46(2) | No person shall load or unload any fuel tank in the cargo handling area. | \$120 |
| 48(1) | The driver of a vehicle in the cargo handling area shall comply with any direction or verbal instruction given by any authorised person who is for the time being engaged in the regulation of traffic in the cargo handling area. | \$120 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|------------|---|--------------|
| 48(2) | The driver of a vehicle in the cargo handling area shall comply with such restrictions on and stipulation for vehicle loads (relating to the height, weight, distribution, packing, adjustment of vehicle loads and the number of passengers allowed in each vehicle) in the cargo handling area as may be imposed by the airport licensee. | \$150 |
| 51(1) | No person shall park or cause or permit a vehicle to remain at rest on any road in the cargo handling area in such a position, condition or circumstances as to be likely to cause danger, obstruction or undue inconvenience to other users of the road or to traffic in the cargo handling area. | \$120 |
| 53(1) | The driver of a vehicle shall ensure that at all times – (a) The number of passengers carried in or on the vehicle and the manner in which any such passenger is carried; and (b) The weight, distribution, packing and adjustment of any load on the vehicle, is such that no danger is caused or is likely to be caused to any person in or on the vehicle, or any person on any road in the cargo handling area. | \$150 |
| 53(2) | The driver of a vehicle shall ensure that any load carried by the vehicle is at all times secured or placed in a position such that danger is not likely to be caused to any person, vehicle or aircraft – (a) By reason of the load or any part thereof falling from the vehicle, or (b) By reason of any other movement of the load or any part thereof in relation to the vehicle. | \$150 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|------------|---|--------------|
| 53(5) | The driver of a vehicle shall ensure that no part of a load on the vehicle or any covering of such load causes or is likely to cause danger, obstruction or annoyance to other persons using the road. | \$150 |
| 53(6) | Except as otherwise permitted by the airport licensee, the driver of a vehicle shall ensure that no part of a load on the vehicle or any covering of such load – (a) Trails along the road; (b) Projects in front of the vehicle; or (c) Projects laterally beyond the body or wheels of the vehicle or any authorised fitting permanently attached to the vehicle. | \$150 |
| 55(1) | Except with prior permission of the airport licensee, no person shall leave any cargo or cargo handling and transporting equipment on a roadway, driveway, vehicular ramp or parking place in the cargo handling area. | \$150 |
| 55(2) | No person shall leave any refuse or litter in the cargo handling area. | \$150 |
| 69(1) | No person shall – (a) Drive vehicle of any description in the cargo handling area unless he is the holder of a valid driving license for the appropriate class of vehicles issued under Road Traffic Act (Cap. 276); or (b) Employ or permit another person to drive a vehicle in the cargo handling area unless the person so employed or permitted to drive is the holder of a valid driving license for the appropriate class of vehicles issued under the Road Traffic Act. | \$120 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|----------------------|---|--------------|
| 69(2) | Without prejudice to paragraph (1), no person shall – (a) Drive a forklift in the cargo handling area unless he is the holder of a valid forklift driving permit; or (b) Employ or permit another person to drive a forklift in the cargo handling area unless the person so employed or permitted to drive is the holder of a valid forklift driving permit. | \$120 |
| HIGH SEVERITY | | |
| 4(1) | Driving at a speed exceeding the speed limit of 30km/h on roads in the vicinity of aircraft stands or 50km/h on roads away from vicinity of aircraft stands or 5km/h within 10 metres from an aircraft parked at aircraft stand. | \$170 |
| 6 | Driver failing to give way to an aircraft at all times or give maximum clearance to the aircraft. | \$170 |
| 8 | Driver failing to obtain prior clearance from the Duty Tower Controller before proceeding to any part of the manoeuvring area. | \$170 |
| 9 | Driver failing to stop at point of entry to the manoeuvring area or failing to ascertain that there is no aircraft movement before driving into the manoeuvring area. | \$170 |
| 12 | Driver starting up a motor vehicle in the movement area within 15 metres of any aircraft that is being refueled. | \$170 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|------------|---|--------------|
| 17 | Driver failing to keep the vehicle within the red apron boundary line that separates the taxiway from the apron and away from the manoeuvring area when driving the vehicle in the movement area parallel to an aircraft taxiing on the taxiway or driver failing to keep the vehicle in the movement area at safety distance of at least 200 metres in front of or at least 250 metres behind any aircraft taxiing on the taxiway. | \$170 |
| 21 | Driver failing to observe the red traffic light signals installed at various locations within the airside where vehicular traffic lanes cross the taxiways or failing to slow the vehicle down when the vehicle approaches the taxiway or failing to stop the vehicle before the stop line at the crossing and keep a lookout for any aircraft that is taxiing towards the crossing whether or not the red traffic light signals at the crossing are illuminated or failing to ensure it is safe to proceed across the taxiway only if the red traffic light signals are not illuminated. | \$200 |
| 22 | Driver failing to ensure vehicle is equipped with a 2-way radio communication system when driving on any runway or taxiway or driver failing to comply with respective light signals when driving a vehicle not equipped with a 2-way radio (only when permitted by the airport licensee) on a runway or taxiway. | \$170 |
| 23 | Driver of a vehicle crossing the movement area in front of the path of a taxiing aircraft or an aircraft on tow. | \$170 |
| 34 | Person proceeding onto the apron without obtaining prior clearance from the Duty Apron Controller. | \$170 |

| BY-LAW NO. | OFFENCE | FINE AMOUNT |
|------------|---|--------------|
| 37 | Person leaving or causing or permit to be left, any material, handling or transporting equipment, refuse or litter on any roadway, driveway or vehicular ramp, or in any other part of the airside. | \$200 |
| 44(1) | Person using a mobile telephone while driving a vehicle or operating equipment within the airside. | \$200 |
| 45 | Person consuming any food or beverage in the movement area except in the offices located on the apron or on board an aircraft or feeding any bird or animal within the airside. | \$170 |
| 91(1) | Any person who drives a vehicle or operates any equipment in any part of the airport shall do so with care and attention and with reasonable consideration for other persons in the airport. | \$170 |



COMMON COMMERCIAL AIRCRAFT

NARROW BODY:

1. Airbus A319



2. Airbus A320



3. Boeing B737



4. ATR 72-500



WIDE BODY:**1. Airbus A330****2. Airbus A350**

3. Airbus A380



4. Boeing B747



5. Boeing B777



6. Boeing B787



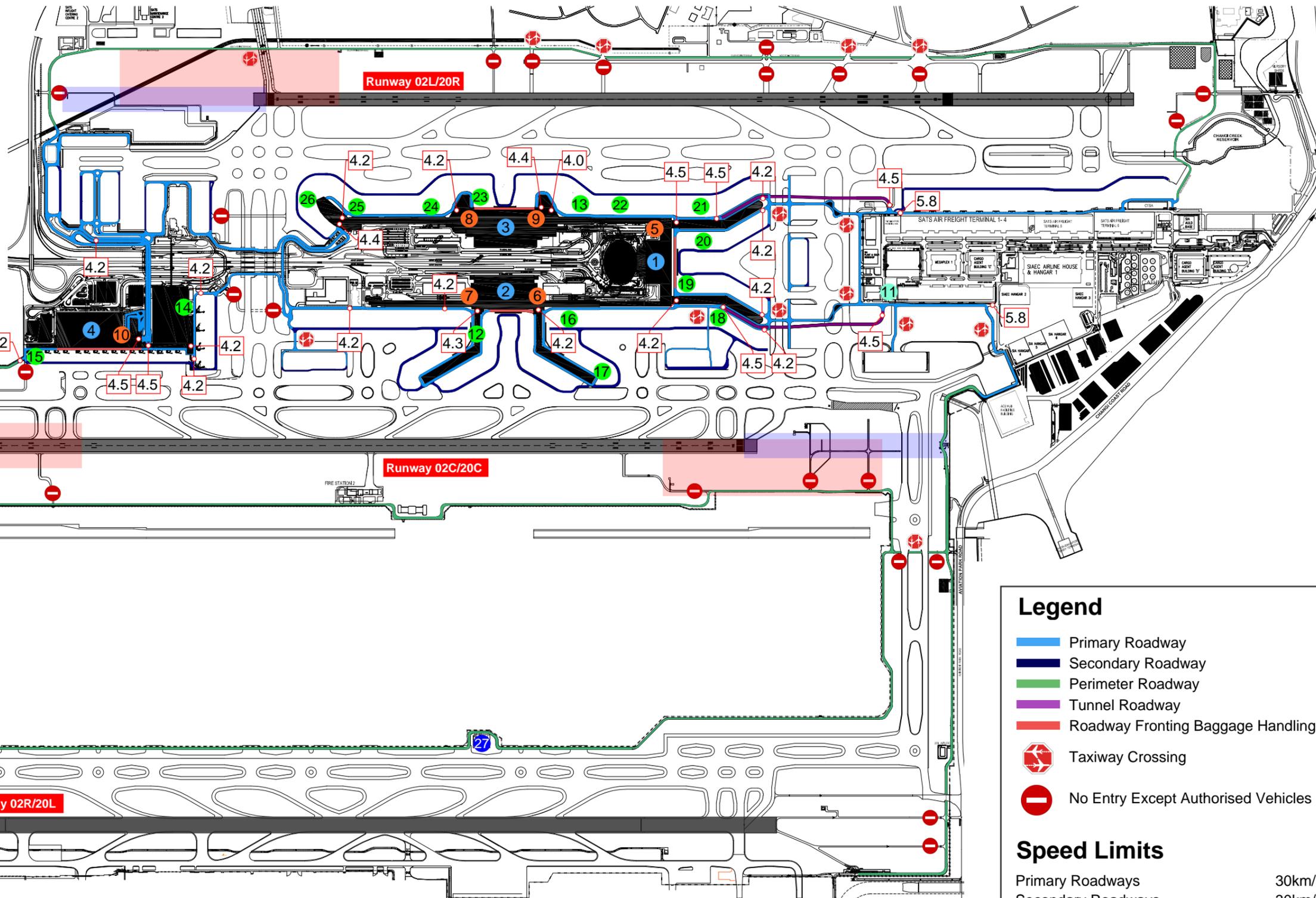
Landmarks

- 1 Terminal 1
- 2 Terminal 2
- 3 Terminal 3
- 4 Terminal 4
- 27 Changi East Tower
- 5 Terminal 1 Bus Station
- 6 Terminal 2 Bus Station
- 7 Terminal 2 Bus Station
- 8 Terminal 3 Bus Station
- 9 Terminal 3 Bus Station
- 10 Terminal 4 Bus Station
- 11 Designated Refueling Point

Electric Charging Stations

- 12 T2 South-east Pier Electric Charging Stations
- 13 T3 B6 Electric Charging Station
- 14 T4 G21 Electric Charging Station
- 15 T4 G1 Electric Charging Station
- 16 T2 E22 Electric Charging Station
- 17 T2 E8 Electric Charging Station
- 18 T1 D46 Electric Charging Station
- 19 T1 D30 Electric Charging Station
- 20 T1 C13 Electric Charging Station
- 21 T1 C22 Electric Charging Station
- 22 T3 B8 Electric Charging Station
- 23 T3 A1 Electric Charging Station
- 24 T3 A9 Electric Charging Station
- 25 T3 A13 Electric Charging Station
- 26 T3 A17 Electric Charging Station

CHANGI AIRPORT AIRSIDE MAP



Legend

- Primary Roadway
- Secondary Roadway
- Perimeter Roadway
- Tunnel Roadway
- Roadway Fronting Baggage Handling Area
- Taxiway Crossing
- No Entry Except Authorised Vehicles

Speed Limits

| | |
|-------------------------------|--------|
| Primary Roadways | 30km/h |
| Secondary Roadways | 30km/h |
| Perimeter Roadways | 50km/h |
| Tunnel Roadways | 50km/h |
| Along Baggage Handling Areas | 15km/h |
| Inside Baggage Handling Areas | 5km/h |

Note: The above stated general speed limits notwithstanding, drivers shall adhere to all speed limit signs in the airside.

CATII ILS Out-of-Bound Area

- LLZ Sensitive Area
- Approach Light Protection

Note: When Tower declares CATII ILS Operations, all vehicles shall keep clear of the Out-of-Bound Areas highlighted unless instructed otherwise.

Height Limits

Maximum allowable height of X.Xm

Note: If the vehicle or towed equipment height exceeds this number, driver shall look for an alternative permissible route. Failure to do so may result in serious damage to vehicle, equipment, and infrastructure, and injury to driver and passenger(s). The above stated height limits notwithstanding, drivers shall look out for all height limit signs in the airside.



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