

Airport Ground Vehicle Operations Program

Introduction

Why is a Vehicle Operations Program needed at our airport?

It is important for the Boulder City Municipal Airport (BVU) to develop a Ground Vehicle Operations Program to inform the tenants and users of the airport on safety, awareness, and responsibility while driving on the Airport Operations Area (AOA).

Boulder City Municipal Airport has recently been designated as the 149th busiest airport in the nation and it is the responsibility of the City of Boulder City to maintain a safe operating environment at the airport for all users. The Federal Aviation Administration states "airport operators should establish procedures and policies concerning vehicle access and vehicle operation on the airside of the airport". A recent assessment by the Airport's insurance carrier strongly recommended a vehicle operation program be developed to minimize potential hazards between aircraft and private vehicles.

Every year there are accidents and incidents involving aircraft, pedestrians, and ground vehicles at airports that lead to property damage and injury which may be fatal. Ground vehicle operation plans promote the safety of airport users by helping identify authorized areas of vehicle operation, outlining vehicle identification systems, addressing vehicle and operator requirements and coordinating construction, maintenance, and emergency activities.

The information contained in this handbook is designed to acquaint you with the airport's policies and procedures for operating a ground vehicle at the Boulder City Municipal Airport. The information in this handbook combined with classroom training will provide sufficient knowledge and skill to pass an airfield driver's test and operate vehicles safely at BVU.

The policies and procedures in this manual apply to all users of, and persons on any portion of the airport property owned or controlled by the City of Boulder City. No persons are exempt from airport operating training requirements for operating a vehicle on the Airport Movement Area. Tenant organizations shall be responsible for the dissemination of, accessibility to, and compliance with these policies and procedures by their employees and subtenants. The policies in this handbook are in addition to Federal Aviation Regulations and applicable state and local ordinances and laws, which remain in full force and effect.

All persons operating a ground vehicle or other motorized equipment on the Airport Movement Area (AMA) at the Boulder City Municipal Airport must display an airport issued identification badge unless they are under the direct escort of a person with an airport issued identification badge.

Airfield Safety

The FAA defines a runway incursion as "any occurrence at an airport involving an aircraft, vehicle, person or object on the ground that creates a collision hazard or results in loss of separation with an aircraft taking off or intending to take off, landing or intending to land." Runway incursions are primarily caused by human error, unfamiliarity with the airport, or loss of situational awareness.

Runway incursions are caused by pilot deviations, or vehicle/pedestrian deviations. Regardless of whom the incursions are attributed to, incursions occur, at the simplest level, because people make mistakes.

As the aviation industry continues to grow and aircraft and vehicles continue to mix in increasingly congested environments, the potential for incursions increases and the margin of safety decreases. We must all remain vigilant and be aware of potential factors that increase risk (such as decreased visibility in bad weather). We must do all we can to keep runway incursions and surface incidents from happening at our nations' airport. Together we can make a difference in runway safety.

Definitions

Accident – a collision between one aircraft or vehicle and another aircraft, vehicle, person, or object which results in property damage, personal injury, or death

Aircraft – a device that is used or intended to be used for flight in the air

Aircraft Incident – an occurrence, other than an accident, associated with the operation of an aircraft that affects or could affect the safety of operations

Airport Employee – authorized personnel of all organizations, activities, and governmental agencies located on or connected with the operation, maintenance, and servicing of the airport

Airside – those areas of an airport that support aircraft activities

Air Operations Area (AOA) – the portion of the airport which encompasses the landing, takeoff, taxiing and parking areas for aircraft.

Apron or Ramp – a defined area on an airport or heliport intended to accommodate aircraft for the purposes of parking, loading and unloading passengers or cargo, or refueling

City Terminal Area – City owned ramp utilized by transient and based aircraft. There is a high level of aircraft activity operating within this area.

Common Traffic Advisory Frequency (**CTAF**) – radio frequency designed for the purpose of carrying out airport advisory practices while operating to or from an airport without an operating ATCT or when the tower is closed. The CTAF may be a UNICOM, MULTICOM, FSS, or tower frequency and in identified in appropriate aeronautical publications. (See below for definitions of UNICOM)

Fixed-Based Operator (FBO) – a person, firm, or organization engaged in a business that provides a range of basic services to general aviation. Services may include the sale and dispensing of fuel, line services, aircraft parking and tie-down, pilot and passenger facilities, airframe and power plant maintenance, aircraft sales and rental, and pilot instruction

Flight Service Station (FSS) – air traffic facilities that provide pilot briefings, en route communications, and visual flight rules; search and rescue services; assist lost aircraft and aircraft in emergency situations; relay air traffic control clearances; originate Notices to Airmen; broadcast aviation weather and National Airspace Systems information; receive and process instrumental flight rules flight plans; and monitor NAVAIDS. In addition, at selected locations, FSSs provide En Route Flight Advisory Service (Flight Watch), Take weather observations, issue airport advisories, and advise Customs and Immigration of transporter flights

Foreign Object Debris (FOD) – debris that can cause damage to aircraft engines, tires, or skin from rocks, trash, or the actual debris found on runways, taxiways, and aprons. FOD is everyone's responsibility. If you see FOD, pick it up

General Aviation (**GA**) – that portion of civil aviation that encompasses all facets of aviation except air carriers holding a certificate of public convenience and necessity

Ground Vehicle – all conveyances, except aircraft, used on the ground to transport persons, cargo, fuel, or equipment (see also vehicle)

Helipad – a small, designated area, usually with a prepared surface, on a heliport, or airport used for takeoff, landings, or parking of helicopters.

Incursion – any occurrence at an airport involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in loss separation with an aircraft taking off, intending to take off, landing or intending to land

Propeller Wash –thrust stream turbulence

Law Enforcement Officer (LEO) – any person vested with police power of arresting under Federal, state, county, or city authority and identifiable by uniform badge, and other indication of authority

Mobile Fueler – a vehicle owned and/or operated by authorized agents to pump and dispense Jet A and 100 LL fuel at the Boulder City Municipal Airport. This may include fuel tankers, in-to-plane fueling pumpers, and hydrant carts

Movement Area (MA) or Airport Movement Area (AMA) – the runways, taxiways, and other areas of an airport that aircraft use for taxiing, takeoff, and landing. The AMA at BVU also includes the City Terminal Area.

Navigational Aid – any visual or electronic device, airborne or on the surface, which provides point to point guidance information or position data to aircraft in flight

Non-movement Area – taxi-lanes, north tie-down, and leased ramps and aprons (those surfaces at BVU that are not part of the AMA).

Operator – any person who is in actual physical control of an aircraft or motor vehicle

Owner – a person who holds the legal title of an aircraft or motor vehicle

Reckless or Careless Manner – to act in a way that intentionally or through negligence threatens the life or safety of any person or threatens damage or destruction of property

Restricted Areas – areas of the airport posted to prohibit or limit entry or access by the general public

 \mathbf{Runway} – a rectangular area on a land airport prepared for the landing and takeoff of aircraft along its length

Runway in Use or Active Runway – any runway or runways currently being used for takeoff or landing. When multiple runways are used, they are all considered active runways.

Runway Safety Area – a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the even of an undershoot, overshoot, or excursion from the runway

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Surface Incident – any event where unauthorized or unapproved movement occurs within the movement area or an occurrence in the movement area associated with the operation of an aircraft that affects or could affect the safety of flight

Taxi – the movement of an airplane under its own power on the surface of an airport

Taxilane – The portion of the aircraft parking area used for access between taxiways and aircraft parking positions

Taxiways – those parts of the airside designated for the surface maneuvering of aircraft to and from the runways and aircraft parking areas

Tie Down Area – an area used for securing aircraft to the ground

Uncontrolled Airport – an airport without an operating airport traffic control tower or when the airport traffic control tower is not operating

UNICOM – a non-Federal communication facility that may provide airport information at certain airports. Locations and frequencies of UNICOMs are shown on aeronautical chars and publications

Vehicle – is any mean in or by which someone travels in; this can include, but not limited to the following: car, truck, refueler, bicycle, motorcycle, moped, or golf cart

Visibility – the ability, as determined by atmospheric conditions and expressed in units of distance, to see and identify prominent unlighted objects by day and prominent lighted objects by night. Visibility is reported as statute miles, hundreds of feet or meters

Airport Familiarization

Airfield Diagram

In the back of this handbook is an airfield diagram showing the layout of the Boulder City Municipal Airport and the Airport Movement Area. The map depicts the runways, taxiways, apron designations, and location of major facilities, such as BCAP, Monarch and Stars & Stripes Air Tours.

Airport Signage and Lighting

Taxiway lights are blue in color and are located along the edge of taxiways and runway lights are white in color and are located on each side of the runway. The lights on the end of the runway have split lenses red and green. The red signifies the end of the runway and the green the beginning of the runway. These lights are pilot controlled allowing the pilot to key the aircraft radio to turn them on or brighter.

3 Clicks – Low; 5 Clicks – Medium; 7 Clicks – High

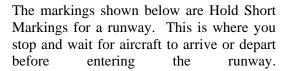
Runway Edge Light:



Runway Light:



Windsocks at the airport are orange in color. This allows pilots to identify the wind direction.

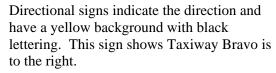






Shown below are examples of the types of signs found on the airfield.

Location signs identify where you are and have a black background and yellow lettering. This sign shows you are on Taxiway Bravo.







Hold Short signs are located before a runway and are often accompanied by Hold Short Markings. This sign has a taxiway location sign on it too, indicating you are on Taxiway Bravo Holding Short of Runway 27L-9R. There are flashing lights with this Hold Short sign for an extra indication you are approaching an active runway.



The next two signs are informational signs, providing direction and pertinent information to pilots.





Airport Communications

All ground vehicles operating on the airport movement areas at the Boulder City Municipal Airport must be equipped with a two-way radio, or escorted by a properly equipped vehicle, allowing continuous monitoring of aircraft movements on the airport.

Aviation Phonetic Alphabet

The Aviation Phonetic Alphabet is used in communications for continuity and clarity between all aircraft and vehicles operating on the airport surface area and to reduce confusion. Because some letters sound similar, the following words are used to reduce confusion. For example, taxiway \underline{B} would be referred to as taxiway \underline{B} ravo.

A	Alpha	N	November
В	Bravo	O	Oscar
C	Charlie	P	Papa
D	Delta	Q	Quebec
Е	Echo	R	Romeo
F	Foxtrot	S	Sierra
G	Golf	T	Tango
Н	Hotel	U	Uniform
I	India	V	Victor
J	Juliet	W	Whiskey
K	Kilo	X	X-ray
L	Lima	Y	Yankee
M	Mike	Z	Zulu

Aviation Terminology

Acknowledge – Let me know you have received and understand this message.

Advise intention – Tell me what you plan to do.

Affirmative - Yes.

Confirm – My version is.. Is that correct?

Correction – An error has been made in the transmission. The correct version is..

Expedite / without delay – With a sense of urgency, proceed with approved instruction in a rapid manner.

Go ahead – State your request (never means "proceed")

Hold – Stop where you are.

Hold short of... - Proceed to, but hold short of a specific point.

Negative – No, or permission not granted, or that is not correct.

Proceed – You are authorized to begin or continue moving

Read back – Repeat my message back to me.

Roger – I have received all of your last transmission. (It is not a yes or no answer)

Say Again – Repeat what you just said.

Stand by – Wait. I will get back to you. (Stand by is not an approval or a denial)

Unable – I can't do it.

Verify – Request confirmation of information.

Without delay – With a sense of urgency, proceed with approved instructions in a rapid manner.

Wilco – I have received your message, understand it, and will comply.

Airfield Communications

When operating at the Boulder City Municipal Airport you should broadcast your intentions on the UNICOM, 122.700, prior to crossing any runways. The UNICOM is a frequency designed for the purpose of carrying out airport advisory practices while operating to or from an airport without an operating control tower. Operators who remain on a runway or AMA surface that will block the movement of aircraft for prolonged periods of time (i.e., removal of a disabled aircraft) should continually announce their presence on the AMA every 2 minutes. In all situations, the vehicle operator is ultimately responsible for the safe movement on the movement area. Broadcast your intentions, look and LISTEN for other traffic, and most importantly, be aware of the AMA environment before proceeding.

Before you make any transmissions over the UNICOM, LOOK <u>AND LISTEN</u> for any traffic in the area or pattern.

Example:

"Boulder City Traffic, Stars and Stripes tug on Runway 27L to assist disabled aircraft, Boulder City Traffic."

"Boulder City Traffic Stars and Stripes tug clear of Runway 27L on Alpha, proceeding Alpha, Delta to Stars and Stripes Ramp."

"Boulder City Traffic, Stars and Stripes tug at the intersection of Delta and Bravo assisting disabled aircraft, Boulder City Traffic."

Vehicle Operating Requirements

To operate a vehicle on the Airport Movement Area you must obtain a vehicle permit from Airport Management. This vehicle permit will allow authorized vehicles and trained individuals to operate in the AMA. Other vehicles are allowed on the airside of the airport, but only in designated locations.

Each vehicle applying for a permit is to be approved by Airport Management.

Authorized Vehicles and Vehicle Permits

All vehicles authorized to operate on the AMA must clearly display a current and valid Boulder City Municipal Airport Vehicle Permit.

Ground vehicles authorized to operate on the AMA shall be limited to those necessary to support the direct operation of aircraft; the inspection and maintenance of the airfield; and *may* include the following:

- Airport Management/City Maintenance vehicles
- Federal Aviation Administration vehicles
- Aircraft Tugs
- Aircraft refueling trucks
- Aircraft removal equipment

Vehicle Requirements

To apply for a vehicle permit to operate in the AMA, the vehicle must meet the following requirements:

- Be equipped with an operating rotating amber beacon or strobe. For low profile vehicles in which a beacon would not be suitable (i.e. aircraft tug) an approved flag attached to the vehicle so that the flag will be readily visible is acceptable for day use only. The flag must be a 3-foot by 3-foot square having a checkered pattern of international orange and while squares at least 1 foot on each side.
- Be equipped with a working 2-way VHF radio to monitor aircraft movements at the airport.
- Insured to indemnify the City of Boulder City in the amount of \$2,000,000.

Authorized Areas

This section defines each area of the airfield where specific vehicles are allowed. Vehicles are not permitted to drive around the airport for enjoyment purposes or park where they like to watch activity at the airport. If tenants driving private vehicles would like to go from one side of the airport to another they must exit though a gate and proceed via Airport Road.

Unless authorized by Airport Management, users may not:

- Park or Stand Idling Vehicles on Taxiways, Ramps, or at the Fuel Facility
- Proceed through other leaseholds without prior leasehold approval
- Drive through or park on the Transient Ramp
- Utilize taxiways to proceed to destinations
- Drive on any perimeter roads (gravel roads adjacent to the airport perimeter fence)
- Ride bicycle on the Airport Movement Area
- Walk across taxiways

Any user found in violation of any of these rules will be subject to penalties such as a towed vehicle, fines, gate card, and/or vehicle access privileges suspended.

Insurance

The Boulder City Municipal Airport requires all applicants for the Vehicle Permit submit proof of insurance. The minimum insurance is \$2,000,000 general liability indemnifying the City of Boulder City. The proper insurance must be maintained and should be kept in the vehicle at all times. A copy must be provided to Airport Management. If there are any changes or your insurance is renewed a copy must be submitted to Airport Management in a timely manner.

Vehicle Parking

All vehicles should be parked in areas identified by the airport operator, well clear of runways, taxiways, aircraft run-up areas and any areas that may pose a danger of jet or propeller blast. Park with the engine off, with the vehicle in "PARK" and the emergency brake set

Accident Reporting

All accidents must be reported to the Boulder City Airport Management Office immediately at 702-293-9405. Even the smallest incidents between a vehicle and an aircraft can have a serious affect on the safety of flight.

When an accident does occur follow these steps:

- Stop and remain at the scene of the accident
- Call 911 (an incident may not warrant emergency response)
- Call Airport Management 702-293-9405
- Render reasonable assistance if capable to any person injured
- Provide as much information to Airport Management regarding the incident
- Aircraft can not be moved after an incident until it has been released by the FSDO & NTSB.

Operating Rules

The following rules apply to the operation of all vehicles inside the Air Operations Area (AOA) at the Boulder City Municipal Airport.

- 1. All applicants who wish to operate authorized vehicles in the Airport Movement Area must pass the written test with a test grade of at least 80 percent. Applicants who do not pass the written test may retake the test after a 5 day period.
- 2. All operators shall obey all posted regulatory signs and all instructions by Airport Management, or by an officer in charge of traffic control and enforcement.
- 3. Any authorized vehicle operating on the AMA must monitor and be capable of transmitting on the UNICOM, 122.7.
- 4. Do not allow anyone to ride in any towed or pushed unit unless such vehicle is designed for passenger transport.
- 5. Do not allow anyone to stand up, or ride on the running board, or ride on a vehicle with his/her arms or legs protruding from the body of a moving vehicle, unless such motor vehicle is so specifically designed and designated.

- 6. Each vehicle operator is responsible for the activities of each vehicle passenger on the airside of the airport.
- 7. Each vehicle operator using an airport security gate shall ensure the gate closed completely behind the vehicle prior to leaving the vicinity of the gate. The vehicle operator shall also ensure other vehicles do not follow behind, also known as "piggybacking". If another vehicle does activate the gate, they are responsible for ensuring the gate closes completely. If a vehicle does piggyback, record the license plate number and vehicle description and notify Airport Management (702.293-9405) immediately. If Airport Management is not available, call 911.
- 8. Exercise extreme care to insure all equipment is secure from high winds and propeller wash.
- 9. Use extreme caution for aircraft entering and exiting ramp areas and taxiways/taxilanes that cross vehicle traveled routes.
- 10. Never allow anyone to disembark from a moving vehicle until it has come to a complete stop.
- 11. Do not discard objects from any vehicle, either standing or in motion, at anytime. This creates FOD (Foreign Object Debris) which can cause damage to aircraft
- 12. Never operate a motor vehicle in a reckless manner or with a disregard for the safety of other persons or property.
- 13. Never park a motor vehicle or other equipment in such a way that it might interfere with, or prevent, the passage or movement of aircraft, emergency equipment or other motor vehicles; or block access to any fire hydrant, emergency fuel shut off device or other fire control equipment.
- 14. No person shall operate a vehicle or other equipment on the airfield under the influence of alcohol or any drug that impairs, or may impair, the operator's abilities.
- 15. Taxicabs, busses, limousines, and other motor vehicle carriers shall load and unload passengers only at locations designated and approved by Airport Management.
- 16. Vehicles may not park on any taxiway, runway, or taxilane unless the driver is in the process of attending to an aircraft stopped on the movement area in question.
- 17. All vehicles driving on the Airport Operations Area (AOA) must drive at a speed not greater that 10 miles per hour.
- 18. All vehicles shall yield the right of way to all police, ambulance, fire department, and other emergency vehicles giving visual signals or audible alarms.

Operating near Aircraft

- 1. Aircraft ALWAYS have the right of way.
- 2. Use caution (especially at night) for wing tips of parked aircraft.

3. Never operate a motor vehicle in such a way as to pass directly under the wings, nose, or tail area of an aircraft unless said equipment will be used in servicing the designated aircraft.

Escorting Procedures

The following requirements are necessary for providing AOA or AMA escorts:

- 1. Authorized escort providers must display a valid access control card for the Boulder City Municipal Airport. Escorts through the AMA must have an airport issued AMA access control card.
- 2. Tenant's escorts must use the closest authorized or assigned gates for vehicles entering their lease area. Visitors under escort must be met at the gate entrance and escorted back to the gate each time they enter the AOA.
- 3. All tenants must ensure service vehicles and persons being escorted remains with an authorized escort provider of that tenant at all times. The escort vehicle has full responsibility to insure that visitors under escort remain with the escort vehicle
- 4. Tenants and leaseholders are authorized to provide escorts only to and from their lease areas.

Vehicle Violations and Consequences

The Boulder City Municipal Airport enforces the policies and procedures regarding vehicle safety on the Airport Operations Area (AOA). A Notice of Violation will be issued for any observed violation of any the policies and procedures established for the safe and orderly conduct of motor vehicles while on the AOA and AMA. At the Boulder City Municipal Airport, even those with minor infractions, are required to complete re-current ground vehicle training prior to being allowed to operate a vehicle on the AOA or AMA again.

The penalties for violations are found in §9-4-5-H-2.

Boulder City Municipal Airport Aircraft Movement Areas

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| Remveys | Taxlways | Remy Area
| Solder (if) Airport Properties
| Solder (

ORDINANCE NO. 1402

AN ORDINANCE OF THE CITY OF BOULDER CITY, NEVADA, AMENDING TITLE 9, CHAPTER 4, MUNICIPAL AIRPORT, SECTION 5-2, REGULATION OF VEHICLES, CREATING A NEW SUBSECTION H, AIRPORT GROUND OPERATIONS

The City Council of Boulder City do ordain:

<u>Section 1.</u> Title 9, Chapter 4, Section 5-2, Subsection H entitled "Airport Ground Operations" is hereby created as shown below, including the exhibit in the attached Exhibit "A"

- H. 1. <u>Airport Ground Vehicle Operations</u>. A certain document entitled "Airport Ground Operations Program", copies of which are on file in the Boulder City Municipal Airport Office and the Boulder City Clerks Office, is hereby adopted and made a part of this chapter, the same as if it were fully set forth herein, except as may be amended from time to time.
 - 2. <u>Penalties for Violations</u> of the Airport Ground Vehicle Operation Program are:
 - a. **First Violation** Violator will receive a written notice of violation. The violator must complete recurrent training within 30 days and will be charged a \$25 retraining fee.
 - b. **Second Violation** Violator will receive a second written notice of violation and the access card will be suspended for 30 days. The violator must complete recurrent training before reactivation of the access card and will be charged a \$25 retraining fee.
 - c. **Third Violation** Violator is subject to revocation of driving privileges permanently.
 - d. **Additional Violations** Each additional violation is subject to enforcement and penalties as listed in §9-4-6, "Enforcement; Penalty for Violations" in this Chapter.

Revocation of Privileges. The Boulder City Municipal Airport reserves the right to immediately revoke the driving privileges of violators who cause a accident or incident.

<u>Section 2.</u> VALIDITY. Each section and each provision or requirement of any section of this ordinance shall be considered severable, and the invalidity of any portion shall not effect the validity or enforceability of any other portion.

<u>Section 3.</u> PUBLICATION. The City Clerk shall cause this Ordinance to be published in summary on Friday, the 12th day of February, 2010, in the *Las Vegas Review Journal*, a daily newspaper, published in Las Vegas, Nevada.

Section 4. EFFECTIVE. This Ordinance shall be effective the 4th day of March, 2010.

APPROVED:	
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ATTEST:

Roger Tobler, Mayor

orene Krumm, Acting City Clerk

The foregoing Ordinance was first proposed and read by title to the City Council on the 12th day of January, 2010, which was a regular meeting; thereafter, on the 9th day of February, 2010, a regular meeting was held and the proposed Ordinance was adopted by the following vote:

VOTING AYE:

Chandler, McCoy, Strickland, Tobler, Walker

VOTING NAY:

None

ABSENT:

None

APPROVED:

ATTEST:

Roger Tobler, Mayor

Lorene Krumm, Acting City Clerk

Boulder City of Nevada: City Codes

9-4-6: ENFORCEMENT; PENALTY FOR VIOLATIONS:

Any person violating any of the provisions of this chapter shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any of the provisions of this chapter is committed, continued or permitted, and upon conviction of any such violation, such person shall be punished by a fine of not more than one thousand dollars (\$1,000.00), or by imprisonment for not more than six (6) months, or by both such fine and imprisonment. (Ord. 850, 10-25-1988, eff. 11-16-1988; amd. 1995 Code)