APRON, ROAD MARKINGS & SAFETY SIGNS
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# Outline

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I. Objective

To provide an orderly and safe movement of passengers, ramp personnel and vehicles in the apron.
II. Apron Markings
Apron Safety Line (ASL)

The ASL defines the areas intended for use by ground vehicles and other aircraft servicing equipment, etc., to provide safe separation from aircraft.
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Equipment Restraint Area (ERA)

This is a closed area on which the aircraft is parked during ground handling. The dimensions of the ERA are determined by the largest type of aircraft using the parking position.

The ERA is defined by the Apron Safety Line, drawn in red, on the ground. Vehicles, ground handling equipment or objects are to keep clear of the ERA while an aircraft is taxiing into the aircraft parking stand.
Equipment Restraint Area (ERA)

This is a closed area on which the aircraft is parked during ground handling. The dimensions of the ERA are determined by the largest type of aircraft using the parking position.

The ERA is defined by the Apron Safety Line, drawn in red, on the ground. Vehicles, ground handling equipment or objects are to keep clear of the ERA while an aircraft is taxiing into the aircraft parking stand.
Equipment Parking Area

This is a closed area, painted in white meant for parking of ground handling vehicles/equipment (In other airports, it is used for long term parking and leased to the ground handling agents under a tenancy agreement).
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Such equipment/vehicles shall not protrude beyond demarcated lines.
This is an area set outside the ERA to position ground handling equipment on standby prior to the arrival of the aircraft.

This area is located on the starboard side of each aircraft stand and marked by white outline before the equipment restraint area.
Equipment Staging Area

Only ground handling equipment is allowed to be positioned at the equipment staging area at least one (1) hour before the estimated time of arrival of aircraft.

All equipments should be removed immediately after completion of aircraft handling.
Described as red hatched lines under the passenger boarding bridge area.

The red hatching defines safety areas that must remain clear at all times. Vehicles must not park or hold in these areas. (NO PARKING OR STOPPING WITHIN THIS AREA)
Bay Designation

These markings help pilots maneuvering aircraft on aprons by providing supplementary information.
Marshaller Stop Line (Stop Bar)

A yellow line located on the right hand side of, and at right angles to, the alignment line as seen by the marshaller facing the incoming aircraft where the aircraft nose wheel is to stop.
Tug Parking Position Line

A red line and located at aerobridges and other aircraft parking positions; this is to ensure that tug is clear of incoming aircraft.
III. Road Markings & Safety Signs
Vehicle & GSE Service Road/Lane

1. Vehicles & GSE service road are marked by a single continuous white line on each side of the road. This road will provide safe clearances between aircraft and vehicles.

2. Vehicles & GSE equipment shall at all time use this road especially going to/from the remote parking area to the main parking areas/passenger terminal.
Pedestrian Crosswalk / Passenger Pathway

Passengers and airport employees shall at all times use the crosswalk/pathway to/from aircraft and terminal.
Speed Limit Sign

Speed Limits
Vehicle & GSE service road : 20 kph
Aircraft Movement Areas : 10 kph
Baggage Make Up/Sorting : 5 kph
Area
No Stopping Anytime

A box marked with a yellow X line. All vehicular traffic must yield when approaching; stopping and parking at all times is strictly prohibited.
Other Safety Signs

- Vertical Height Clearance: 4.0m
- Wear Safety Vest
- Pick up FOD
- No U Turn
- No Parking Any Time
- Speed Limit 28.8
- Visitors Car Park
- Do not operate mobile telephones in this area
Other Safety Signs

- Don’t Get Sucked In!
- Hearing Conservation Going To The Tarmac
- Wear Your Earmuffs
- Observe Equipment Limit Lines Do Not Approach The Aircraft Whilst The Red Beacon Is Flashing And Until Clearance Is Given
- Danger Zones Be Extremely Cautious
Other Safety Signs

- **FOR FOD's SAKE**
- **GROUND SAFETY**
  Flight Safety Begins With Ground Safety and Ground Safety Begins With You
- **WARNING**
  ENGINE INGESTION
- **NO WALKING SITTING SLEEPING ON CONVEYOR**
  WILL RESULT TO BODILY INJURY
Other Safety Signs

- Do not approach or pass behind an aircraft whilst the beacon is flashing.
- See and be seen.
- Safety: No seat, no ride.
IV. Airside Drivers Permit

1. Require a permit for all airside drivers of motorized vehicles.
2. All drivers to undergo an Airside Drivers Training Course; and
3. Establish an Airside Drivers Handbook

To provide an orderly and safe movement of passengers, ramp personnel and vehicles in the apron.
Drivers Training Course Outline

1. General Information
2. General Traffic Control
3. Who can drive Airside?
4. Rules for Driving Safely
5. Vehicle Parking Restrictions
6. Cancellation of Authority and Permits
7. Visual Aids
8. Radio Procedures
9. Light Signals from Control Tower
10. Safety Summary
11. Glossary of Terms
12. Airport Map

- Vehicles & GSE
- Supervision of Unauthorized Drivers and Vehicles
- Airside Vehicles Speed Limits
- Vehicle Routes and Procedures on Movement Areas
- Vehicle Operations near Runways
- Vehicle Operations at Baggage Sorting Areas
- Low Visibility Conditions
- Traffic offenses
- Runway & Taxiway Markings
- Movement Area Guidance Signs & Markings
- Apron Area Markings
- Markings and Markers for vehicles and GSE
Questions & Answers
References

- ICAO Annex 14 Aerodrome
  SARPs Volume 1- Aerodrome Design and Operations
- Metropolitan Washington Airports Authority Website
- Dubai Department of Civil Aviation, Airside Safety Regulation
- Civil Aviation Authority of Singapore, 14th Edition Rules and Regulations for Airside Personnel Handbook
- Qantas Safety Awareness Program
- Brisbane Airport Airside Drivers Handbook
- Sydney Airport Airside Drivers Handbook
The End

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Widescreen Test Pattern (16:9)

Aspect Ratio Test
(Should appear circular)