RENTON AIRPORT
Clayton Scott Field

GROUND VEHICLE OPERATION RULES

Updated December 2012

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Welcome to the Renton Airport!

Accidents between ground vehicles and aircraft occur at airports around the world. To reduce accidents and liability, the Renton Airport has developed this Ground Vehicle Operations Handbook to educate drivers on the safe operation of vehicles in the Aircraft Operations Area. Please keep this manual readily available and use it as a reference guide.

Questions or clarifications about airport operations are always welcome. Please feel free to stop by the Airport Office at the base of the Air Traffic Control Tower during our normal business hours or call us at (425) 430-7471.

By following the procedures outlined in this book you are helping to create a safer and more enjoyable environment for all users of the Renton Airport.

Purpose and Objectives

The purpose of the ground vehicle training program is to promote safe airfield driving through education. The program provides new and refresher training for employees, tenants, and other ground vehicles operators on this airfield. The primary objectives of this program are to:

- Introduce and explain the procedures specific to Renton Airport for operating ground vehicles;

- Identify and describe movement areas, non-movement areas, runways, and taxiways;

- Identify and describe airfield signs, markings, and lighting at Renton Airport;

- Identify and describe the Vehicle Drive Lane and the runway hold short lines;

- Describe the appropriate radio procedures while operating within the Movement Areas; and

- Provide other useful Airport-specific information.

General Airport Areas

Specific terms are used to describe certain areas on the airport. You must be familiar with these terms to know what requirements you must meet to enter and operate in these areas.

Landside and Airside

The airport is divided into two general areas termed landside and airside. The landside area is the area of the airport that is outside of the security fence and is open to the general public. The airside, which is also referred to as the Air Operations Area encompasses all areas within the security fence and is not open to the general public.

Landside

Both perimeter roads, parking lots outside of the security fence, the front entrance garden and statue area, and the grassy area at the north end of the Airport are on the landside. Landside vehicle operators do not need to communicate with the Control Tower, nor are landside vehicles required to have a flashing amber beacon.

Airside

All areas inside of the perimeter security fence are on the airside also known as the Air Operations Area, or AOA. These areas include parking areas, aprons, taxilanes, taxiways, and the runway. The AOA is further divided into Non-Movement and Movement Areas.

Airside - Non-Movement Areas

The non-movement area consists of the areas on the Airport that are in the AOA but neither require you to be in contact with the Control Tower, nor have a flashing amber beacon (designated airport vehicles excluded – see page 19). Non-movement areas include parking areas within the security fence, and the aprons.

General Airport Areas (continued)

Airside - Movement Areas

The runway, taxiways, and the taxiway object free area are the only Movement Areas on the Airport. The Control Tower controls all movement areas on the airport. Hence, any operation in a Movement Area requires authorization from the Control Tower.

The Control Tower transmits on two frequencies, Tower (124.7 MHz) and Ground (121.6 MHz). Operating a vehicle in the Movement Areas requires authorization from the Control Tower, when open, and use of a flashing amber beacon. At all times when the Control Tower is closed, intentions must be communicated over the Common Traffic Advisory Frequency (Same as the Tower Frequency - 124.7 MHz).

To operate a vehicle in the movement area you must have a flashing amber beacon mounted on the uppermost part of your vehicle and be in contact with the Control Tower.
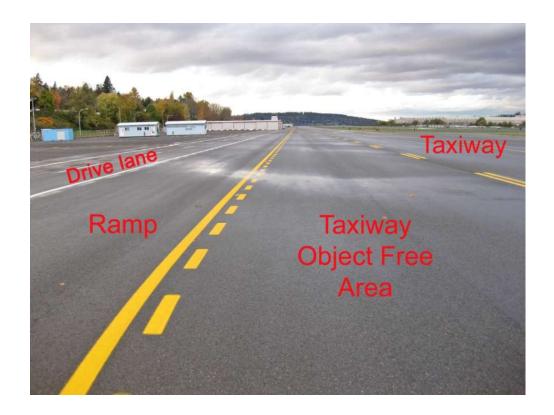
Use of Control Tower Frequencies

While operating on most areas of the Airport, you will use the Ground frequency. There are some areas on the Airport that require use of the Tower frequency. The list below should help clarify which frequency to use during a particular operation. If you are:

- Operating only on a taxiway - use the Ground frequency (121.6 MHz);
- Crossing the runway from taxiway to taxiway - use the Ground frequency (121.6 MHz – Airport employees only);
- Entering the runway for inspections or maintenance - use the Tower frequency (124.7 MHz - Airport employees only);
- Using the east access road to the north bridge - use the Tower frequency (124.7 MHz - Airport employees only); and
- Crossing the runway from the Alpha Taxiway to the north bridge - use the Ground frequency (121.6 MHz – Airport employees only).

Taxiway Markings and Lighting

In general, aircraft get to and from aprons and runways via taxiways. Taxiways have yellow markings and blue edge lights. Each taxiway is labeled with a letter and those letters are part of a phonetic alphabet. Meaning, instead of being referred to as Taxiway "A," the taxiway would be referred to as Taxiway Alpha.

Clearance must be obtained from the Control Tower prior to entering the Taxiway Object Free Area. Think of it this way, if you are on the west side of the airport stay west of the yellow line, and if you are on the east side of the airport stay east of the yellow line.

Taxiway Markings and Lighting (continued)

Taxiway direction and designation signs have a yellow background with black lettering. These signs indicate where that taxiway is located from your present position.

A **taxiway location sign** has a black background with yellow lettering. This sign identifies the taxiway you are presently operating on.

Taxiway and runway identification signs may be used together to provide directional information to the pilot or driver. For example, this sign indicates you are currently at the Echo intersection of Taxiway Alpha facing Runway 16-34.

Runway Markings and Lighting

Runway Paint Markings

Runway markings are white. Runways have numbers on each end and a broken white stripe down the center. The numbers on each end of the runway identify the magnetic heading of the runway. By adding a zero to the runway number you will know its compass heading. For example, Runway 16 equates to approximately 160°. Note that at the other end of the runway the number is 34 (340°), which is 180° in the opposite direction of Runway 16.

Runway Lighting

Runways have white lights along the pavement edges. The exception is that the edge lights on the last 2000 feet of the runway are white on one side of the light cover and amber on the other (Runway 16 only). Runway threshold lights are additional lights that are positioned across the ends of each runway to indicate where the runway begins or ends. These lights are green on one side of the light cover and red on the other.

Runway Markings and Lighting (continued)

Runway Hold Line

A Runway Hold Line denotes where the taxiway ends and the runway begins. It consists of two solid yellow stripes followed by two broken yellow stripes. If you come to a runway hold line – **STOP!** Only Airport employees are permitted to cross the runway. All other ground vehicles must use the perimeter road to access the other side of the airfield. Airport employees must receive clearance from the Control Tower before proceeding onto the runway when the Control Tower is open. If the Control Tower is closed, you must:

- Wait for any aircraft in the pattern to land and exit the runway prior to proceeding;
- Ensure that your movement onto the runway will not interfere with aircraft taxiing, landing, or taking off; and
- Make a radio announcement of your intentions to cross the Runway Hold Line onto the runway. Announcements should be made on 124.7 MHz when the Tower is closed.

Vehicle Restricted Areas

Vehicle Restricted Areas have been established at the Airport to provide increased security for the Boeing Company's leased aprons, and also to decrease runway and taxiway incursions (unauthorized entry onto a taxiway or the runway). Vehicle Restricted Areas are marked with stop signs. If you come to one of these signs - **STOP!**
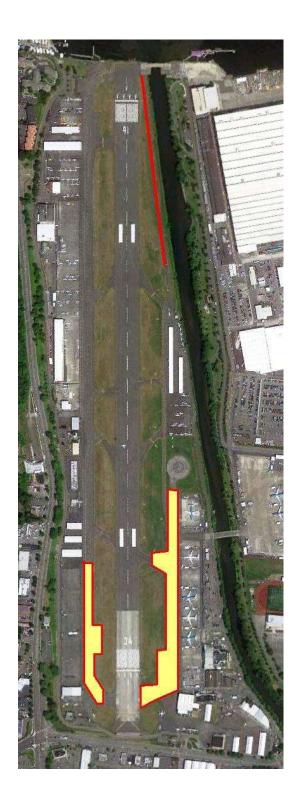
There are three restricted areas:

1. The first is located north of the last row of hangars at the end of East Perimeter Road. This access road is for airport operations and maintenance vehicles only.

2. The second restricted area is Taxiway Bravo from the compass pad south to the large Aerodyne hangar located at 300 Airport Way. This area is off limits for all non-Boeing vehicles. Float trucks and airport operations and maintenance vehicles may proceed on Taxiway Bravo when authorized by the Control Tower.

3. The third restricted area is Taxiway Alpha from the Lane Hangars at 500 West Perimeter Road south to the large hangar at 243 West Perimeter Road. This area is off limits for all non-Boeing vehicles. Float trucks and airport operations and maintenance vehicles may proceed on Taxiway Alpha when authorized by the Control Tower.

Any unauthorized drivers caught driving in the Vehicle Restricted Areas will have their access privileges revoked by the Airport Manager or his/her designee.

Vehicle Restricted Areas Map

Vehicle Drive Lane

The Vehicle Drive Lane runs most of the length of the airfield on the west side. The Vehicle Drive Lane is the designated drive lane for private vehicles operating on the airport. Vehicle traffic must use the Vehicle Drive Lane where it exists.

Where the Vehicle Drive Lane is not yet present, or if portions of the lane are blocked, vehicle traffic must stay as far away from the Taxiway Object Free Area as reasonably possible. Be cautious while using the Vehicle Drive Lane around Lane Hangars and the 540 Hangar. Also, be alert for aircraft crossing the Vehicle Drive Lane to enter the taxiway.

No vehicle may pass in front of an aircraft that is positioned on the ramp waiting to taxi, unless that pilot signals that it is alright to pass. **All aircraft have the right-of-way over vehicles** (Advisory Circular 150/5210-20). If you see an aircraft that appears poised to taxi across the ramp, you must wait for that aircraft before continuing to your destination.

Renton Air Traffic Control Tower

When open, the Control Tower directs all vehicle traffic on the movement area. The Control Tower is open every day of the year. Hours of operation are 7:00 am to 8:00 pm from October 1 to April 30, and 7:00 am to 9:00 pm from May 1 to September 30. When the Control Tower is closed, there are different requirements for communicating your intentions while driving on the movement area.

Radio Communications – Tower Open

When the Control Tower is open you must contact Tower or Ground for approval prior to moving aircraft or vehicles onto a movement area.

You will need to use different frequencies to receive authorization from the Tower depending on where you will be driving.

Renton Air Traffic Control Tower (continued)

Radio Communications – Tower Closed

When the Control Tower is closed, the airport becomes an uncontrolled field. The procedure during these hours is to monitor the Common Traffic Advisory Frequency on 124.7 MHz and announce your intentions to enter any movement area.

You must announce your intentions prior to entering the movement areas and upon exiting the movement areas.

> ☆ ☆ ☆ ☆ ☆ ☆ **IMPORTANT!** ☆ ☆ ☆ ☆ ☆ ☆
>
> When the Renton Air Traffic Control Tower is closed, vehicle operators must monitor the Common Traffic Advisory Frequency (124.7 MHz) and make an announcement prior to entering the movement areas and upon exiting the movement areas.

Rules for Radio Communications

The following are requirements for radio communications while operating a vehicle in the movement area.

Make Sure To:

- Transmit on the appropriate frequency;

- Listen to the frequency prior to transmitting;

- Use appropriate radio phraseology;

- Use standard vehicle identification phrases;

- Advise on initial contact your request – who you are calling (Renton Ground or Tower), who you are, where you are, and what you want to do; and

- Be familiar with the locations of the movement and non-movement areas.

Loss of Radio Communications

Non-Movement Areas

If you are only operating in the non-movement area then two-way radio contact with the Control Tower is not necessary. If you have a radio installed in your vehicle and it becomes inoperable you may continue to operate in the non-movement area only.

Movement Areas

If your radio becomes inoperable before you proceed into the movement area then do not continue. Instead, return the vehicle for radio repairs. If you are on the movement area and lose radio contact with the Control Tower, you should do the following:

- Get off the movement area immediately!

- Turn your vehicle toward the Control Tower and flash your headlights.

- Look up at the Control Tower cab for light gun signals.

- If the Control Tower responds with a **steady red** signal you must STOP!

- If the Control Tower responds with a **steady green** signal you may proceed.

If you have a cell phone, you may call the Control Tower at 206-764-6632 for instructions as an alternative.

Light Gun Signals

Color and Type of Light Signal	Movement of Vehicles, Equipment, and Personnel
Steady Green	Cleared to Cross, Proceed
Steady Red	**STOP!**
Flashing Red	Clear the Taxiway or Runway
Flashing White	Return to Starting Point
Alternating **Green** and **Red**	Exercise Extreme Caution

Stop!

Proceed

Driving on the Airport

Personal Vehicles on the Airside

Personal vehicles not equipped with an amber beacon, or a two-way radio are only allowed to operate in the non-movement areas (designated Airport vehicles excluded). Use of the Vehicle Drive Lane is required where it exists to ensure proper separation from airplanes and other vehicles. Be cautious. Look around for airplanes that are preparing to start or that are beginning to taxi. Always yield to aircraft by moving right where able.

Airport Vehicles on the Airside

Designated airport vehicles include float trucks, fuel trucks, airport or Boeing maintenance trucks, Boeing tugs, Boeing service vehicles, fire vehicles, and airport management vehicles. All designated airport vehicles must use an amber beacon while operating in the AOA. Designated airport vehicles are required to have fully functional radios, and operable lights (including parking lights, headlights, and taillights). All designated airport vehicles must use the Vehicle Drive Lane where it exists except in cases where doing so could harm people, parked aircraft, or vehicles. Fire vehicles, Boeing fuel trucks, and float trucks may deviate from the Vehicle Drive Lane as needed for added safety.

Foreign Object Debris / Damage (FOD)

Foreign Object Debris is any loose item in an airport environment that could be ingested by aircraft engines or could strike an airplane and create damage.

Foreign Object Damage is defined as aircraft engine damage due to ingestion of objects and/or debris.

Jet engines ingest huge amounts of air. Garbage and debris can also be sucked into the engine causing extensive damage. Debris can also puncture tires and dent or puncture propellers or wings.

Nuts and bolts, tools, rocks and pebbles, or any garbage can be classified as or cause FOD. Make Renton Airport a safer place by placing all garbage in a sturdy, covered container that cannot be blown over by wind or jet blast. Also, please pick up any debris you find on the ground.

Finally, avoid tracking mud and gravel onto pavement surfaces. If you must drive on an unpaved surface, stop your vehicle and check your tires once you leave that area. Remove any rocks that are lodged in the treads. If you discover a serious debris problem, report it to the Airport Office at (425) 430-7471.

Other Airport Information

Float Truck Operations

When retrieving floatplanes from the floatplane ramp, back up towards the west to avoid entering the Runway Safety Zone for Runway 16.

Accident Reporting

Any person involved in an accident, as a participant or as a witness, shall report the accident immediately to the Renton Police and/or Renton Fire and Emergency Services via 911. You must also notify airport management at (425) 430-7471.

> **IMPORTANT!**
>
> Dial 911 and (425) 430-7471
>
> to report all emergencies, accidents, hazardous material releases, and fuel spills.

Watch Your Speed

The speed limit on the ramp is 15 MPH except while driving near aircraft when the speed limit decreases to 5 MPH.

No Unattended Vehicles

No disabled vehicle may be left unattended or abandoned in the AOA. If your vehicle breaks down, you must remain with it and call for assistance.

Other Airport Information (continued)

Use a Ground Guide

When backing trucks or equipment in close proximity to other equipment, aircraft, or vehicles, a ground guide is strongly recommended.

Use Parking Brake and/or Wheel Chocks

If you must park a vehicle in the AOA, you must always set the parking brake or use wheel chocks to prevent the vehicle from rolling into aircraft or other equipment.

Be Aware of Jet Blast and Prop Wash

You should be aware of the effects of jet blast and prop wash. An operating jet engine can easily produce a blast of hot air strong enough to knock you to the ground or burn you. There have been several documented cases where vehicles have been overturned by jet blast. Prop wash can also knock you down or throw debris in your face. Therefore, remain clear of areas behind operating jet or propeller engines.

Other Airport Information (continued)

Reporting Hazardous Material Spills

If a hazardous material release occurs, you must contact Renton Fire and Emergency Services via 911, **and** the airport office at (425) 430-7471.

Avoid Blind Spots

Blind spots are areas on the Air Operations Area that are not visible from the Air Traffic Control Tower. Use extreme caution when operating in these areas and always yield to aircraft. These areas include:

- The area near the Ace Aviation and Aerodyne buildings;
- The area next to the City Hangar (south of the Tower);
- The area between the Northwest Seaplanes hangar and the hangar building at 850 West Perimeter Road; and
- The areas between the Lane Hangars.

Other Airport Information (continued)

Low Visibility Driving

It is extremely easy to become disoriented when driving on the airfield in rain, fog, or at night. Drive slowly and watch for signs and markings. If you are unfamiliar with the airport and the office is open, stop in and ask for directions to your destination. If the airport office is closed, drive with someone who is very familiar with the layout of the airport.

While driving on the airport:

- Give yourself plenty of time to get to your destination;
- Make sure the vehicle's amber beacon is operating properly;
- Make sure your radio is operating properly and the volume is up; and
- Remember that the maximum permissible speed is 15 MPH or 5 MPH if you are near aircraft.

Appendix 1 - Phonetic Alphabet

Always use the International Phonetic Alphabet when communicating with the Control Tower.

A	*Alpha*	**T**	*Tango*
B	*Bravo*	**U**	*Uniform*
C	*Charlie*	**V**	*Victor*
D	*Delta*	**W**	*Whiskey*
E	*Echo*	**X**	*X-Ray*
F	*Foxtrot*	**Y**	*Yankee*
G	*Golf*	**Z**	*Zulu*
H	*Hotel*	**1**	
I	*India*	**2**	
J	*Juliet*	**3**	
K	*Kilo*	**4**	
L	*Lima*	**5**	
M	*Mike*	**6**	
N	*November*	**7**	
O	*Oscar*	**8**	
P	*Papa*	**9**	*Niner*
Q	*Quebec*	**0**	
R	*Romeo*		
S	*Sierra*		

Appendix 2 – Phone Numbers

Renton Airport Office 616 West Perimeter Road, Unit A Renton, Washington 98057 *www.rentonwa.gov/airport*	(425) 430-7471
Renton Air Traffic Control Tower	(206) 764-6632
Boeing Fire Department	(206) 852-3519
Renton Police or Fire and Emergency Services	911

Drive and Fly Safely!

Information courtesy of

Renton Airport Staff

and

Renton Air Traffic Control Tower Staff