

Drivers Training Guide

Movement Area

Updated July 31, 2026



Lawrence Regional Airport

Preface

The purpose of this manual is to provide uniform requirements for the safety of personnel, vehicles, equipment, and aircraft during operations at the Lawrence Regional Airport (LWC).

This guide to ground vehicle operations with the air operations area (AOA) is prepared in accordance with Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5210-20 (current edition), and Airport Rules and Regulations.

This program has been designed to maintain safe ground vehicle operations at the Airport. The policies set forth in this document are in accordance with the Airport Driver's Training Program.

Driving on the AOA is a privilege and subject to approval by the Airport, it may be suspended or revoked at any time. It is the tenant's responsibility to operate all equipment safely and be familiar with the Airport's Rules and Regulations.

Failure to follow these procedures may result in civil and monetary fines. Additionally, the Airport reserves the right to suspend and/ or revoke driving privileges and/ or identification (ID) badges for failure to comply with these and other applicable safety and security provisions.

The function of this program is to educate and demonstrate the need for safety first. It is important for all airport drivers to have a strong situational awareness based on the fundamental understanding of the rules and regulations. At the end of the program you should:

- Know the policies, procedures, rules, and regulations that apply to you when operating vehicles and equipment on the AOA.
- Recognize the types of hazards that are present and the knowledge to avoid and eliminate them.
- Familiarization with airfield lighting, signs, markings, and terminology.

If you have any questions regarding the airport and its operations, please feel free to contact the Airport General Manager at airportmanager@lawrenceks.gov.

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Terminology and Definitions

Accident: A collision between one aircraft or vehicle and another aircraft, vehicle, person, or object that results in property damage, personal injury, or death.

Air Operations Area (AOA): Any area of an airport used or intended to be used for landing, takeoff, or surface movement of aircraft. The AOA consists of non-movement and movement areas.

Apron or Ramp: Those areas within the AOA designated for the loading, unloading, servicing, and parking of aircraft.

Federal Aviation Administration (FAA): An agency within the Department of Transportation (DOT). It is a governmental regulatory agency that oversees the aviation industry in the United States. There are multiple agencies within the FAA.

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.

Ground Vehicle: All conveyances, except aircraft INTENDED FOR FLIGHT, used on the ground to transport persons, cargo, fuel or equipment.

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.

LWC: The FAA's airport designation for the Lawrence Regional Airport.

Movement Area: The runways, taxiways and associated safety areas used for taxi, takeoff and landing of aircraft.

Non-Movement Area: Taxilanes and ramps including aircraft parking areas.

Notices to Airmen (NOTAMs): Provides essential information to personnel concerned with flight and airport operations.

Operator: Any person who is in physical control of an aircraft or ground vehicle. For ground vehicle may also be referred to as **Driver**.

Runway: A defined surface on the airport that is reserved for aircraft takeoffs and landings.

Safety Area: A defined surface area surrounding a runway or taxiway designed to reduce the risk of damage to aircraft in the event of an overshoot, undershoot or excursion from the runway or taxiway.

Situational Awareness: Is the ability to identify, process, and comprehend the critical elements of information about what is happening to operator. *It is an individual knowing what is going on around them.*

Surface Incident: Any event during which 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.

Taxilane: The portion of aircraft parking areas used by aircraft for access between parking areas and taxiways.

Taxiway: A defined surface area used primarily by aircraft to proceed to and from the ramp and runway areas to other locations on the airport.

Transportation Security Administration (TSA): United States Department of Homeland Security agency with authority of the security of traveling public in the United States.

Vehicle Service Roadway: A traffic lane delineated for vehicles on the terminal ramp. The roadway edge markings are solid white line while a dashed white line is used to separate lanes within the roadway. Vehicle traffic is to be contained in the vehicle service road as much as possible.

Introduction to AOA Driver Process

Prerequisites to Obtaining LWC Driver Status

- Have in your possession a valid Kansas Driver's License. Out of state licenses are only acceptable if the individual is not a full-time employee at the Airport.
- Read and become familiar with the Driver's Training Guide.
- Schedule and pass Driver's Training Program through the Airport General Manager.
 - Movement area applicants will be required to pass the movement area written exam, the airfield diagram exam and a movement area practical test. This is a field test that requires the applicant to show an understanding of AOA familiarization, oral communications, radio procedures, and ability to safely operate while on the AOA.
 - Non-movement area drivers must review and sign an acknowledgement of the rules and regulations pertaining to ground vehicles as the airport.
- The applicant must wait a minimum of seven days to retake any portion of this process.

Driver Classification

Individuals whose duties require that they drive on the AOA are required to obtain appropriate Non-Movement or Movement Area certification from the airport as applicable.

Driving on the AOA is a privilege. Those who violate the established safety rules, policies, or procedures will be denied driver privileges.

There is no certification requirement for pedestrians to access non-movement areas of the airport, however all pedestrians entering the movement areas must complete the Movement Area Certification.

Authority

The LWC AOA Driver Program is administered by the Airport General Manager. The Airport General Manager and the Lawrence Police Department have the authority to stop drivers on the AOA. Drivers may be requested to show proper authorization to operate a vehicle or equipment on the AOA. Failure to produce proper authorization may result in a written Notice of Violation. Drivers under escort while on the AOA may be required to show proof of a valid driver's license. Security regulations and procedures required to be in the secured areas of the airport remain in effect.

Enforcement

At the discretion of the Airport, violations of the rules summarized in this document, airport rules and regulations, airport security program or the contract documentation, depending on the nature and severity may result in:

- Verbal warning or written warning
- Removal from the AOA of individuals, vehicles, and equipment
- Suspension of airport ID or vehicle driving privileges.
- Cessation of the work until corrective measures are taken

Any violations in which the Airport receives a fine or violation by any agencies as a result of the actions of any company or person employed by that company will be the responsibility of that company.

Training

The Airport General Manager may conduct training classes covering vehicle and equipment operations on the AOA. Additionally, exams for the Non-movement area program and Movement area program require scheduling for proctoring by the Airport General Manager or their designee. To schedule an appointment, e-mail the Airport General Manager at airportmanager@lawrenceks.gov.

Non-movement training requires reviewing and acknowledging that you understand and agree to the rules and regulations around operating a ground vehicle at the airport. The rules and acknowledgement are located on the same form, and must be signed by any person intending to operate a ground vehicle on the airport in an unescorted manner.

Movement training requires completing the non-movement training, passing a 10-question exam based on the information in this guide, correctly identifying the airfield layout on an airfield diagram exam, and passing a practical exam of driving on the airfield and communicating with local traffic with the Airport General Manager or designee.

Expiration

Non-movement driver certification is valid for 24 months from the date of acknowledgement.

Movement driver certification is valid for 12 calendar months from the date of training.

Renewal

Renewals are required at expiration of driver certification. Contact the Airport General Manager for renewals. Each individual's driving record will be reviewed by the Airport. Renewals require the individual to maintain all policies set forth in this guide. Individuals that have had driving infractions may be required to complete further training before a renewal is issued.

Air Operations Area

The Air Operations Area (AOA) at the Airport is a restricted portion of the airport that only authorized persons are allowed to enter. This section is designed as an introduction to the components of the AOA and its primary characteristics.

The AOA is divided into two separate areas: the non-movement areas and movement areas. Non-movement areas include taxiways and aprons. These areas include loading ramps, parking aprons, perimeter roads and taxilanes. Movement areas include taxiways, runways, and their associated safety areas. Vehicle and equipment operators are required to receive training from the Airport prior to their operations on any part of the AOA.

Runway Dimensions

<u>Runway</u>	<u>Length</u>	<u>Width</u>	<u>Material</u>	<u>Surface Treatment</u>
1/19	3,901 ft	75 ft	Concrete/Asphalt	Grooved
15/33	5,701 ft	100 ft	Asphalt	Grooved

Taxiway Dimensions

<u>Taxiway</u>	<u>Width</u>	<u>Material</u>
A	35 ft	Asphalt
A1	35 ft	Asphalt
A2	35 ft	Asphalt
A3	N/A	(Reserved)
A4	35 ft	Asphalt
A5	35 ft	Asphalt
B	35 ft	Asphalt
C	40 ft	Concrete/Asphalt
D	35 ft	Asphalt

Safety Areas

A safety area is a designated area abutting the edges of a runway or taxiway, intended to reduce the risk of damage to an aircraft inadvertently leaving the runway or taxiway. Any operations in the safety area require communication with local air traffic. It is important no ruts or depressions are left in the safety area. No objects may be located in safety areas without approval from the Airport General Manager.

The safety areas are centered on the centerline for the respective taxiway or runway.

Runway Safety Area Dimensions

<u>Runway</u>	<u>Width</u>	<u>Length Off Ends</u>
1/19	150 ft	300 ft Both Ends
15/33	300 ft	600 ft Both Ends

Taxiway Safety Area Dimensions

<u>Taxiway</u>	<u>Width</u>
A	79 ft
A1	79 ft
A2	79 ft
A3	(Reserved)
A4	79 ft
A5	79 ft
B	79 ft
C	79 ft
D	79 ft

Runway safety area dimensions are indicated visually on the airfield with markings and signage. The location of markings and signs are located well beyond the required minimum distances listed above at 250ft. from their respective runway centerlines. Additionally, the Localizer and Glideslope for Runway 33 also have a “critical area” that must be observed to ensure there is no interference with aircraft utilizing these for instrument approaches. Generally speaking, the critical area is centered on these facilities, and extends 250 ft. from the center of the facility. Therefore, on Runway 15/33, it is the best practice to provide 1000 ft. and 250 ft. from centerline for each runway end for the safety area, which is also well beyond the minimum distances listed above.

Non-Movement Area

Non-movement areas are defined as aprons/ramps, aircraft parking areas, and other areas accessible to vehicles and aircraft.

While driving on terminal ramp, cargo ramp and general aviation ramp it is important to remember a few indicators that help to show aircraft activity to be aware of:

- The airplane’s rotating beacon. If it is illuminated it may indicate that the engine(s) are or about to be running; it may also indicate that the airplane is or about to be moving.
- If the tow bar is attached between the aircraft and pushback with an operator in the pushback the airplane may soon be moving.
- If the ground service equipment has been pulled away from the plane the aircraft may soon be moving.
- If applicable, stairs are pulled back and the door is shut the aircraft may soon be moving.
- Chocks absent from an aircraft may indicate the aircraft will soon move.

- If wing walkers are in position the aircraft might be moving or will soon be moving. Wing walkers may often be able to provide instructions to a vehicle operator whether it is safe to pass the aircraft or not. If instructions received by the wing walker are not understood do not pass the aircraft.

A lot of activity occurs on the ramps at the airport. When operating a vehicle on the ramps use the painted roadway whenever possible. When operating on the ramp it is important to maintain a high sense of alertness. Aircraft are coming and going and always have the right away. It is imperative that operators keep their head on a swivel looking left and right for aircraft, vehicle traffic and pedestrians.

It is important to stay out of areas that are not shared use or company owned/ leased areas without first getting permission.

The speed limit on the non-movement area is 15 miles per hour.

The speed limit for any vehicles operating near the terminal building is 10 miles per hour. When within 50 feet of an aircraft or building the speed limit is reduced to 5 miles per hour.

Movement Area

Operators who are authorized to drive on the movement area require extra training and vigilance since there are dangers associated with this area that are not present in non-movement areas. All personnel who access the movement areas and safety areas shall be made familiar with this guide.

The movement area is defined as the taxiways, runways and other areas used for taxi, takeoff and landing of aircraft. Only ground vehicles necessary for operations, maintenance and construction are permitted access to these movement and safety areas.

Drivers must be movement area trained and have received driver certification from the Airport General Manager. Drivers must maintain constant radio communications with local air traffic while on the movement areas.

Operating on the airport movement areas require the utmost attention from the operator. Situational awareness is very important. Operators are to know where they are located at all times. It is good practice to listen to the radio to gain an understanding of the activities of aircraft, vehicles, and equipment on the airfield.

If disoriented, the operator should immediately move off pavement in a safe location and re-establish situational awareness before proceeding.

When operating on the movement and non-movement areas AIRCRAFT ALWAYS HAVE THE RIGHT-OF-WAY. Never cross the path of a moving aircraft.

Vehicle and Operations Requirements on the AOA

Motor vehicles will be operated only in areas of the airport authorized by the Airport General Manager under the established Rules and Regulations.

Vehicles operating on the movement area must be radio equipped or be escorted by a radio equipped vehicle.

All motor vehicles and ground equipment on the AOA must be maintained in generally sound mechanical condition with no excessive leaking of fluids. Vehicles must be clean and free of any potential FOD hazards.

A minimum insurance liability policy must be maintained on each vehicle and a copy of current insurance certificate must be on file with the City.

Vehicles on the AOA must display proper company identification on both driver side and passenger side of the vehicle at all times. Vehicles shall be equipped with appropriate lights, horn, and brakes. Clear vision from the driver's seat is required. Per FAA Advisory Circular 150/5210-5 (current edition), all vehicles must be properly marked and lighted, including an appropriate beacon affixed to the uppermost part of the vehicle structure.

All motor vehicles operating on any portion of the AOA during nighttime or low visibility will continuously display headlights on low beam and operating taillights. Nighttime is defined as a half-hour after official sunset time and a half-hour before official sunrise time. Operators shall be courteous to aircraft by temporarily switching headlights to parking lights or turning their vehicles as to keep headlights away from impacting aircraft cockpits.

Any accidents, incidents, injuries, and property damage that occur on airport property must be reported immediately to the Airport General Manager. All accidents occurring on airport property will be investigated by the Lawrence Police Department or other appropriate law enforcement agency. Those involved and their equipment may not leave until permission is granted by the Police Officer responding.

Vehicle access to the AOA is obtained through automated or manual gates. When accessing the AOA, the driver must stop and block the gate, and then ensure that the gate is closed before driving away. Failure to wait for gate closure or not securing the gate properly may result in loss of AOA driving privileges, or monetary and/or civil penalties assessed by the airport.

Vehicles shall be operated to the fullest extent possible on vehicle service roadways and perimeter roadways.

Cleaning and repairs of vehicles must be made in designated areas.

Right of way is to be always given to aircraft and pedestrians. In emergency situations right away is to be given to Fire, Police, Emergency Medical Services, Airport Operations type vehicles to include the Airport General Manager, and other emergency response vehicles.

Poor weather driving requires extra vigilance. Weather conditions may present situations in which signage, markings and lighting become covered or inoperable. Surface areas may have become slick. Conditions may arise when there is low visibility. In these conditions not only should extra precautions be taken, but driving should be limited to as little as possible.

Construction vehicles shall be equipped with an orange and white checkered flag and/ or rotating amber beacon. Construction vehicles operating at night must have a rotating amber beacon with front and rear lights operating. Additional items may be addressed in the construction plan. Container carriers and tugs may tow no more carts, pods, or containers than are practical, under control, tracking properly, and safe.

Non-motorized equipment shall have reflectors side and rear reflectors or lights.

Drivers are responsible for their vehicle, cargo, escorts, and passengers.

Handling and storage of hazardous substances and materials are regulated further under National Fire Protection Agency 407 and local fire regulations. Fuel trucks are not to park within 50 feet of an occupied building and at least 10 feet away from other vehicles.

Vehicles shall not be operated on the AOA:

- In a careless or negligent manner.
- In disregard of the rights and safety of others.
- Without due caution or at a speed or manner which could endanger persons or property.
- While the driver is under the influence of an intoxicating or control substance.
- If the vehicle is hazardously equipped or loaded in a manner that may endanger persons or property.
- Overloaded weight or carry more persons than designed for.
- With persons, bodies, or appendages outside of vehicle cab or designed operating area.
- Operate under aircraft, or between aircraft and buildings except those designed to.
- Parked as to block readily available access to fire hydrants.
- Park in an area that interferes with airport operations or emergency response.

Vehicle Escorts

An escort is an individual who meets security and safety requirements who takes responsibility while on the AOA for another individual not meeting security and/ or safety requirements. The following must be adhered to when providing an escort on the AOA:

- Individual to be escorted is informed that any movement on the AOA without proper escort will result in termination of airside vehicle privilege or possible fines levied by the Airport.
- Individual providing escort must make verbal contact with the driver of the escorted vehicle(s) before allowing them onto the AOA. Advise the driver to never pass the escorting vehicle, to follow cautiously and maintain the designated speed limit or less. Escorts must remain with the individual(s) being escorted at all times while on the AOA.
- Escort vehicles must start escort procedures from the public side before bringing another vehicle under escort into any area of the AOA.
- Escorts of vehicles must be done using a properly equipped vehicle.
- Vehicle providing escort must turn on headlights, regardless time of day.
- When work is completed, individual providing the escort will escort the individual(s) back to the access gate and ensure the gate is secured after the individual(s) have exited the AOA.
- No escorts are allowed during periods of low visibility.
- Vehicles providing escorts must turn on their headlights regardless time of day.
- Advanced notice and approval is required by Airport General Manager when escorting more than two vehicles at a time.

Situational Awareness

Vehicle drivers must confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when announcing intent to cross a runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time. At non-towered airports, all aircraft movements and flight operations rely on aircraft operators to self-report their positions and intentions. However, there is no requirement for an aircraft to have radio communications. Because aircraft do not always broadcast their positions or intentions, visual checking, radio monitoring, and situational awareness of the surroundings is critical to safety.

Airport Markings, Lighting and Signage

The airport follows a uniform designation of pavement markings, airfield lighting and signage.

Taxiways

Taxiways are surfaces designed to for the ground maneuvering of aircraft to and from the runways and ramps.

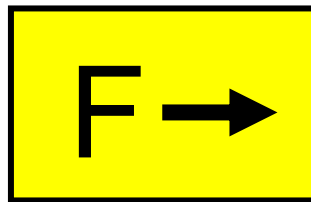
Taxiway Lighting

Taxiway lighting consists of blue taxiway edge lights or reflectors.

Taxiway Signs

Taxiway signs at LWC are used to for direction, destination and location

Direction and designation signs have black lettering and a directional arrow or arrows on a yellow background. The arrow indicates the direction to that taxiways, runway, or destination.



Taxiway Location Sign

Location signs have yellow lettering on a black background. The location sign indicates that the operator of the vehicle is located on the named taxiway or runway.



Taxiway Location Sign

Taxiway Markings

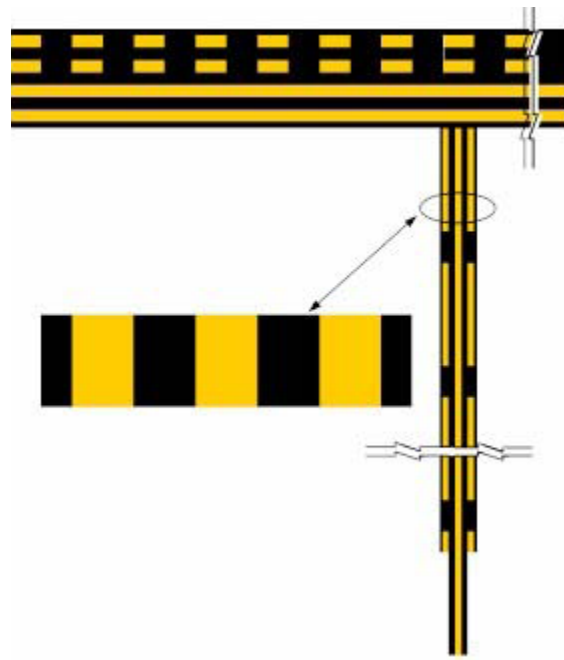
Taxiway markings will always be yellow. The taxiway centerline is painted on all the taxiway ways.

Runway holding position markings are located across each taxiway that leads directly onto a runway. These markings have two solid lines and two broken lines. These markings are always co-located with a runway holding position sign. Ground Vehicle and Pedestrian operators are not to cross these marking without obtaining proper clearance. The solid lines are located the taxiway side, while the dashed lines are located on the runway side.



Runway Holding Position Marking

Enhanced taxiway centerline markings appear on all taxiway centerlines before the runway holding position marking. These are a dashed line on each side the accompanying centerline. This marking is used to serve as additional warning of an approaching runway.



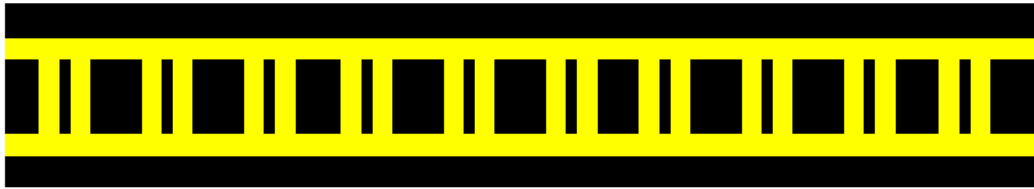
Enhanced Taxiway Centerline Marking

A non-movement boundary marking consists of one solid yellow line and one dashed yellow line. The solid line is located on the non-movement area side while the dashed is located on the movement area side. Operators must make initial communication over CTAF to cross this line onto the movement area. This marking is not currently installed at LWC.



Non-Movement Area Boundary Marking

Instrument landing system (ILS) critical area holding position marking is two yellow lines running parallel with yellow lines running perpendicular between them in the form of a ladder or train tracks. This marking shows the point at which aircraft and vehicles must stop prior to entering the ILS critical area. This normally occurs in inclement weather. This marking is not currently installed at LWC.



ILS Holding Position Marking

Runways

Runways are rectangular areas on the airport that are used for the landing and takeoff of aircraft along its length. Runways are identified by a one or two digit number according to its compass heading. E.g. Runway 36 is on a 360 heading meaning it is straight north. With parallel runways a “L” is added for left and “R” for right.

Runway Lighting

The runway edge lights are white in color except the last 2,000 feet where they change to amber in color. Runway end and threshold lights are red on the side for side that the runway is terminating and green on the side signaling the beginning of the runway.

Runway Signs

Mandatory runway holding position signs have white numbering and lettering on a red background with a white border. The numbering/ lettering identifies the runway it is protecting. These are located at every entrance to a runway and are on the edge of the runway safety area and co-located with the runway holding position marking. **Do not proceed beyond these signs until safe to do so following radio communication and visual clearance.**



Runway Holding Position Sign

Instrument landing system (ILS) holding position signs have white letters on a red background with a white border. This sign tells operators and pilots where to stop to avoid interrupting a signals to aircraft attempting to land at the airport. Operators and pilots are to “Hold Short ILS Critical Area” if weather requires (VFR conditions). Passing beyond this sign may give landing aircraft false navigational signals during IFR conditions.



ILS Hold Sign

Runway distance remaining (RDR) signs have a white number on a black background. This sign provides the runway distance that is remains. The number is the remaining runway length in 1,000 foot increments.



Runway Distance Remaining (RDR) Sign

A runway exit sign is the same color scheme of a taxiway directional sign. The sign utilizes black lettering and directional arrow on a yellow background. The runway exit sign is located prior to a runway/ taxiway intersection and on the side of the runway an aircraft or vehicle is expected to exit.

Runway Markings

All runway pavement markings are white, with the exception of the Runway Overrun Markings which are yellow. Some markings located on a runway are the centerlines, threshold markings, displaced threshold markings, aiming points, touchdown zones, designator, and edge markings. Lead in and lead off lines are the only non-white markings located on the runway. Lead in/off lines are yellow and are used to guide aircraft properly on/off runways from/ to taxiways.



Runway Overrun: Indicates areas of pavement not usable for taxiing or landing purposes, but are considered an extension of (and therefore part of) the runway, as it is in the Runway Safety Area. Currently there are no overrun areas at LWC.



Runway Centerline: Indicates the center of the runway for aircraft operations



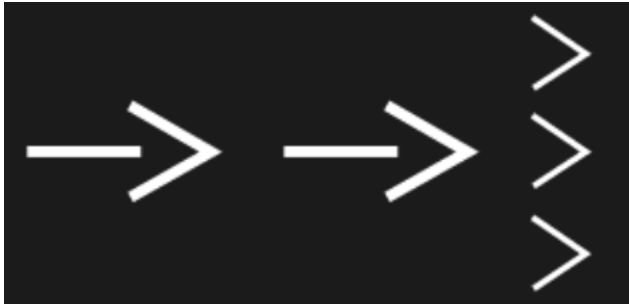
Runway Edge: Indicates the edge of usable pavement for aircraft landing purposes.



Runway Threshold: Indicates the beginning or end of a runway.



Displaced Threshold: Indicates an area on the runway where aircraft may depart from, but aircraft may not land in or before this area. This is considered an extension of (and therefore part of) the runway. Currently there is not a displaced threshold at LWC.



Aiming Points: Indicates the area on the runway where pilots should attempt to land on the runway. Pilots are not required to land in this area, but for ground and vehicle operators, this may be one of the most dangerous locations to note while on any runway surface.



Touchdown Zone: Indicates distance from the aiming points to help pilots determine where they should land on the runway.



Runway Designator: Provides the runway's magnetic compass heading in a 2-digit format. May be accompanied by a letter (L, R, or C) to indicate a specific runway on an airport with parallel runways with matching runway designators. Currently there are no letters on runways at LWC.



Summary

It's critical that all operators on the AOA are familiar with the airfield layout, taxiway and runway characteristics and safe equipment operation. Know the differences between the movement areas and the non-movement area. Be able to differentiate and understand signs, markings, and lighting.

Communications

Airport Frequencies

ASOS Broadcast: **121.225**

Provides information on weather and NOTAMs.

LWC CTAF/Unicom: **123.00**

Used to operate on runways and Taxiways.

Operators on the movement areas have responsibilities that must be met at all times while in the movement area:

- Have an operational two-way VHF radio tuned to the proper frequency.
- Be prepared to maintain continuous contact with aircraft while on any taxiway or runway.
- Listen on the appropriate frequency to be aware of other movements around the operator. It's imperative to maintain a sense of awareness of what is going on around the operator. **Vehicles and pedestrians on the AOA must always give way to aircraft.**
- Become and remain knowledgeable on correct phraseology and language for aviation operations. Regulations require those contacting air traffic to be proficient in English.

Commonly used radio phrases:

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

Advise intentions - State your plans.

Affirmative – Yes.

Confirm - My version is correct?

Correction - I have made a mistake.

Go ahead - State your request (**never means "proceed"**).

Hold - Stop where you are.

Hold short of - Proceed to, but hold short of the point specified.

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

Proceed - You are authorized to begin or continue moving.

Read back - Repeat the instructions you have.

Roger - I have received and understand all of your last transmission.

Say again - Repeat what you just said.

Standby – Wait, I will get back to you.

Unable - I can't do it.

Verify - Request confirmation of instruction or transmit correct information.

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

Without delay – Compliance with instruction required immediately to avoid an imminent situation.

The FAA has advised that good practice requires vehicle operators to use the phrase **“Off”** when stating off or clear of an area. This practice is used to help local air traffic and airport users to differentiate between aircraft and vehicles.

Phonetic Alphabet

Some letters, numbers, and words have similar sounds. Saying B and P often sound similar. Or “nine” sounding like the word to say “no” in German. The International Civil Aviation Organization developed the phonetic alphabet using the following words to reduce confusion.

A	Alpha	N	November
B	Bravo	O	Oscar
C	Charlie	P	Papa
D	Delta	Q	Quebec
E	Echo	R	Romeo
F	Foxtrot	S	Sierra
G	Golf	T	Tango
H	Hotel	U	Uniform
I	India	V	Victor
J	Juliet	W	Whiskey
K	Kilo	X	X-ray
L	Lima	Y	Yankee
M	Mike	Z	Zulu
1	One	6	Six
2	Two	7	Seven
3	Tree	8	Eight
4	Four	9	Niner
5	Fife	10	One – Zero

Note that the numbers do not go above 9. An example is that runway 33 is pronounced tree-tree. Runway 19 is pronounced runway one-niner.

The standard communications at LWC is to state

1. the airport you’re currently at (Lawrence Traffic)
2. who you are,
3. where you are,
4. what your intentions are, and
5. Closing with the airport you’re currently at again.

The following example contains standard phraseology used by an airport vehicle (Ops 9) crossing an active runway:

Ops 9 “Lawrence Regional Traffic, Ops Niner holding short of Runway One at taxiway Alpha to cross runway One Northbound on taxiway Alpha, Lawrence Traffic”

Listen for the radio traffic, because pilots may be in the area who have not already made contact with the airport’s UNICOM frequency. Always check left, and right outside of your vehicle, and for any aircraft in the air traffic pattern.

Loss of Radio Communication

In the event that radio communication is lost, immediately move off all paved runway surfaces and outside of their associated safety areas. If you are able to proceed to a non-movement area safely without needing an escort, proceed to do so safely.

It is always a good practice to let someone know you are going to be operating on the movement area prior to entering the movement area, and to have contact information for them. When safe to do so, contact another movement area approved driver and request an escort from the movement area.

Summary

A runway incursion is any occurrence at an airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft. Communications and situational awareness are some of the greatest way to prevent an incursion from occurring.

Points to remember:

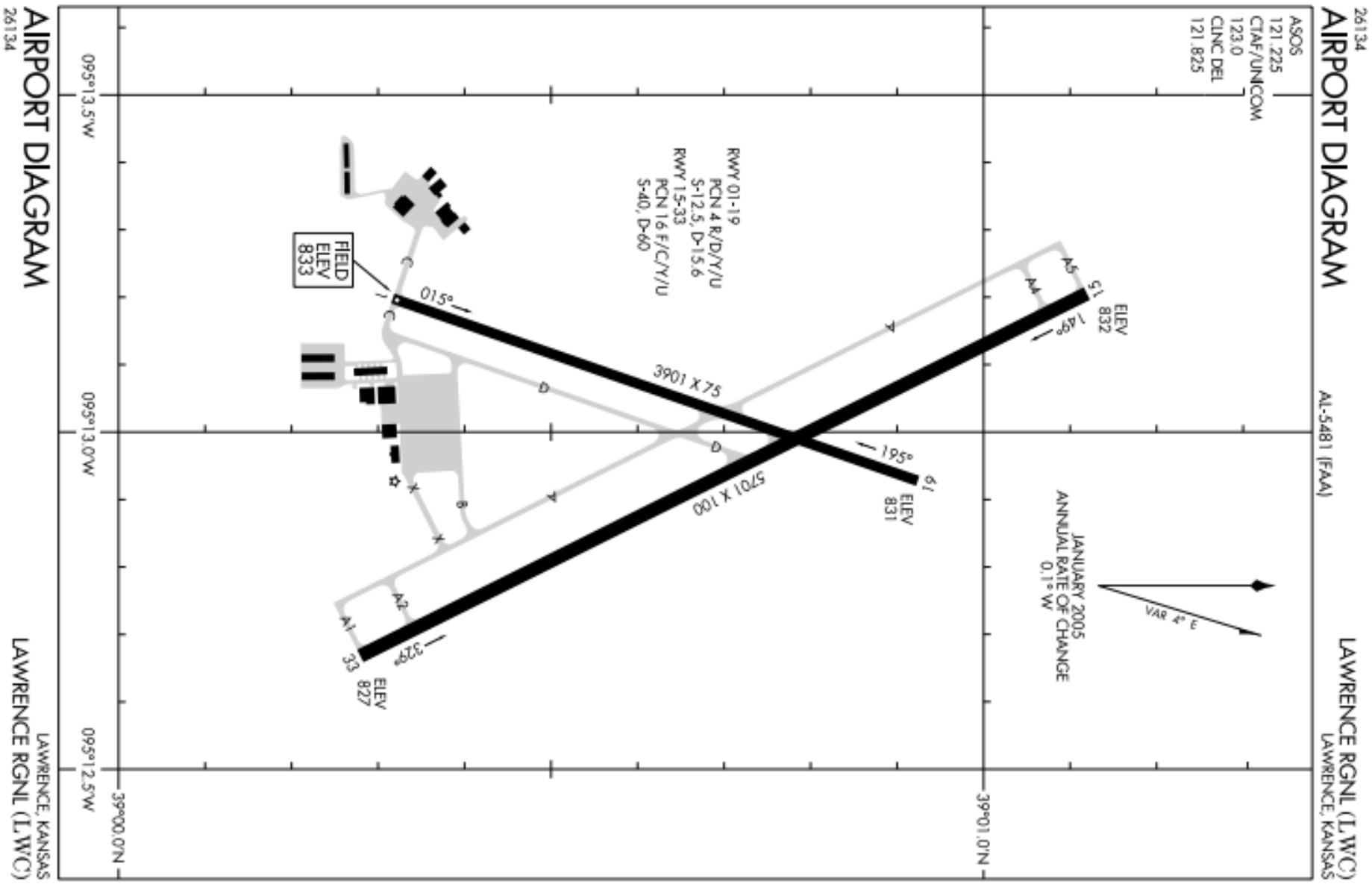
- Use and practice correct aviation phraseology.
- Think of what you will say before you say it.
- Be alert at all times for aircraft and listen attentively to the radio.
- Never enter the AOA without proper operating equipment.

Best Practices for Airfield Safety – Vehicle Drivers

FAA.GOV

1. Review and understand airfield signage and markings.
2. Review the airport diagram prior to moving the vehicle. Have the airport diagram out and available for immediate reference while driving in the operational area.
3. Review current airfield information for any taxiway closures, runway closures, construction activity, or other surface risks.
4. Ensure appropriate vehicle lights (high beams, flashers, beacons, and strobes) are operational prior to driving in the operational area.
5. Use service roads whenever possible to minimize time spent on taxiways and runways.
6. During radio transmissions, use correct terminology and proper voice cadence.
7. Eliminate distractions while driving in the operational area. Do not use cell phones or music radios while driving in the operational area.
8. Focus attention and have your "eyes out" of the vehicle.
9. Maintain appropriate speed.
10. Be alert to similar aircraft and vehicle call signs operating on the field.
11. When crossing any runway or taxiway, first visually check to ensure there is no conflicting traffic. If there is any doubt that the runway is clear, reconfirm crossing clearance via radio.
12. Note that if you see an aircraft in take-off position on a runway with take-off/landing lights ON, that aircraft has most likely received its take-off clearance and will be departing immediately.
13. If your radio fails while you're in the operational area, move off the paved portion of any runway and outside of the runway safety area surfaces immediately. If able, contact another movement area driver via cell phone and request escort back to the non-movement area. At no point should you re-enter the movement area without an operational radio.

Airport Diagram – LWC



Helpful Resources

It is highly recommended that **The National Academies** video, “**Staying Safe on the Airfield**” is watched before attempting the movement area test. This 45 minute video can found on Vimeo at: www.vimeo.com/95888688

FAA Office of Runway Safety: www.faa.gov/go/runwaysafety

FAA Airport Diagram: www.faa.gov/airports/runway_safety/diagrams/

FAA Guide to Ground Vehicle Operations: http://www.faa.gov/airports/runway_safety/media/ground_vehicle_guide_proof_final.pdf

Transportation Security Administration (TSA): www.TSA.gov

Lawrence Regional Airport: lawrenceks.gov/airport/

Contacts:

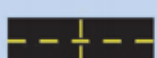
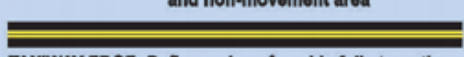
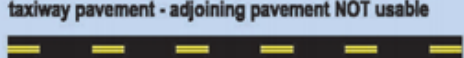
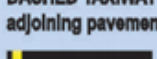
Airport General Manager: airportmanager@lawrenceks.gov 785-832-3126

Lawrence Regional Airport
1930 Airport Rd
Lawrence, KS, 66044

Lawrence Regional Airport (LWC)

Ground Vehicle Guide to Airport Signs & Markings

Airport Markings

	HOLDING POSITION: Hold short of runway
	ILS CRITICAL AREA HOLDING POSITION: Hold short of ILS Critical Area or approach airspace
	TAXIWAY/TAXIWAY HOLDING POSITION: Hold short of intersecting taxiway when directed by ATC
	NON-MOVEMENT AREA BOUNDARY: Defines boundary of movement area and non-movement area
	TAXIWAY EDGE: Defines edge of usable full strength taxiway pavement - adjoining pavement NOT usable
	DASHED TAXIWAY EDGE: Defines edge of taxiway where adjoining pavement IS available for aircraft use
	ENHANCED CENTERLINES: Indicates approaching holding position marking

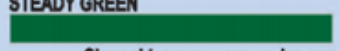
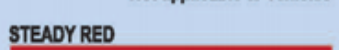
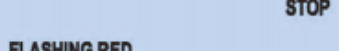
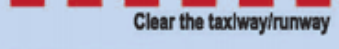
Ground Vehicle Guide to Airport Signs & Markings

Airport Signs - Action and Purpose

4-22	TAXIWAY/RUNWAY HOLDING POSITION: Hold short of runway		RUNWAY BOUNDARY: Exit boundary of runway or approach protected areas
26-8	RUNWAY/RUNWAY HOLDING POSITION: Hold short of runway		ILS CRITICAL AREA BOUNDARY: Hold short of ILS Critical Area or approach airspace
8-APCH	RUNWAY APPROACH HOLDING POSITION: Hold short for aircraft on approach or departure		TAXIWAY DIRECTION: Defines direction & designation of intersecting taxiway(s)
ILS	ILS CRITICAL AREA HOLDING POSITION: Hold short of ILS Critical Area or approach airspace		RUNWAY EXIT: Defines direction & designation of exit taxiway from runway
	NO ENTRY: Identifies areas where AIRCRAFT entry is prohibited	22↑	OUTBOUND DESTINATION: Defines direction to take-off runway(s)
	TAXIWAY LOCATION: Identifies taxiway on which vehicle/aircraft is located		INBOUND DESTINATION: Defines directions for arriving aircraft
	RUNWAY LOCATION: Identifies runway on which vehicle/aircraft is located		TAXIWAY ENDING MARKER: Indicates taxiway does not continue

NOTE: Certain signs will appear combined in arrays. Many signs may also appear painted directly on the surface of the taxiways.

ATCT Light Gun Signals

STEADY GREEN		Cleared to cross, proceed or go
FLASHING GREEN		Not applicable to vehicles
STEADY RED		STOP
FLASHING RED		Clear the taxiway/runway
FLASHING WHITE		Return to starting point on airport
ALTERNATING GREEN/RED		Exercise extreme caution



CTAF/UNICOM Frequency 123.000 ATIS Frequency 121.225 Phone Number 785-832-3126

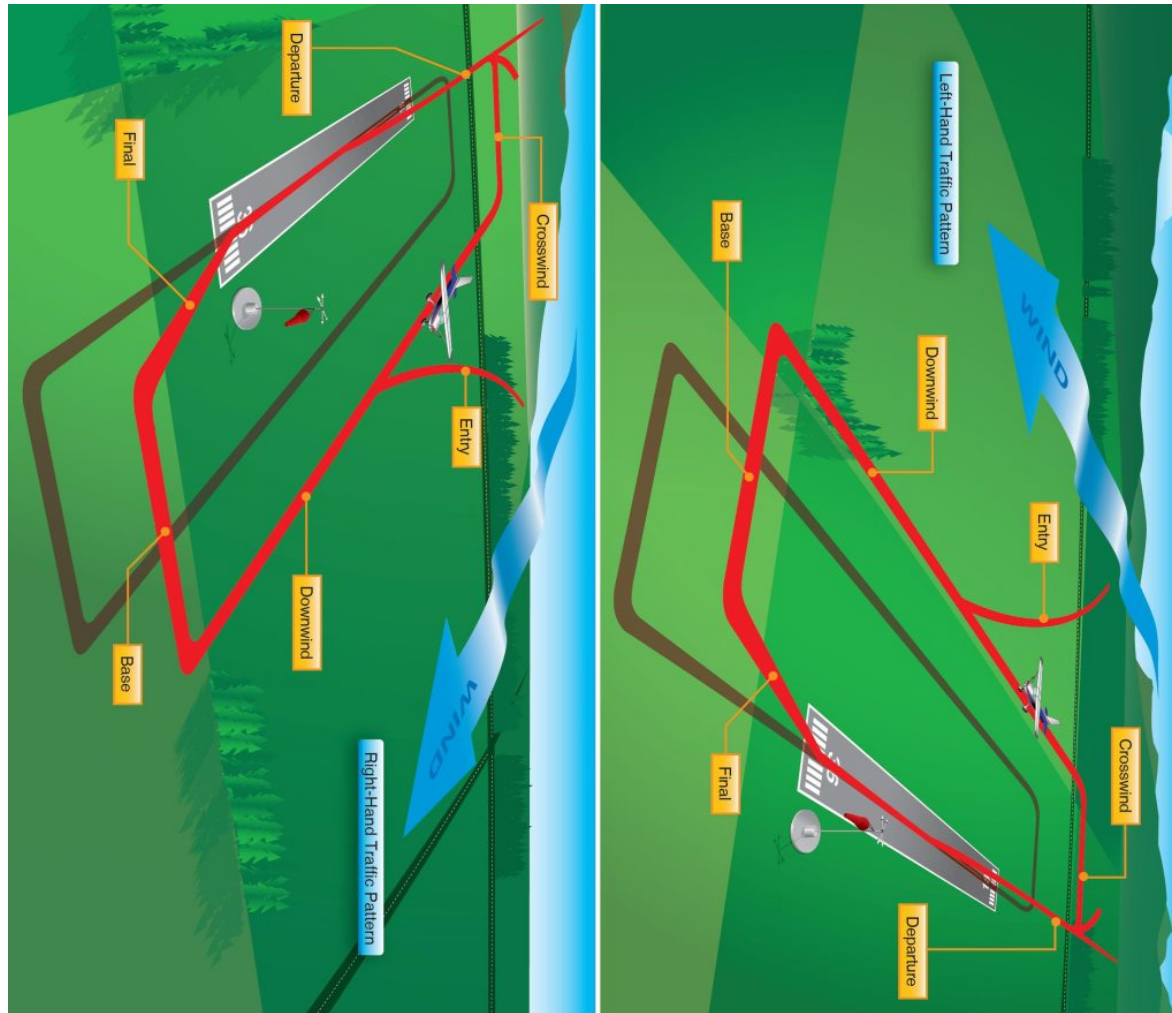
FAA Office of Runway Safety and
Office of Airport Safety & Standards
<http://www.faa.gov/runwaysafety>

07/2009

Air Traffic Patterns

All Runways at LWC are “Standard” Left-Hand Patterns

Aircraft prefer to takeoff and land **INTO** the wind



Practice Airfield Exam

