



**DEPARTMENT OF TRANSPORTATION**

**AIRPORTS DIVISION**

**AIRPORT TRAFFIC DIRECTIVES**

**D**

**STUDENT STUDY MANUAL**

**2007 EDITION**

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# INTRODUCTION

The “Airside” of an Airport is a specialized work environment that is governed by rules designed to prevent accidents and minimize the risk of injury to people, planes or property within it.

This manual is a consolidated reference source containing the applicable Regulations, Rules and Procedures for the safe operation of vehicles and equipment on the airside of an airport.

Persons using this manual are reminded that it has no legislative authority. For purposes of interpreting and applying the law, the applicable Acts and Regulations must be consulted.

Generally there are two types of Airside Vehicle Operator Permits (AVOP), DA and D. Both are for the performance of assigned duties on the airside of an airport, and may be subject to restrictions that are specified on the permit.

A D AVOP allows the holder to operate a vehicle/equipment on all airside areas of an airport and are issued by the Regional Airport Manager or Designate.

**Note: Students studying for the D AVOP for the Yellowknife, Normal Wells or Inuvik Airports are only required to read section 5A. All other students are to read section 5B and 5C.**

To acquire a D AVOP, the Employer/Applicant are required to;

1. Complete an AVOP application stating the reason a D AVOP is required.
2. The Employer or Individual must provide proof of valid airside insurance.
3. Applicants must have proof they have a valid driver’s license.
4. Applicants must obtain an Aeronautical Radiotelephone Operators Restricted Certificate from Industry Canada or person designated the authority to issue Aeronautical Radiotelephone Operators Restricted Certificate on behalf of Industry Canada.
5. The Regional Airport Manager must approve all applications for D AVOP.
6. The Applicant must study this manual and pass a written exam and practical driving tests which includes airport radio communication procedures.

# DEFINITIONS

## Aerodrome

Any area of land, water (including the frozen surface thereof), or other supporting surface used or designated, prepared, equipped, or set apart for use either in whole or in part for the arrival and departure, movement, or servicing of aircraft, and including any buildings, installations, and equipment in connection therewith.

## Aircraft

Any machine capable of deriving support in the atmosphere from the reactions of the air.

## Airport

An aerodrome for which under Part III of Canadian Aviation Regulations, an airport certificate has been issued by the Minister of Transport Canada.

## Airport Operator

The person in charge of an aerodrome, and includes an employee, agent or other authorized representative of that person.

## Airport Contractor

A contractor is an entity contracted to provide the services of operating and maintaining an airport on behalf of the owner.

## Airport Traffic

All traffic on the manoeuvring area of an airport and all aircraft flying in the surrounding area of an airport.

## Air Traffic Services Unit (ATS)

A Control Tower (ATC), Flight Service Station (FSS) or Community Aerodrome Radio Station (CARS) operated by or for Nav Canada at an Airport.

## Airside

The movement area of an aerodrome, nearby land and buildings or portions thereof, access to which is controlled.

## **Airside Vehicle Operator's Permit - AVOP**

A permit issued by the Airport Operator certifying that the person named therein is authorized to operate a vehicle on airside of an airport(s).

## **Apron**

The part of an aerodrome, other than the manoeuvring area, intended to accommodate the loading and unloading of passengers and cargo, the refueling, servicing, maintenance, and parking of aircraft, and any movement of aircraft, vehicles, and pedestrians necessary for such purposes.

## **Approach Markers**

Large wooden markers at both ends of the runway that help the pilot line up for their approach. They are painted day-glo orange and placed every 150 m (500 ft.) from threshold centerline.

## **Apron Traffic**

All aircraft, vehicles/equipment and pedestrians using the apron of an Airport are considered apron traffic.

## **Aircraft Operational Stand**

An area on an airport apron designated for the parking of aircraft for the purpose of loading and unloading passengers, and the provision of ground services.

## **Community Aerodrome Radio Station (CARS)**

An aerodrome radio station operated by a Nav Canada designated contractor, to assist local aviation activity through the provision of weather, and communication services.

## **Controlled Airport**

An airport at which an air traffic control unit is provided.

## **Cross-Walk**

Any portion of a road, apron area, or any other area designated by a sign or surface marking as a pedestrian crossing.

## **DA AVOP**

An Airside Vehicle Operator's Permit authorizing a person to operate a vehicle on aprons and service roads only at the airport named on the permit, and may be subject to restrictions as specified by the Airport Operator.

## **D AVOP**

An Airside Vehicle Operator's Permit authorizing a person to operate a vehicle at the airport named on the permit on all airside areas and may be subjected to restrictions specified by Regional Airport Operator.

## **Equipment**

Any motor vehicle or mobile device, either self-propelled or towed of a specialized nature, used for runway and airfield maintenance, repair and servicing of aircraft including test equipment, cargo and passenger handling equipment.

## **Flight Service Station (FSS)**

An aeronautical facility providing mobile and fixed communications, flight information, search and rescue alerting, and weather services to pilots and other users and is operated by Nav CANADA.

## **Frangible Object**

An object of low mass designed to break, distort or yield on impact so as to prevent and minimize hazard to aircraft.

## **Groundside**

That area of an airport not intended to be used for activities related to aircraft operations and to which the public normally has unrestricted access.

## **Insurance**

A contract binding a company to indemnify an insured party against specified loss in return for premiums paid.

## **Instrument runway**

Runways intended for the operation of aircraft using instrument approach procedures.

## **Intersection**

The point where two runways, a runway and a taxiway, or two taxiways cross or meet or where a taxiway and apron meet.

## **Landing Area**

That part of a movement area intended for the landing or take-off of aircraft.

## **Manoeuvring Area**

The part of an aerodrome to be used for the taking off and landing of aircraft and for the movement of aircraft associated with takeoff and landing, excluding aprons.

## **Marker**

An object displayed above ground level in order to indicate an obstacle or delineate a boundary.

## **Marking**

A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.

## **Movement Area**

That part of an aerodrome used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

## **Night**

The period beginning one half-hour after sunset and ending one half-hour before sunrise and in respect of any place where the sun does not rise or set daily the period during which the centre of the sun's disc is more than six degrees below the horizon.

## **Non-instrument runway**

A runway intended for the operation of aircraft using visual approach procedures.



## **Obstacle**

All fixed (whether temporary or permanent) and mobile objects or parts thereof that are located on an area intended for the surface movement of aircraft or that extend above a defined surface intended to protect aircraft in flight.

## **Obstacle Limitation surface (OLS)**

A surface that establishes the limit to which objects may project into the airspace associated with an aerodrome so that aircraft operations at the aerodrome may be conducted safely.

## **Precision Approach Patch Indicators (PAPI)**

Lighting units in the form of a wing bar located on the side of a runway that provides visual information to the pilot on approach to runway. I.E. PAPI indicates to the pilot that the aircraft is either on, above or below approach slope to runway.

## **Radiotelephone Operator's Restricted Certificate (RORC)**

A document issued by Industry Canada certifying that the holder may act as an operator on any aeronautical radio station fitted with radiotelephone equipment only, transmitting on fixed frequencies and not open to public correspondence.

## **Regional Airport Manager**

A Department of Transportation duly authorized official representative, responsible for the operation and maintenance of an Airport and/or a number of Satellite Airports within a region.

## **Road-holding Position**

A designated position on a service road which vehicle/equipment operators are required to hold and advise ATS of intentions before proceeding on to or leaving the runway or any manoeuvring area.

## **Runway end safety area**

An area adjacent to end of the runway strip primarily intended to reduce the risk of damage to an aircraft undershooting or overrunning the runway.

## Runway Identification Lights (RILS)

Runway identification lights are unidirectional strobes located on the approach end of a runway that are used when an aircraft is in the landing phase of flight.

## Runway

A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

**NOTE:** For the purposes of vehicle control and vehicle communication service this area includes 60 m (200 ft.) from the runway edge on paved surfaces and 45m (150 ft) from the runway edge on gravel surfaces, wherever practical, and 150 m (500 ft.) from the threshold of the runway wherever practical.

## Runway Visual Range (RVR)

The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

## Runway Shoulder

An area adjacent to the edge of the pavement so prepared as to provide a transition between the pavement and the adjacent surface.

## Taxiway

That part of an airport used for manoeuvring aircraft and airport equipment between the apron area and runway. Normally identified by a letter(s) or a combination of letters followed by a number on black background with yellow characters.

## Threshold

The beginning portion of a runway usable for landing aircraft.

## Threshold Markers

Wooden markers painted day-glo orange used on gravel runways indicating the threshold of runway usually placed 15 m (50 ft.) to the side of the threshold.

## **Touchdown Zone**

The portion of a runway beyond the threshold where it is intended that landing aircraft make first contact with the runway.

## **Uncontrolled Airport**

An airport that is “non-controlled” to the extent that the airport does not have an operating Air Traffic Control Tower.

## **Visual Approach Slope Indicator System (VASIS)**

Lighting units in the form of a wing bar located on the side of a runway that provides visual information to the pilot on approach to runway. I.E. VASIS indicates to pilot the aircraft is either on, above or below approach slope to runway.

## **Vehicle**

An automobile, bicycle, over-snow vehicle, truck, bus, or any self-propelled vehicle or device in, on or by which a person or thing is or may be transported, carried, or conveyed on land, and includes a machine designed to derive support in the atmosphere from reactions against the earth's surface of air expelled from the machine, but does not include an aircraft.

## **Vehicle Operator**

The person responsible for the operation and safety of the vehicle and equipment; usually referred to as the driver.

## **Warning Devices**

A siren and/or flashing red light and/or back up alarm.

# **1 Airport Airside Vehicle Operation Traffic Directives**

## **1.1 Airport Division Traffic Directives**

The directives contained in this manual apply at Airports owned and operated by the Government of the NWT, Department of Transportation, Airports Division and are based on Acts, Regulations and Procedures for the safe and orderly operation of motorized vehicles on Airport movement areas. The Airport Traffic Directives meet the intent of the Canadian Aviation Regulation, Part III, Subpart 2 Airport and Article 302.10.

## **1.2 Local Airport Traffic Directives**

There may be considerable difference in the operating conditions at each Airport because of the size and complexity of the operation, climatic conditions, geographical location, and other factors. Local Airport Traffic Directives (LATD) address these differences by establishing safety procedures specific for that airport, in addition to those stated in this manual. LATD(s) is the responsibility of the Regional Airport Manager.

If Local Airport Traffic Directives are prepared for an Airport they should contain some or all of the following information:

### **1.2.1 How and when to:**

**1.2.1.1** apply for an Airside Vehicle Operator's Permit

**1.2.1.2** report an accident

**1.2.1.3** report hazardous debris on aircraft movement surfaces

**1.2.1.4** arrange for an Airside Vehicle Operator's Permit test

### **1.2.2 Airport Site Plan.**

**1.2.3** Explanation of Operating Procedures/Restrictions specific to the Airport. i.e. designated routing for vehicles etc.

**1.2.4** Airport Control Tower (ATC) with Flight Service Station (FSS) Agreements related to vehicle operations.

**1.2.5** Study material related to the Airside Vehicle Operator's Permit test at an Airport for D.

**1.2.6** D Airside Vehicle Operator's Permit self-test.

**1.2.7** D Airside Vehicle Operator's Permit test answers.

**1.2.8 D Airside Vehicle Operator's Permit test.**

**1.3 D Airside Vehicle Operator's Permit (AVOP)**

**1.3.1** No person shall operate a vehicle on an airside area of an Airport unless:

**1.3.1.1** an operational need and right has been identified;

**1.3.1.2** the vehicle operator is the holder of a valid driver's license to operate a motor vehicle of the class being driven;

**1.3.1.3** the employer or individual attests to the fact the person is qualified to operate specific vehicle/equipment airside;

**1.3.1.4** the vehicle(s) is properly equipped and insured for operating airside;

**1.3.1.5** the vehicle operator is in possession of a valid Airside Vehicle Operator's Permit (AVOP);

**1.3.1.6** the vehicle operator agrees in writing to comply with Airport Traffic Directives and Local Airport Traffic Directives (LATD) requirements (if applicable);

**1.3.1.7** the vehicle operator accessing airside is under escort by a person who meets the requirements listed under section 1.5; or

**1.3.1.8** The vehicle operator accessing airside has obtained authorization from the Regional Airport Manager under specific instructions.

**1.3.2** Regional Airport Managers have the authority to issue a Regional D AVOP for Airports under his/her control based on;

**1.3.2.1** Applicant obtaining a Industry Canada Aeronautical Radiotelephone Operators Restricted Certificate

**1.3.2.2** Applicant's establishes a need & right,

**1.3.2.3** Applicant passes a written knowledge exam; and

**1.3.2.4** Applicant passes airside practical tests.

- 1.3.3** Regional Airport Managers may also designate a person with the authority to issue D AVOP for Airports in their region, based on the designated person's completion of an Airport Traffic Directives "train the trainer course" and an understanding of program requirements and procedures.
- 1.3.4** An application for a D AVOP must be made to the Regional Airport Manager or designate by the Applicant in writing, and must include the address of the applicant and justification for the need to have a D AVOP.
- 1.3.5** Other information pertinent to the issuance of a D AVOP not addressed in this manual can be found in Airports Division Airside Access and Vehicle Control Plan. Additional information may also be identified in the Local Airport Traffic Directives in force at the airport where the application is made. To avoid delays, an AVOP Applicant should also check with the Regional Airport Manager's office to verify whether other requirements such as insurance, security clearances, certificates or licenses that may be required to be submitted at the time of application for an AVOP.

**Note:** Subject to being revoked or suspended, an Airside Vehicle Operator's Permit (AVOP) issued under the Airport Traffic Directives (LATD's) is valid for a period of up to five years.

- 1.3.6** Upon the expiry of an Airside Vehicle Operator's Permit or termination of employment, the Employer or Permit Holder shall forthwith return the AVOP to the Regional Airport Manager or designate.
- 1.3.7** The Regional Airport Manager may suspend or cancel permission to operate a vehicle/equipment on airside of an airport at any time if they deem necessary.

## **1.4 Insurance**

In order to operate a motorized vehicle airside, at a GNWT owned and operated Airport, either on an intermittent or regular basis, the vehicle owner must provide proof they have at least \$2,000,000.00 of insurance coverage. The proof of insurance can take the form of a certificate of Insurance that indicates the insurance company's knowledge of airside activity, or it can be in the form of a letter from the insurance company indicating that they are aware that the vehicle is being operated airside.

## 1.5 Vehicle/Equipment Escorts Apron

A company whose employee has a valid drivers license, proper D AVOP, a properly equipped airside vehicle with airside vehicle insurance coverage can provide vehicle escort service on an airport. However it must be fully understood the company is totally responsible and liable for the escorted vehicle should it be involved in an accident or incident.

### 1.5.1 Rules for Airside Vehicle Escorts

- 1.5.1.1 the person providing the escort must have a valid D AVOP for that airport
- 1.5.1.2 the company or person providing the vehicle escort must have airside vehicle/equipment insurance
- 1.5.1.3 the person providing the vehicle escort is totally responsible and liable for the escorted vehicle
- 1.5.1.4 the person providing the escort must remain with vehicle/equipment under escort at all times
- 1.5.1.5 the person providing the escort is responsible for briefing the escorted vehicle/equipment operator on airside operational procedures
- 1.5.1.6 the person providing the escort must not lead or direct escorted vehicle/equipment into any unauthorized area
- 1.5.1.7 as soon as the escorted vehicle/equipment completes its assigned airside task, it must be escorted off airside

**Note:** Security Regulations can supersede escort rules. The Regional Airport Manager also has the right to restrict escort rules at anytime.

- 1.5.1.8 Vehicle/equipment providing escorts on runway/taxiways must be equipped with a radio on the proper airside frequency, the person providing escort must have a valid D AVOP, Radio License, and follow established communication procedures in Section 5 of this manual.

## **1.6 Airside Safety**

- 1.6.1** At all GNWT Airports, the only people allowed airside are those that have an established need and right, such as airport staff, air carrier employees, aircraft owners, persons authorized by Airport Manager or Designated Airport Contractor and ticketed passengers when escorted by airline personnel to and from an aircraft to groundside or the air terminal building.
- 1.6.2** Smoking is strictly prohibited anywhere airside, and this includes inside any vehicle.
- 1.6.3** No pedestrian on an apron shall impede, interfere with or obstruct in any way the free movement of apron traffic without authorization from the Regional Airport Manager or Designate Airport Contractor.
- 1.6.4** Pedestrian(s) are not allowed on the manoeuvring area of an airport without permission.
- 1.6.5** It is the responsibility of all personnel working airside to report all accidents, such as slips and falls, injuries, damages, vandalism, etc. and any unsafe condition observed to the Regional Airport Manager/Designated Airport Contractor or Airports Division Duty Manager.
- 1.6.6** The use of personnel entertainment devices with earphones or headsets, such as MP3 players, cassettes, CD, TV players, etc are prohibited for use airside.
- 1.6.7** Passengers shall not be on board an aircraft when refueling with the engine running.
- 1.6.8** To enhance communications on airports heavy equipment operating on runways and taxiways shall have a radio installed and on the mandatory/ground frequency with adequate speaker system and/or equipped with headphones.
- 1.6.9** Under no circumstances will a vehicle/equipment operator bring a cellular phone onto airside. The use of cell phones is strictly prohibited.



## 2 Responsibilities and Duties

- 2.1 The Employer or vehicle owner must ensure the vehicle they are operating airside is; properly insured and equipped for the areas they operate on airside, maintained in safe operating condition, and that their employees are qualified to operate the vehicle or equipment while performing their duties airside.
- 2.2 Before operating a motor vehicle on the airside of an Airport, vehicle operators must agree to comply with all airside operational procedures in this manual, and have authorization from the Regional Airport Manager or their designate.
- 2.3 The vehicle/equipment operator is responsible for determining airside vehicle/equipment is in safe operating condition, has the required safety equipment/markings and radios are fully operational.
- 2.4 It is the responsibility of all vehicle operators to immediately notify their supervisor, employer or vehicle/equipment owner of any equipment malfunction.
- 2.5 If a vehicle operator encounters any obstruction or potentially hazardous condition or accidents on airside, he/she must immediately report its nature and location to the Regional Airport Manager, Airport Contactor and Airports Division Duty Manager so that corrective action can be taken.
- 2.6 It is the responsibility of all AVOP holders to report to Regional Airport Manager and/or Airports Division Duty Manager unauthorized person(s) airside with no established need and right including ticketed passengers walking to and from an aircraft **not** under escort by air carrier personnel, pilots and/or aircraft owners.
- 2.7 It is the responsibility of every AVOP holder to carry with them their AVOP and Driver's license when operating airside.

## 3 Vehicle Operating Procedures

### 3.1 General

- 3.1.1 **Aircraft always have the right-of-way airside.** Therefore all vehicle/equipment operators shall yield to any aircraft. Airside vehicle operators must be alert at all times before entering an airport movement area, the vehicle operator

shall always visually check to ensure aircraft are not approaching or departing and pedestrian traffic including passengers.

In order of priority, vehicle drivers will yield to:

1. All aircraft, under power or under tow
2. Emergency vehicles responding to incidents/accidents
3. Snow removal vehicles or equipment
4. Fuel vehicles
5. Other airport maintenance vehicles

**3.1.2** Vehicles and pedestrians are permitted on the airport movement area only with authorization from Airports Division Headquarters, the Regional Airport Manager or Designate.

**3.1.3** No person shall operate a vehicle in an airside area unless the vehicle displays a territorial registration plate, or other means of identification authorized by the Regional Airport Manager.

**3.1.4** No person shall park an aircraft fuel servicing vehicle within 15 m (50ft) of the airport terminal building, aircraft, cargo building, aircraft hangar or any other airport structure designed to house the public that has windows or doors in any exposed walls.

**3.1.5** No person shall park a vehicle/equipment so as to block fuel servicing vehicle from an emergency departure.

**3.1.6** No person shall park a vehicle in any area designated by a sign, such as fire lane, loading area etc.

**3.1.7** Vehicle/equipment shall not be driven over aircraft power cables or service hoses.

**3.1.8** Vehicles must never overtake a taxiing aircraft.

**3.1.9** Vehicle/equipment operators shall reduce speed and maintain a careful lookout when near aircraft and corners of buildings or other installations.

**3.1.10** No person shall operate a vehicle on airside of an airport while under the influence of drugs or alcohol, or if they have been prohibited from operating a motor vehicle as imposed

by a court or judge.

Operating a vehicle under the influence is an offence under the criminal code of Canada and the Highway Traffic Act.

- 3.1.11** No person shall operate a vehicle on airside in a reckless or dangerous manner that proposes a threat to aircraft, vehicle traffic or airside personnel and passengers.
- 3.1.12** Headlights and beacon must be turned on at all times whenever a vehicle is moving airside.
- 3.1.13** Foreign material such as lumps of ice, clay, mud or debris, cementation or organ matter dropped airside can seriously damage aircraft. Vehicle operators, therefore, must ensure the surfaces of movement areas are kept free of foreign material by checking the vehicle/equipment wheels, tires and mud-flaps before they enter airside areas.
- 3.1.14** All potentially hazardous foreign material to aircraft on the apron such as plastic bags, construction material, garbage etc. must be picked up by any AVOP Holder and reported immediately to the Regional Airport Manager or Designate. If the FOD is on runways or taxiways the Vehicle operator shall notify Air Traffic Services of intentions then proceed out on to the runway or taxiway for immediate removal. Advise the Regional Airport Manager or Designate after removal of FOD.
- 3.1.15** Vehicle Operators shall remain a safe distance from areas affected by jet blast or prop wash from manoeuvring aircraft. Vehicle Operators shall not pass in front of or closely behind aircraft with engines running unless the wheels of the aircraft are chocked and the marshaller waves permission.
- 3.1.16** No person shall operate a vehicle on a road, at an Airport, at a rate of speed that exceeds the posted speed limit for that road, or where no speed limit is posted, at 50 km/h (30 mph.).
- 3.1.17** Operators and vehicles shall remain clear of the scene of an airport accident, incident and aircraft carrying distinguished visitors unless authorized by the Regional Airport Manager.
- 3.1.18** No person is allowed to leave a vehicle/equipment parked overnight on an apron, taxiway or runway without the

Regional Airport Managers authority. In the event a vehicle/equipment breaks down the movement surface it must be reported immediately to Air Traffic Services, NOTAM issued, notify Regional Airport Manager and/or Airports Division Duty Manager. The vehicle/equipment operator must then make arrangements for the immediate removal of vehicle/equipment from movement surface.

**3.1.19** Under no circumstances will a vehicle/equipment operator bring a cellular telephone onto airside. The use of cell phones is strictly prohibited.

**3.1.20** Vehicle/equipment Operators shall ensure their vehicle or equipment does not track on to airside surfaces any chemical that does not comply with the most current applicable S.A.E. Aerospace material spec. i.e. no chlorides, salts and/or corrosive material that can cause damage to aircraft will be allowed on airside surfaces.

**3.1.21** At Airports with Instrument Landing Systems (ILS) no vehicle or equipment shall stop or park without permission in the area of the glide path or localizer.

### **3.2 Operation of Vehicles on Aprons and Other Uncontrolled Movement Areas**

**3.2.1** Every operator of a vehicle on an apron shall acknowledge and obey instructions received from the Regional Airport Manager or Designate.

**3.2.2** All vehicles and equipment on the airside must be authorized by the Regional Airport Manager or Designate or be escorted by a qualified person. At GNWT airports the escort authorization for the apron is a valid driver License, D Airside Vehicle Operator's Permit (AVOP) held by the vehicle/equipment operator, a properly equipped airside vehicle, along with proper insurance coverage and authorization from their employer.

At GNWT airports the escort authorization for runways and taxiways include, a vehicle equipped with radio and safety equipment, a person with a valid drivers license, valid D AVOP, radio license, proper insurance coverage and authorization form the Regional Airport Manager or Designate.

**3.2.3** A DA or D AVOP may limit the holder to operate a vehicle on specific area(s) of an airport only. This limitation recognizes that the operator will not require access to airside areas other than that specified and that the vehicle used in the normal performance of their duties may be equipped with a beacon and not a radio.

**Note:** Radio equipment is not required for vehicles operating on Airport apron areas or service roads.

**3.2.4** All self-propelled vehicles airside must be equipped with headlamps, tail lamps and parking lamps and a call sign. Vehicles with a cab must be equipped with a rotating or flashing beacon mounted on top of the vehicle. Vehicles without a cab must also be equipped with a rotating or flashing beacon mounted where it does not create a hazard and is visible.



**3.2.5** Whenever a self-propelled vehicle is moving from one place to another on the airport apron, the beacon must be in operation. The purpose of this procedure is to indicate to taxiing aircraft that the vehicle is being operated in the active movement area.

**3.2.6** Headlight, taillight and parking lights must be left on while engaged in servicing parked aircraft.

**3.2.7** Beacons should not be left flashing when a vehicle is stationary within the perimeter of a parked aircraft being serviced. Generally use of flashing beacons can be potentially distracting to taxiing aircraft and downgrades their value as a warning indicator that the vehicle is in motion.

- 3.2.8** All vehicle lights should be turned off when a vehicle is parked in a designated airside parking location.
- 3.2.9** All non-self-propelled equipment are required to carry a strip of yellow reflective material along the full length of the equipment, and diagonal yellow and black panels on the front and rear lower corners.



- 3.2.10** The presence of unlit equipment on airport aprons can be a significant hazard to taxiing aircraft. For this reason, it is important that the reflective material on all equipment be kept clean and in good condition at all times.



- 3.2.11** The Vehicle Operator must know the apron layout, including the location of aircraft operational stands, passenger walkways, helicopter pad(s), designated apron safety area and vehicle parking location(s).
- 3.2.12** Apron servicing vehicles/equipment when not in use shall be parked on the apron in a designated apron safety area assigned by the Airport Manager, which is properly marked and provides separation from aircraft using the apron. This is for temporary parking only, while waiting for the aircraft.
- 3.2.13** DA & D AVOP holders operating on paved surfaces must understand the Pavement Marking System defined in section 4.4.

- 3.2.14** DA AVOP holders operating on the apron areas of an Airport must never proceed past the double amber lights that indicate the taxiway and apron intersection.
- 3.2.15** D AVOP holders operating airside of an airport must always communicate with Air Traffic Services before proceeding past the double amber lights that indicate taxiway and apron intersection.
- 3.2.16** No person shall operate a vehicle within 15 m (50 ft.) of an aircraft being fuelled or de-fuelled except for the purpose of servicing that aircraft.
- 3.2.17** Areas within aircraft operational stands provide for free movement of aircraft service vehicles and equipment performing their duties. Never drive under the wings or tail of an aircraft unless authorized by the pilot-in-command.  
**Note:** Unless engaged in servicing the aircraft all vehicles shall remain a minimum of 15 m (50 ft.) away from the aircraft.
- 3.2.18** Every airside operator of a vehicle entering onto, or already on an apron, shall yield the right-of-way to approaching aircraft that are close enough to constitute an immediate hazard and refrain from proceeding further until the operator can do so safely.
- 3.2.19** No Operator of a vehicle entering onto, or already on an apron, shall approach or cross an aircraft movement guideline except:
- 3.2.19.1** At a right angle to the aircraft movement guideline;  
or
- 3.2.19.2** Where a designated vehicle crossing point exists, at that crossing point.
- 3.2.20** No person on an apron shall drive vehicles and equipment in excess of 25 km/h. (15 mph). Check local airport traffic directives for changes. Operators shall reduce speed and maintain a careful lookout when near aircraft, corners of buildings or other installations.

- 3.2.21** Equipment and vehicles shall not be parked or left unattended on vehicular routes or aircraft movement areas without permission from the Regional Airport Manager or Designate.
- 3.2.22** Vehicles must always be backed into designated airside vehicle parking areas when not in immediate use with beacon and lights off.
- 3.2.23** Generally, aircraft servicing and aircraft maintenance personnel airside are permitted within aircraft operational stands in the performance of their duties. However, every vehicle operator on an apron shall yield the right-of-way to all pedestrian and passenger traffic at all times.
- 3.2.24** At no time will vehicle operators on the apron cross between the aircraft and air terminal building when passengers are enplaning or deplaning.
- 3.2.25** No operator of a vehicle shall overtake or pass another vehicle at an active pedestrian crosswalk.
- 3.2.26** Vehicle operators going airside must close or wait until automatic electric gates close after entering and exiting apron.



- 3.2.27** Vehicle/equipment operators should make every effort to use services and/or perimeter roads to reach airside field locations when roads are available and time permits.
- 3.2.28** Vehicle/equipment operators with D AVOP must know the complete layout of airside and capable of identifying and labeling areas on a drawing.
- 3.2.29** Aircraft being towed or vehicles towing an aircraft must always be in radio contact with air traffic services before entering and while within the manoeuvring area.



**3.2.30** Vehicle/equipment operators will only proceed along routes specified on manoeuvring areas to airfield location unless he/she receives alternate instructions from Flight Service Station or Pilot.

## **4. Lighting, Signage and Markings**

### **4.1 General**

On an Airport, both vehicle and aircraft movement on the ground are guided by airfield lighting, signage and pavement and gravel markings on airside which are different from those used on roads and highways.

This section describes airfield lighting, signage and pavement and gravel markings most commonly used at NWT Airports, which an airside Vehicle Operator is required to know. Other traffic control devices, in addition to the following, may be used at some Airports and will be explained as required, in the Local Airport Traffic Directives (LATD).

### **4.2 Lighting and Nav Aids**

All Vehicle and Equipment Operators must know and understand airfield lighting used on airports in the GNWT.

Airfield Lighting commonly used at airports:

**Blue** lights are used along the edge of aprons and taxiways.



**Double amber** (yellow) indicates an apron/taxiway intersection.



**Double blue** lights indicate a taxiway/runway intersection.



**White** lights are used along the edge of runways.



**Threshold** lights are double sided lights; one half red and one half green and are used to identify the end of the runway. The red faces the runway and green faces the approach to runway. (Note; runways less than 45 m in width require 2 groups of 3 lights and greater than 45 m require 2 groups of 4 lights).



**Precision Approach Path Indicator System (PAPIS)** are a series of lights along side the runway that tells the pilot if the aircraft is too high or to low during landing.



**Visual Approach Slope Indicator System (VASIS)** is a series of light units on the side of the runway that tells the pilot if he is too high or low during landing.



**NOTE:** Both PAPIS and VASIS lights require regular inspection to detect misalignment that could lead to a dangerous approach path.

**Runway Identification Light Strobes (RILS)** on the approach end of runway and used by pilot to identify runway in use for landing.



**NOTE:** The minimum recommended distance an airside vehicle operator with a D permit can come to a RILS, PAPIS or VASIS is 2 metres (6 feet).

**Aerodrome Beacon** is rotating or flashing white light mounted on tower or building and used by pilot for visual identification of airport.



**Wind Direction Indicator** is normally a red and white cone shaped 3.6m long, normally found on both sides of runway and gives general indication of wind speed and direction.



**Ceiling Projector** is a light usually located airside that directs a beam of light towards the sky that is used by Nav Canada Along with an alidade to measure the height of the cloud base.



### **Simple Approach Lighting**

The Simple approach lighting system normally used on paved runways consists of a minimum of 5 lights installed on the extended center line of the runway extending over a distance of 450 m, 90 m apart and two light units, one each at right angles to the runway threshold.



### **Precision Approach lighting**

The precision approach lighting system consists of 7 center line barrettes installed on the extended center line of runway extending over a distance of 720 m, 60 m apart and 5 sequenced flashing lights on a cross bar.



**ARCAL** Aircraft Radio Control of Aerodrome Lighting – electronic unit that allows pilots to remotely turn on airfield lighting outside CARS hours for duration of approximately 15 minutes.



### **Apron Floodlighting**

Apron floodlights are designed to illuminate apron service area at night.

**Note:** D AVOP Vehicle operators shall never proceed past the double amber (yellow) lights that indicate the intersection of an apron and taxiway.

**VHF Omnidirectional Range (VOR)** is a type of radio navigation system for aircraft. Operating close to it and other radio navigational equipment may also affect the signal on some types of electron nav aids such as Instrument Landing Systems (ILS). For this reason vehicle/equipment operators must get approval from ground control or Flight Services before approaching any such equipment.



### 4.3 Airside Signage

#### 4.3.1 Mandatory Signage

These signs consist of the runway headings with white characters on a red background. These signs are normally mounted either on the left, right or both sides of a taxiway and are located 15 m (50 ft.) to 20 m (55 ft.) from the edge. These signs also indicate the “HOLD” position on a taxiway.



#### 4.3.2 Information Signage

These signs include direction, location, designation and runway exit signs. An information sign consists of an inscription in black on a yellow background except that of a location sign (i.e. taxiway sign) consists of an inscription in

yellow on a black background or white on a green background.

**Location signs** comprise the designation of the location with inscription in yellow on a black background such as a taxiway and do not contain arrows.



**Destination sign** comprise of alpha, alpha numeric or numeric message identifying the designation plus an arrow indicating the direction to proceed.



**Runway exit sign** consists of the designator of the exit taxiway and an arrow indicating the direction to follow.

TYPICAL RUNWAY EXIT SIGNS



Example: Taxiway 'G' or 'G2' exit left

Example: Taxiway 'G' or 'G2' exit right

**Information signs** provide information of interest primarily to aircraft but which may also be helpful to Vehicle Operators as reference points.



**Directional signs** normally have an arrow indication the direction of travel to exits, aprons, terminal buildings, or other facilities named on the sign.

**Designator Signs** like street signs: identify the names of runways by number, and of taxiways by letter. Taxiway signs have a black background with yellow letters and are located on side of the taxiway. Remember that taxiways are referred to when speaking by using the phonetic alphabet so that taxiway “A” is spoken of as “taxiway Alpha”; taxiway “B” is “taxiway Bravo”, etc. and that a vehicle may not enter a taxiway without prior approval from ground control or Flight Services or CARS. In their absence the vehicle operators must follow established approved procedures of notifying designated flight service station and broadcasting intentions on the airport mandatory frequency.

**Airside Service Roads Signs** used on aprons and airside service roads are generally the same signs as those used on territorial roads. All Vehicle Operators on airside service roads are required to comply with these signs.

#### 4.4 Pavement Marking

**Taxiway Centre Line Markings** are a continuous yellow line used to provide guidance from the runway centre line to a point on the apron.

**Aircraft Movement Guide Lines** are a single yellow line extending from the runway along a taxiway to, and in some cases, along the apron. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on pavement and that the wings will not contact known obstructions (buildings, light standards, etc.). On aprons, vehicles may only cross aircraft movement guidelines at right angles.



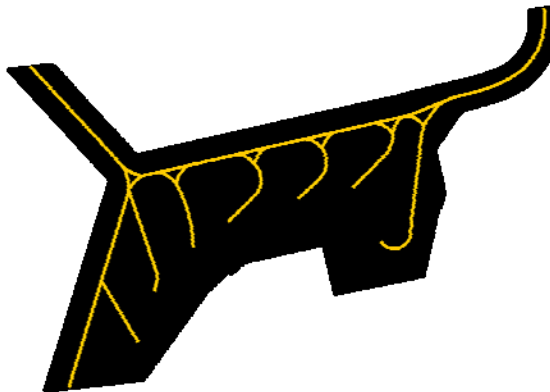
**Aircraft Lead in Lines** are yellow lines between an aircraft guideline, a gate or parking position. The aircraft nose wheel is centered in these lines to guide the aircraft into the parking position without hitting other parked aircraft or obstructions.

**Aircraft Stand markings** are yellow and provided for designated parking positions on a paved apron.



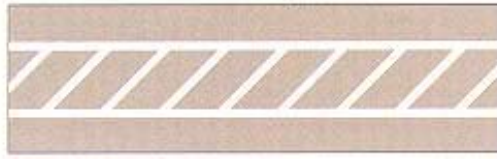
**Taxiway Center line Marking** is yellow, 15 cm in width and continuous in length from the runway centerline to a point on the apron where aircraft stand markings commence.

**Aircraft stand taxiway marking** is a continuous yellow 15 cm line used to provide guidance from a point on the apron to aircraft stand marking.



**Apron Safety Lines** are used to define the area(s) intended for use by ground vehicles and other aircraft servicing equipment to provide separation from aircraft.

**Apron passenger path lines** are two white parallel lines with white diagonal hatching between them giving a zebra stripe appearance and are used to provide safe guidance to passengers enplaning or deplaning an aircraft.



**Runway markings** are white.

**Runway Center line** consists of a line of uniformly spaced stripes and gaps. The length of a stripe should be 30 m the gap should be 30 m and the width of the stripes is at least .9 m.

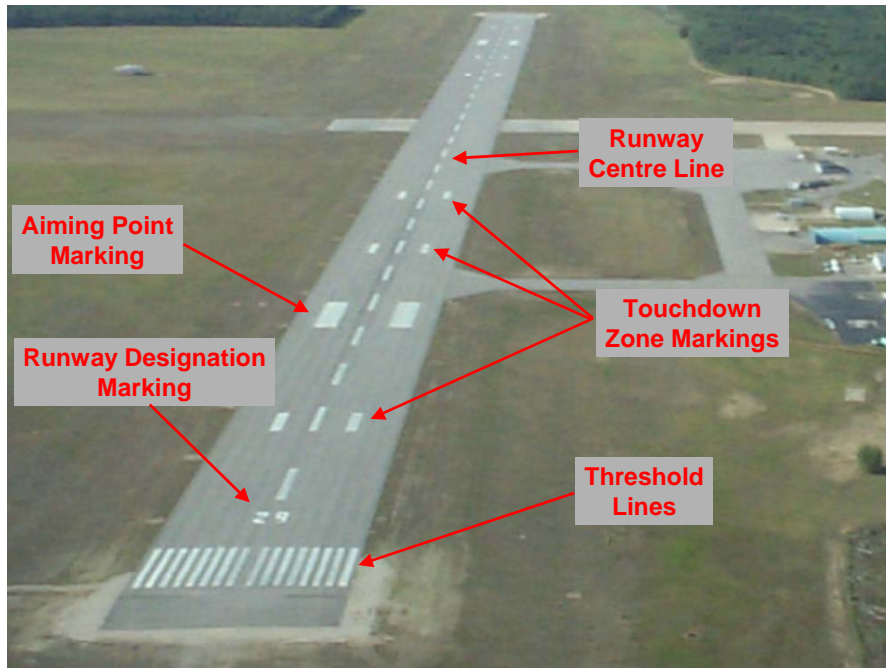
**Threshold Markings** start 6 m from the threshold and consist of a pattern of long stripes of equal shape and size placed evenly about the centerline of a runway. The number of stripes is determined by the width of runway i.e. 45 m (150 ft) 12 stripes. The stripes extend laterally to within 3 m of runway edge and 6 m from the edge length wise. Stripes are separated into two groups by at least 3.6 m. The stripes are 30 m long, 1.80 m wide with spacing of 1.80 m between them.

**Runway Designation Markings** are located beyond the threshold markings and consists of a two-digit number 9 m high and 6 m wide.

**Aiming Point Marking** consists of two clearly marked stripes located 150 m to 400 m from threshold depending on runway code number.

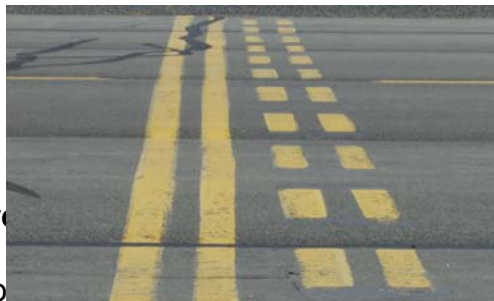
**Touchdown Zone Marking** consists of pairs of rectangular markings symmetrically disposed about the runway centerline with the number of such pairs related to the landing distance available.

**Runway Side Stripe Markings** consists of a stripe normally .9 m in width along edge of runway.



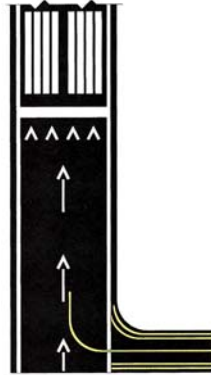
**Aircraft stand marking** is 15 cm yellow line and includes stand identification, lead-in line, turning line, stop line and lead-out line and are used to assist in parking an aircraft.

**Taxiway hold lines** are located not less than 60 m from edge of runway consisting of two solid and two broken yellow lines across the taxiway with broken lines closest to runway.



**Displaced Thro**

If for any reason the beginning of the runway, white lines painted close together to form arrows, point to a bar across the runway to indicate the beginning of the usable part of the runway for aircraft.



#### 4.5 Gravel Marking

**Centerline Marking** consists of a 1.25 m wide stripe of colored water (dye) down the center of the runway in winter that can be easily seen from the air.

#### **Hold Position**

The amber lights at the taxiway/apron intersection are used to indicate a holding position.

**Threshold Markers** are 1.25 m X 1.25 m day-glo orange wooden markers placed 15 m on either side of threshold.



**Approach Markers** are the 1.25 m X 2.50 m day-glo orange wooden markers placed 150 m from threshold centerline and 150 m apart thereafter.



**Runway Edge Markers** are day-glo orange pyramid or cone shaped, lightweight and frangible mounted and be sufficiently low to preserve clearance of aircraft propellers.

Note: Markers should be anchored to prevent them blowing around or away.



**Taxiway Edge Markers** are retro-reflective blue rectangular or cone shaped, lightweight and frangible mounted and shall be sufficiently low to preserve clearance of aircraft propellers.

## 5.A Radiotelephone Procedures (FSS/Ground Control) (YZF/YVQ/YEV)

### 5.1 Radiotelephone and Voice Techniques

**5.1.1** Hold background-noise-canceling microphones as close to the lips as possible. Hold most other microphones approximately 6.5 cm (2-3 in.) in front of the mouth.

**5.1.2** Listen out first to ensure that you will not interrupt another transmission, then: depress the “press to talk” (PTT) switch before beginning to speak and keep it depressed for the entire transmission. Avoid clicking on and off. When the transmission is finished, release the (PTT) switch immediately.

**5.1.3** Speak plainly and distinctly to prevent running consecutive words together. Do not shout, accentuate syllables artificially, or speak too rapidly.

**5.1.4** Use standard procedure words and phrases and standard airport terminology.

**5.1.5** Due to obstructions (i.e. metal buildings, hills, etc.) There may be some areas on the airport where signals are not

received. These areas are referred to as blind spots and should be indicated in the Local Airport Traffic Directives airport site plan.

## **5.2 Communicate with Ground / Flight Service Station**

**5.2.1** Vehicle/equipment operators are always required to obtain permission before proceeding past the apron and taxiway intersection, and entering within 60 m (200 ft.) from the side of a paved runway.

Note:

The above procedure does not apply to the area extending from each end of the runway (threshold) in order that the airport can maintain an unobstructed aircraft approach to the runway for landing and to gain altitude after take off.

**5.2.2** Vehicle/equipment operators when approaching the threshold area(s) are required to obtain permission 150m (500 ft) from threshold of a runway before proceeding onto the manoeuvring area and maintain radio communication with Ground Control or Flight Service Station when in this area.

**5.2.3** All vehicle/equipment operators must monitor the radio at all times when on the manoeuvring area. Vehicle Operators are not allowed to leave a vehicle radio unattended while in the manoeuvring area, except with the specific permission of the Air Traffic Services Unit or Flight Service Specialist or the radio is equipped with an external speaker and the operator can answer in timely manner.

**5.2.4** It is mandatory that all vehicle/equipment operators advise Ground Control or Flight Service Station when he/she has exited the manoeuvring area.

**5.2.5** All vehicle/equipment operators will report to Ground Control or Flight Service Stations only after completion of an activity on the manoeuvring area. For example vehicle/equipment operators will only report being off of a runway after he/she is at least 60 m (200 ft.) from edge of runway paved surface, and not while still in the process of leaving the manoeuvring area.

**5.2.6** Vehicle/equipment operators must ensure he/she fully understands and complies with all instructions given by a

Ground Controller or Flight Service Specialist before entering an aircraft manoeuvring area or crossing an active runway.

- 5.2.7** In addition to Ground Control or a Flight Service Station Specialist giving permission via radio to proceed onto or within the manoeuvring area, vehicle/equipment operators must visually check to ensure he/she will not interfere with any aircraft on or approaching the route directed to use.
- 5.2.8** Vehicle/equipment Operators must always use the correct radio call sign for the vehicle he/she is operating, in every radio transmission.
- 5.2.9** When non-radio-equipped vehicles and equipment are operating in groups or fleets with a radio-equipped vehicle, they shall be under the control of a qualified employee responsible for requesting and acknowledging all ground control or flight services station instructions.
- 5.2.10** Before proceeding onto manoeuvring areas the vehicle/equipment operator shall contact flight service station/ground control for permission to proceed to a specific location by a specified route. The vehicle/equipment operator shall acknowledge all instructions from the flight service station/ground control as understood or request that the instructions be repeated if not understood. The operator shall proceed only along the specified route to the specified location unless he/she receives alternate instructions.
- 5.2.11** Requests for permission to proceed onto the manoeuvring area shall include:
  - 5.2..1** The vehicle identification.
  - 5.2..2** The vehicle's current location.
  - 5.2..3** The intended activity/work to be performed while in the manoeuvring area and/or specific destination and intended route (otherwise the flight service station specialist/ground controller will normally specify the route to be followed).
  - 5.2..4** The time the vehicle and/or the person will be in the manoeuvring area.
  - 5.2..5** When an operator is instructed to hold short of a runway or is waiting permission to cross or proceed onto a runway the operator shall hold the vehicle 60m (200 ft) from the nearest edge of the runway or behind

the solid yellow line on the taxiway so marked. Vehicle/equipment Operators shall repeat hold short instructions followed by the vehicle call sign.

**5.2.12** When instructed to leave the runway vehicle operators shall acknowledge instructions and proceed to a taxiway holding position or to a safe position off to the side of the runway at least 60m (200 ft) from the nearest edge of the runway. Once in the holding position vehicle operators shall inform flight service station specialist/ground controller that he/she is off the runway and give their exact position.

Note:

Vehicles/equipment sometimes may have to operate within 60m (200 ft) from the runway. When this happens the operator must inform flight service station specialist/ground controller of the approximate distance of the vehicle/equipment is from the nearest runway edge.

**5.2.13** If the vehicle/equipment breaks down the operator shall immediately notify the flight service station /ground control of location and difficulty and request assistance.

**5.2.14** If the radio fails while the vehicle is in the manoeuvring area turn the vehicle to face the flight service station/control tower and flash the headlights off and on. The flight service station specialist/ground controller will respond using the following light signals:

- 5.2..1** Flashing green light – proceed
- 5.2..2** Steady red light –stop hold your position
- 5.2..3** Flashing red light – vacate the runway
- 5.2..4** Flashing white light – return to starting point on the airport

Note:

In the course of moving from the manoeuvring area the vehicle operator must hold short of each intervening runway and receive permission to proceed (flashing green light signal) before crossing the runway.

**5.2.15** If the vehicle/equipment radio and vehicle both fail while in the manoeuvring area, light and place red road flares approximately 30m (100 ft) ahead of and behind the vehicle in line parallel to the nearest runway or taxiway as a warning to aircraft. If the flares when placed are not likely to be seen



from the flight service station or control tower due to snow banks or other intervening obstructions light and place one or more flares near the vehicle where they may be clearly visible from flight service station or control tower. Stay with the vehicle. In adverse weather conditions normally associated with combined vehicle and radio failures the vehicle may provide the best protection until help arrives.

**5.2.16** The blinking on and off of runway lights is a warning signal for all vehicles to leave the runway immediately.

### **5.3 Standard Procedures and Words**

While it is not practical to say precise phraseology for all radiotelephone procedures, the following words and phrases should be used where applicable. Do not use words and phrases such as (“Clear”) (“OK”, “REPEAT”) (“HOW IS THAT”), or slang expressions.

#### **5.3.1 Word or Phrase-meaning**

ACKNOWLEDGE	Let me know that you have received and understood this message.
AFFIRMATIVE	Yes, or permission granted.
CONFIRM	My version is ... is that correct?
CORRECTION	An error has been made in this transmission (or message indicated). My correct version is...
HOW DO YOU READ?	Can you hear and understand me?
I SAY AGAIN	I will now repeat my last word (sentence) for clarification.
NEGATIVE	No, or permission not granted, or THAT is not correct, or I do not agree.
OVER	My transmission is ended and I expect a response from you. <u>(Normally used only under poor communication conditions.)</u>
OUT	This conversation is ended and no response is expected. <u>(Normally used</u>

only under poor communication conditions.)

READ BACK	Repeat all, or the specified part, of this message back to me exactly as received.
ROGER	I have received all of your last transmission.
SAY AGAIN	Repeat all, or the following part, of your last transmission. (Do not use the word "Repeat".)
SPEAK SLOWER	(Self-explanatory)
STANDBY	Wait and listen, will call you again.
THAT IS CORRECT	(Self explanatory)
VERIFY	Check text with originator and send correct version.
ADVISE INTENTIONS	Vehicle operator must communicate their intended plan to CARS plus call sign, location, intended route and destination.

#### 5.4 Call-up Procedure

A "call-up" is a procedure used to establish two-way communication between an airport vehicle/equipment operator, ground control (control tower) or Flight Service Station or an aircraft. Before making a "call-up", listen out to avoid cutting into a transmission from other users. Proceed only when others are not using the frequency.

##### A call-up consists of:

- 1 call sign of the station called;
- 2 identification of the station from which the call is made. On call-up, always use the call sign of the station called.

Examples (Ground Control/ FSS):

Norman Wells Radio	Staff four six
--------------------	----------------

(call sign of site being called up)	(call sign of vehicle calling)
Staff four six (call up from vehicle, being answered)	Norman Wells Radio (site responding)

**Note:**

If you do not receive a response to your call-up, wait a reasonable time and call again.

**5.5 Acknowledgments**

An acknowledgment means a transmission has been received and understood. Never acknowledge until the transmission is fully understood.

Examples:

Inuvik Radio Staff two-niner Roger (station called up acknowledges)	Staff Two-niner (vehicle communicating)
Inuvik Radio Staff two-niner "Say Again" (call sign Staff 29 does not fully understand message)	Staff Two-niner (vehicle communicating)

**5.6 End of Transmission**

To end any two-way communication, say the name of the vehicle (call sign) and the word out.

Example:

GRADER ONE FIVE SEVEN (Grader communicating on radio)	OUT End two-way communications
--	-----------------------------------

**5.7 Standard Radio Phraseologies with Ground Control and Flight Services Station**

In the aviation industry standard phraseology has been developed through years of practice to transmit instructions, and messages most efficiently and without misunderstanding, using the fewest words.

Examples FSS/Tower:

**5.7.1 Authorization Request and Response**

Inuvik Radio, Truck 85	Initial call from vehicle
Truck 85 Inuvik radio	Inuvik radio responses to initial call up
Truck 85 on the apron request permission to proceed on to runway 06-24 via taxiway A for snow removal.	Truck 85 requests permission from Inuvik radio to proceed on to runway. (Note Truck 85 advises Inuvik radio intended route and why they require access).
Inuvik radio proceed via ALFA onto runway 06-24.	Inuvik radio answers and allows Truck 85 to proceed on to runway.

If the request for permission to proceed is denied, response from “Inuvik Radio will start with the word “NEGATIVE”, for example:

**Note: Holding short is a mandatory read back required by all D AVOP Holders.**

Truck 85 Inuvik radio negative hold short aircraft on final.	Inuvik Radio denies Truck 85 access to runway
Truck 85 roger, holding short on the apron	It is mandatory read back Truck 85 must respond holding short and provide location.

### **5.7.2 Authorization Request when Escorting Non-radio-equipped Vehicle**

For Example FSS/Ground Control:

Norman Wells Radio staff 23 plus one request permission to proceed on to runway 09-27 via taxiway A to repair runway lights.	The D AVOP Holder providing escort to another vehicle without radio communications must also request permission for escort vehicle to proceed on to runway.
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Use the term “plus one” or “plus two” because it indicates to FSS or Ground Controller the number of vehicles in the group.

### 5.7.3 Control Instructions

Staff 23 Norman Wells Radio proceed on to runway 09-27.	FSS grants the vehicle/equipment operator access with the understanding there is a chance there may be aircraft in area that has not contacted FSS.
Staff 23 proceeding.	To enhance safety when on the taxiway it is mandatory staff 23 visually check both approach ends of runway to verify there is no aircraft on final approach before driving out on to runway.

When a vehicle/equipment operators requests permission to proceed on to runway and is instructed by FSS/Ground Control to “HOLD SHORT RUNWAY 06-24. It is mandatory the instruction to hold short be read back.

Example: Mandatory read back.

Norman Wells radio staff 23 request permission to proceed on to runway 09-27 for snow removal	Staff 23 communicating with FSS.
Staff 23 Norman Wells radio negative HOLD SHORT aircraft final 09-27.	FSS instructing staff 23 to not proceed on to runway and to hold short of runway.
Norman Wells radio staff 23 roger, holding short on the apron.	It is mandatory staff 23 advise FSS they are Holding Short and give location

### 5.8 **Radio Test Procedures**

Aeronautical radio tests, when necessary, should not be more than 10 seconds in duration. The radio test shall not interfere with other aeronautical communications.

The readability of signals may be reported in plain language, but most often are reported according to the following scale:

1 – Unreadable	4 – readable
2 – readable now and then	5 – perfectly readable
3 – readable but with difficulty	

## 5.9 Radio License Requirements

All AVOP D permit holders require a Radiotelephone Operators Restricted Certificate if they have access or the ability to operate on an aeronautical frequency band.

## 5.B Radiotelephone Procedures (Community Aerodrome Radio Station)

### 5.1 Radiotelephone and Voice Techniques

See Section 5A.1

### 5.2 Communicate with Community Aerodrome Radio Station

**5.2.1** Vehicle/equipment operators shall always communicate his/her intentions before, proceeding past the apron and taxiway intersection, and entering within 45 m (150 ft.) from the side of a **gravel runway**.

Vehicle/equipment operators shall always communicate his/her intentions when proceeding past the apron and taxiway intersection and entering within 60 m (200 ft.) from the side of a **paved runway**.

The CARS O/C will acknowledge this transmission and explain the air traffic situation. Based on this information, the vehicle operator must decide if it is safe to go on the runway or not. The vehicle operator then will advise the O/C of his/her intentions and proceed accordingly.

If the vehicle operator is advised of an aircraft taxiing for takeoff or inbound to land, they shall hold short or get off the active runways and taxiways. Advise the CARS O/C of intentions and report **“off” or Holding Short.**

**5.2.2** Vehicle/equipment operators when approaching the threshold area(s) are required to advise the CARS operator when they need to operate within 150m (500 ft) from threshold of a runway before proceeding onto that area and maintain radio communication with Community Aerodrome Radio Station (CARS) when in that area.

**5.2.3** All vehicle/equipment operators must monitor the radio at all times when on the manoeuvring area. Vehicle Operators are not allowed to leave a vehicle radio unattended while on the manoeuvring area. However in some circumstances vehicle

operators may leave the vehicle/equipment if they have a portable radio on MF or the radio installed in vehicle/equipment is equipped with an external speaker and the operator can answer in timely manner.

- 5.2.4** It is mandatory all vehicle/equipment operators advise Community Aerodrome Radio Stations when he/she has exited the manoeuvring area.
- 5.2.5** All vehicle/equipment operators will advise Community Aerodrome Radio Stations only after completion of an activity on the manoeuvring. For example vehicle/equipment operators will only report being off of a runway after he/she is at least 45 m (150 ft.) from edge of runway surface, and not while still in the process of leaving the manoeuvring area.
- 5.2.6** Vehicle/equipment operators must ensure he/she fully understand the Community Aerodrome Radio Station Observer Communicator before entering an aircraft manoeuvring area or crossing an active runway.
- 5.2.7** In addition to communicating vehicle/equipment operator's intentions to proceed on to runway or within manoeuvring area to Community Aerodrome Radio Stations, vehicle/equipment operators must visually check to ensure he/she will not interfere with any aircraft on or approaching the intended route.
- 5.2.8** Vehicle/equipment Operators must always use the correct radio call sign for the vehicle he/she is operating, in every radio transmission.
- 5.2.9** When non-radio-equipped vehicles and equipment are being escorted in a group or fleets, they shall be under the control of a radio equipped vehicle and qualified employee responsible for requesting and acknowledging all radio communications with the Community Aerodrome Radio Station.
- 5.2.10** Before proceeding onto manoeuvring areas the vehicle/equipment operators shall contact Community Aerodrome Radio Stations and advise them of his/her duration of time and intentions to proceed on to the runway, vehicle/equipment specific location and specified route to be used. The vehicle/equipment operator shall acknowledge all information from the Community Aerodrome Radio Station

as understood or request that the information be repeated if not understood.

**5.2.11** Vehicle/equipment operators advising CARS of intentions to proceed into the manoeuvring area shall include:

- 5.2..1** The vehicle identification
- 5.2..2** The vehicle's current location
- 5.2..3** The intended activity/work to be performed while in the manoeuvring area and/or specific destination and intended route.
- 5.2..4** The time the vehicle and/or the person will be in the manoeuvring area
- 5.2..5** When advised by CARS of an inbound aircraft the vehicle operators shall acknowledge information, advise intention, leave the runway and proceed to the apron or a taxiway holding position or to a safe position off to the side of the runway at least 45m (150 ft) from the nearest edge of the runway. Once in the holding position vehicle operators shall inform CARS OC that he/she is off the runway and give their exact position.

**Note:**

Vehicles/equipment sometimes may have to operate within 45m (150 ft) from the runway. When this happens the operator must inform Community Aerodrome Radio Station of the approximate distance the vehicle/equipment is from the nearest runway edge.

**5.2.12** If the vehicle/equipment breaks down the operator shall immediately notify the Community Aerodrome Radio Station of location and difficulty and request for assistance.

**5.2.13** If the radio fails while the vehicle is in the manoeuvring area turn the vehicle to face the Community Aerodrome Radio Station and flash the headlights off and on.

**Note:**

In the course of moving from the manoeuvring area the vehicle operator must hold short of each intervening runway and verify no aircraft ready for take off on approach or final before proceeding across the runway.

**5.2.14** If the vehicle/equipment radio and vehicle both fail while in the manoeuvring area, light and place red road flares



approximately 30m (100 ft) ahead of and behind the vehicle in line parallel to the runway or taxiway as a warning to aircraft. If the flares when placed are not likely to be seen from the Community Aerodrome Radio Station due to snow banks or other intervening obstructions light and place one or more flares near the vehicle where they may be clearly visible from Community Aerodrome Radio Station. Stay with the vehicle. In adverse weather conditions normally associated with combined vehicle and radio failures the vehicle may provide the best protection until help arrives.

**Note:**

If in area with cell phone service call the CARS and arrange to issue a NOTAM closing the runway.

**5.2.15** The blinking on and off of runway lights is a warning signal for all vehicles to leave the runway immediately.

**5.2.16** When instructed to leave the runway vehicle operators shall acknowledge instructions and proceed to a taxiway holding position or to a safe position off to the side of the runway at least 45m (150 ft) from the nearest edge of the runway. Once in the holding position vehicle operators shall inform the CARS/FSS that he/she is off the runway and give their exact position.

**5.4 Standard Procedures and Words**

See Section 5A.3

**5.5 Call-up Procedure**

A “call-up” is a procedure used to establish two-way communication between an airport vehicle/equipment operator, Community Aerodrome Radio Station or an aircraft. Before making a “call-up”, listen out to avoid cutting into a transmission from other users. Proceed only when others are not using the frequency.

**A call-up consists of:**

- 3 call sign of the station called;
- 4 identification of the station from which the call is made. On call-up, always use the call sign of the station called.

Examples (CARS & Vehicle/equipment):

Paulatuk Airport Radio (call sign of site being called up)	Staff four six (call sign of vehicle calling)
Staff four six (call up from vehicle, being answered)	Paulatuk Airport Radio (site responding)

**Note:**

If you do not receive a response to your call-up, wait a reasonable time and call again.

**5.6 Acknowledgments**

An acknowledgment means a transmission has been received and understood. Never acknowledge until the transmission is fully understood.

Examples:

Tuktoyaktuk Airport Radio Staff two-niner Roger (station called up acknowledges)	Staff Two-niner (vehicle communicating)
Tuktoyaktuk Airport Radio Staff two-niner "Say Again" (call sign Staff 29 does not fully understand message)	Staff Two-niner (vehicle communicating)

**5.7 End of Transmission**

To end any two-way communication, say the name of the vehicle (call sign) and the word out. (Normally only used under poor communication conditions)

Example:

GRADER ONE FIVE SEVEN (Grader communicating on radio)	OUT End two-way communications
--	-----------------------------------

**5.8 Standard Radio Phraseologies with Community Aerodrome Radio Station**

In the aviation industry standard phraseology has been developed through years of practice to transmit clear concise messages most efficiently and without misunderstanding, using the fewest words.

Examples CARS:

**5.8.1 Vehicle/equipment intentions and CARS Response**

Radio Communications                      Explanation

Fort Simpson Airport Radio, Truck 85 on the apron would like to go out on runway 13/31	Initial call from vehicle
Truck 85 Fort Simpson Airport Radio roger, no reported traffic	Fort Simpson Airport radio responses to initial call up
Truck 85 Roger. Proceeding onto 13/31.	Truck 85 acknowledges Fort Simpson Airport Radio and proceeds onto runway 13/31
Truck 85 Roger.	Fort Simpson Airport Radio acknowledges truck 85.

If an aircraft is in bound, on take off, taxiing for take off etc. Community Aerodrome Radio Station will communicate vehicle/equipment and aircraft intentions. The following is an example of that communications along with the mandatory read back "HOLDING SHORT". (The old request for permission to proceed is denied, to truck 85 from "Fort Simpson Airport Radio.

**EXAMPLE:**

**Note:** Mandatory read back **Holding Short.**

Radio Communications                      Explanation

YFS Radio Truck 85 would like to go out on the runway 13/31	Initial call from vehicle
Truck 85 Fort Simpson Airport Radio what is your position and intended route?	Fort Simpson Airport Radio wants to know present location of Truck 85 and intended route.
Truck 85 is at the maintenance garage would like to proceed via the ramp and taxiway A to runway 13/31	Truck 85 response and provides location and intended route.
Truck 85 roger, aircraft taxiing for departure runway 13 advise intentions	Fort Simpson Airport Radio wants to know Truck 85 intentions as there is an aircraft taxiing for departure and will pass intentions to the aircraft
Truck 85 will proceed onto	Truck 85 advises YFS Radio

taxiway A and <b>Hold Short</b> of runway 13/31	intentions
Truck 85 Roger check <b>you holding short runway 13</b>	CARS reads back holding short

### 5.8.2 Escorting Non-radio-equipped Vehicle

For Example CARS:

Radio Communications      Explanation

YHY Radio staff 23 plus one on the apron would like to go out on the runway 13/31 to repair manhole.	The D AVOP Holder providing escort to another vehicle without radio communications must also include escort vehicle in his/her intentions to proceed on to runway.
--	--

Use the term “plus one” or “plus two” because it indicates to CARS the number of vehicle(s) in the group.

### 5.8.3 Communication Controls

Example Cars;

Radio Communications      Explanation

Staff 23 YSM Radio on the apron requesting runway 11/29 via taxi A to complete runway check.	Staff 23 requesting to proceed on to runway
Staff 23 YSM radio, roger, traffic is a C185 last estimated 3 minutes ago planning runway 11 advise intentions	YSM Radio acknowledges and wants to know staff 23 intentions on going on to runway with inbound aircraft in order to pass information to the aircraft
Staff 23 will wait on the apron for the 185.	Staff 23 intentions are to wait on apron until 185 lands.
Staff 23 Roger	YSM Radio acknowledges Staff 23
YSM Radio staff 23	Staff 23 call YSM Radio

Staff 23 the C185 has reported off the runway no reported traffic advise intentions.	YSM Radio answering and advises 185 off runway there is no reported aircraft and wants to know if staff 23 still wants out on runway  <b>NOTE:</b> The vehicle/equipment operator accessing the runway with the understanding that no aircraft traffic has reported into CARS however there still is a chance there may be an aircraft in area that has not contacted CARS.
Staff 23 proceeding onto 11/29	Staff 23 advises YSM Radio of intentions  <b>NOTE:</b> To enhance safety when on the taxiway it is mandatory vehicle/equipment operators visually check both approach ends of runway to verify there is no aircraft on final approach before driving out on to runway.
Staff 23 Roger	YSM Radio acknowledges staff 23.

## 5.9 Radio Test Procedures

Aeronautical radio tests, when necessary, should not be more than 10 seconds in duration. The radio test shall not interfere with other aeronautical communications.

The readability of signals may be reported in plain language, but most often are reported according to the following scale:

1 – Unreadable	4 – readable
2 – readable now and then	5 – perfectly readable
3 – readable but with difficulty	



- When requested provide the location of other known ground traffic on manoeuvring area;
- When requested provide runway surface condition reports;
- Give way to aircraft at all times; and
- Broadcast on the MF or ATF that manoeuvring area is clear of ground traffic upon exiting; and
- Cancel the NOTAM

### Phraseology

The following are examples of the phraseologies used to notify aircraft in the area of the airport vehicle/equipment operator's intentions and typical responses to call from aircraft.

**All Vehicle/Equipment Operators shall blind broadcast intentions twice on the mandatory frequency to ensure message is clear and understood.**

**All vehicle/equipment operators shall wait for one minute after transmitting blind broadcast intentions prior to proceeding on to the airport manoeuvring area to give aircraft in vicinity time to respond.**

NOTE:

Insert the airport name where the example shows Wekweti, the vehicle/equipment call sign where the example shows Staff 21 or Grader 150 and the runway numbers where the example shows runway 13-31.

a) Proceeding on to manoeuvring area

### **EXAMPLE:**

**Wekweti** airport traffic, this is Staff 21, proceeding on taxiway and **runway 13-31** for airfield inspection.

**Wekweti** airport traffic, this is Grader 150, proceeding on taxiway and **runway 13-31** for snow removal.

***All Aircraft call up***

**Wekweti** airport traffic, this is Foxtrot Alpha Bravo Charlie, ten miles northwest of **Wekweti** inbound for landing runway 13 in 8 minutes, conflicting traffic this is Foxtrot Alpha Bravo Charlie on one two three decimal two.

***Airport Vehicle/equipment Operator (maintenance) on the runway response to the aircraft call up.***

Aircraft in vicinity of **Wekweti**, this is Staff 21, airport maintenance at **Wekweti**, on **runway 13-31**. Will advise when all equipment is off runway.

**Note:** Do not try to remember the call sign of aircraft use the “**phrase**” “**aircraft in vicinity of airport**” at all times.

**Example Vehicle/equipment operators Response:**

Aircraft in the vicinity of **Wekweti**, this is Staff 21 on **runway 13-31**. Will advise when all equipment is off runway.

**Runway Condition Reporting (RCR)**

Aircraft in the vicinity of **Wekweti**, this is Staff 21. Runway Surface Condition **runway 13-31**, 100 percent ¼ inch loose snow over compact snow, windrows both sides and length of runway 2 feet high, 5 feet inside of the lights.

**5.2 Radio License Requirements**

All AVOP D permit holders require a Radiotelephone Operators Restricted Certificate if they have access or the ability to operate on an aeronautical frequency band.

**6. Vehicle Identification**

For radiotelephone communication, airport vehicles are given the following identifiers (call signs).

<b>Function</b>	<b>Generic Identifier</b>	<b>Number Allocated</b>
Crash Firefighting and Rescue Vehicles	Red	1-19
Staff vehicles (cars, station wagons, pick-ups, panels) (includes Ottawa and Regional Headquarters, airport manager, telecommunications, and air traffic services)	Staff	20-79
Trucks (dump, snowplow, stake, etc.)	Truck	80-119
Snow blowers	Blower	120-149
Tractors, Graders	Tractor/Grader	150-179



<b>Function</b>	<b>Generic Identifier</b>	<b>Number Allocated</b>
Passengers Transfer Vehicles (PTV)	PTV	180-204
Police and Security	Police	205-219
Other vehicles and equipment not covered above	Type of vehicle	220-239
Commercial, maintenance, and construction vehicles and mobile equipment rented or contracted to Transport Canada	Type of vehicle	240-299
Air carrier and service agency vehicles and equipment	Type of vehicle	300-499
National Defense Vehicles except Airport Emergency Services Vehicles	Type of vehicle consistent with the above	500-599
<b>Note:</b> <i>The identification assigned to a vehicle must be used in full in every radiotelephone transmission from that vehicle.</i>		

## 7. Recommended Safety Equipment for Vehicles

### 7.1 Safety Equipment for Manoeuvring Areas

All vehicles that will be operated or driven on the aircraft manoeuvring areas of airports must be equipped with a rotating warning light that must be turned on while a vehicle is on these areas. If equipped with headlights, these must also be turned on at all times on airside.

The beacon warning light shall be mounted on the vehicle in a location that will permit the beam to be seen by aircraft or surface traffic from any position within 360°. The light beam shall be set at an angle of 6° above the horizontal and it shall rotate at a constant speed of 35 RPM.

The enclosing globe of the warning light shall be “aviation yellow” for all vehicles except airport emergency service vehicles, which are to be equipped with a red warning light.

#### Additional Recommended Safety Equipment

Vehicles operated alone (not in company of another vehicle or vehicles) in the manoeuvring area or other remote locations of the airfield for an extended period of time are to carry a supply of red, road safety flares sufficient to provide a continuous signal for a minimum of one hour. Although not required to be in the vehicle at all times, the carriage of these flares is strongly recommended in winter when both motor and battery/radio failure are most likely to occur. The vehicle owner is responsible to ensure provision of an adequate supply of flares based on operating requirements.

The Vehicle Operator and his/her supervisor are responsible to ensure that flares are in the vehicle when required based on prevailing operating conditions and work assignment.

## 7.2 Safety Marking and Equipment Requirements for Apron Areas

All vehicles and equipment operating on aprons shall be equipped with standard safety markings prescribed for apron service vehicles. (AAP-200-04)

### Exceptions:

Occasional use on the apron area of vehicles or equipment not equipped with standard safety markings may be permitted while under escort of a vehicle so equipped.

Aircraft fuelling vehicles that have an overall height in excess of 3.5 m (11 ft.) are permitted to mount 360° beacon lamps on the vehicle cab provided that tail signal lamps are operated in conjunction with the 360° beacon lamp to provide adequate indication to the rear of the vehicle.

Police, emergency services and other vehicles equipped with safety marking prescribed for operation on airport manoeuvring areas are considered to equal or exceed these standards.

## 8. Acts and Regulations

The following acts and regulations were used to support the information in this manual:

- 1 Department of Transport Act;
- 2 Aeronautics Act;
- 3 ©Government Property Traffic Act;
- 4 Radio Act;

- 5 Canadian Aviation Regulations;
- 6 TP 312 – Aerodrome Standards & Recommended Practices;
- 7 General Radio Regulations.

Related manuals on which this directive is based include:

- ATC-MANOPS
- FSS-MANOPS
- CARS-MANOPS
- AOM (Airport Operations Manual)
- Safety Marking Requirements for Apron Service Vehicles (AAP-200-04).
- Airport Division Identification System for Radiotelephone Communications From Vehicles Operated On Airport Manoeuvring Areas (AAP-200-03).
- Airside Vehicle Operators Permit System Manual (AAP-200-01)

## 9. D Exams

### 9.1 D exams gravel and pavement

- Exams are 30 multiple-choice questions.
- There maybe an addition exam with 10 questions on local airport traffic directives at some airports.
- There is also a practical driving test.
- Require 100% to pass
- Retest requires at least 24 hours before applicant can re-write or complete practical test.
- Applicant will have three attempts to pass D exams.

## 10. D AVOP Revocation

### 10.1 AVOP Surrendering

An AVOP is subject to being revoked or surrendered by the Regional Airport Manager/Designate or Airports Division.

- on its expiry date (5) yrs
- when it is no longer required for employment

- when the AVOP holder has their driver's license suspended or revoked
- when an airport contract is completed
- when a vehicle incursion is caused
- whenever a vehicle operator drives dangerously, carelessly or recklessly
- When the vehicle/equipment operator is involved in a accident/collision. This will result in an automatic AVOP suspension. Duration of suspension will be determined pending investigation.

## 10.2 AVOP Demerit System

### 10.2.1 Infraction Reports

Airside drivers who do not comply with the airside traffic directives will be issued infraction reports. The Regional Airport Manager or Designated Airport Contractor and Airports Division Safety Security & Emergency Planning have the authority to enforce airport traffic directives.

### 10.2.2 Processing Infraction Reports

Reports issued on airside will be sent to the Regional Airport Manager or Airports Division Safety Security & Emergency Planning who will determine which category the reports falls into and take corrective action.

Minor Violations	Moving violation, no threat to taxiing/parked aircraft, vehicle incursion no impact on aviation safety, failure to communicate intentions, failure to advise when off manoeuvring area, failure to close gate no impact on aviation safety.
Major Violations	Speeding or causing a threat to taxiing/parked aircraft or pedestrian, vehicle incursion impacting aviation safety, failure to communicate intentions resulting in potential near miss incident or accident, failure to close gate resulting in authorized traffic airside, failure to leave manoeuvring area when requested by a pilot or FSS.
Gross Misconduct	Reckless, careless or dangerous driving Driving under the influence of alcohol/drugs Driving at an excessive speed
Other Violations	Minor or major infractions identified in airport traffic directives D student study manual

After determining which category the violation fits into the following tasks will be completed:

1. Data entries of each ticket and points accumulation on the AVOP database
2. Letter prepared and addressed to the employer for and total accumulated to date (c.c. to AVOP Holder)
3. Each report and letter filed

### 10.3 Violations and Suspensions

Safety will be the first responsibility of all airside drivers at GNWT owned and operated airports. At no time do operational considerations such as time pressures, allow drivers to disobey the airside traffic directives. Any action that compromises safety will result in an infraction report and will be treated as an offense under the Demerit Point System and depending on the severity on the offense, the criminal code of Canada.

Upon implementation, all airside drivers will start with 0 points. Points will accumulate based on the infractions committed by the driver. Previous records will remain on file.

### 10.4 Minor Violations

Infractions in this category will carry a 2-point penalty. These violations will remain on the employee's AVOP driving record for 2 years.

After an airside driver receives an infraction report for a minor violation a letter will be sent to the individual's employer detailing the violation in addition to the 2-points being added to his/her record.

Example Offenses	Penalty
Driving on airside without issued AVOP & Drivers license in his/her possession.	2 points
Parking in unauthorized parking location	2 points
Use of personal entertainment device with headset or ear phones	2 points
Failing to report an accident, Unsafe condition if aware, FOD etc	2 points
Driving 1-14 KMPH above speed limit	2 points
Driving without an operational beacon	2 points

Failing to wait until the gate is closed upon entry or exit to the airside	2 points
Leaving equipment on the airside movement area with no lights or markings	2 points
Use of cell phones	2 points

### 10.5 Major Violations

Infractions in this category will carry a 6-point penalty. These violations will remain on the employee's AVOP driving record for 4 years.

After an airside driver receives an infraction report for a major violation a letter will be sent to the individual's employer detailing the violation and 6 points will be added to the individual's record.

Drivers who accumulate 6 points may incur a 5 calendar day AVOP suspension.

Examples Offenses	Penalty
Failing to give right-of-way to aircraft, snow removal equipment and emergency response vehicles	6 points
Driving 15-25 KMPH above speed limit	6 points
Driving between aircraft and terminal when passengers are loading or unloading	6 points
Unauthorized parking in fire lane or area that impacts aircraft movements	6 points
Runway incursion	6 points
Careless driving	6 points

### 10.6 Gross Misconduct Violations

Infraction in this category will carry a 12-point penalty and may be reported to the RCMP. These violations will remain on the employee's driving record for 6 years.

After a driver receives an infraction report for gross misconduct a letter will be sent to the individual's employer detailing the violation and 12 points will be added to the individual's record.

A Driver who accumulates 14 points will incur a 20 calendar day AVOP suspension.

Example Offenses	Penalty
Failing to give right-of-way to pedestrian	12 points
Dangerous driving	12 points
Refusing to submit to a breathalyzer	12 points
Driving under the influence of alcohol/drugs	12 points
Driving greater than 25 KMPH above speed limit	12 points

### **10.7 Other Violations**

Violation of directives not specifically covered in this document will be considered and penalties will be based on the results of an investigation.

### **10.9 Points Accumulation**

The Airport Regional Airport Manager will conduct interviews with airside drivers who have accumulated 6 or more points for the following purposes:

1. To act upon a potentially dangerous situation;
2. To reinforce the element of safe airside driving;
3. To impress upon the individual the seriousness of bad driving habits; and
4. To educate the employee on acceptable driving habits.

### **10.9 Infraction Appeals**

#### **10.9.1 1<sup>st</sup> Level**

Violations may be appealed within 7 days of the infraction report. A written letter from AVOP Holder of appeal including a description of circumstances and justification of appeal must be sent to Regional Airport Manager. The Regional Airport Manager will designate person to investigate the incident, conduct interviews and file report. Arguments citing operational necessity will not be considered on appeal.

A 3-member committee composed of the Regional Airport Manager, employer and a member of airport safety/security committee will review the investigation report at the 1<sup>st</sup> level of appeal and if required make recommendations based on facts.

### **10.9.2 2<sup>nd</sup> Level**

If the AVOP Holder disagrees with the results of the 1<sup>st</sup> level of appeal, he/she may submit an appeal via letter to Airports Division Safety & Security within 15 days of decision. Airports Division Safety & Security will review infraction, investigation report and 1<sup>st</sup> level recommendations. Schedule a meeting with Regional Airport Manager, AVOP Holder and representative.

The decision of Airport Division Safety & Security reached at the meeting will be final and conclusive.

## **11. Forms and Records**

All records are confidential and subject to the Privacy Act and Access to Information Act controls.

All requests for access to personal information must be directed to the GNWT Public Records Committee.

All records are retained for a minimum of 3 years and cannot be disposed of without written permission from the Record Management Committee.

### **AVOP Application**

The Application is filed at the applicable Airport Manager's office and a copy provided to the Applicant or their Employer.

### **Test Results**

The test results are kept on file at the applicable Airport Manager's office, or elsewhere as designated by the APM.

## **12. D AVOP Test**

The written AVOP test is based on 30 multiple choice questions taken from information contained in this manual. Questions that relate to the Local Airport Traffic Directives are contained in another airport document that should be attached to the student study manual and forms part of your AVOP theory exam.



### **13. AVOP Self-Test Questions**

The correct answer for each question is in section 10. Check your own score and identify those areas of the manual that may need further study.

1. What color are the lights that outline the apron area?
  - a) White
  - b) Amber (yellow)
  - c) Blue
  - d) Red and green

2. Manoeuvring surfaces at an Airport that are designated by a letter are?
  - a) Aprons
  - b) Runways
  - c) Service Roads
  - d) Taxiways
  
3. Who is responsible for determining the vehicle they are operating airside is properly equipped and in safe operating condition?
  - a) The Police
  - b) The Airport Manager
  - c) The Owner of the vehicle
  - d) The Operator of the vehicle
  
4. How must vehicles be parked in designated parking spaces on airside?
  - a) Left with beacon or flashing signal lamps in operation
  - b) Backed into the parking area
  - c) Driven in front first
  - d) Left with engine running
  
5. Lights used to indicate the intersection of a taxiway and aprons are what color and arrangement?
  - a) Double white
  - b) Double yellow (amber)
  - c) Double red
  - d) Double blue
  
6. Local Airport Traffic Directives?
  - a) Apply only at government airports
  - b) Apply only to commercial vehicles
  - c) Apply only at airports where issued
  - d) Apply only to government vehicles
  
7. Who has authority to issue, suspend or cancel permission to operate a vehicle on airside of an airport operated or owned by Department of Transportation?
  - a) The Minister of Transportation

- b) The Regional Airport Manager
  - c) Transport Canada Minister
  - d) The RCMP
8. What manual contains information on regulations and procedures that relate to safe operation of a vehicle on the airside of a GNWT owned and operated airport:
- a) Aeronautical Study Guide for Radiotelephone Operator's Restricted Certificate
  - b) GNWT Drivers Handbook
  - c) Airport Traffic Directives Manual
  - d) Local Airport Traffic Directives
9. Who is responsible for ensuring vehicles/equipment are in safe operating condition and have the required safety equipment and markings:
- a) The owner of the vehicle
  - b) The operator of the vehicle
  - c) The RCMP
  - d) The Airport Manager
10. Whose responsibility is it to report unsafe vehicle operating deficiencies and potentially dangerous conditions airside?
- a) The aircraft passengers
  - b) The base supervisor
  - c) The mechanic
  - d) The vehicle operator
11. Who is responsible for reporting a person found on the airside of an airport without a need and right to be there?
- a) The Airport Maintainer
  - b) The Air Carrier Representative
  - c) The Community Aerodrome Radio Station Observer Communicator
  - d) All personnel who work airside with need and right including AVOP Holders
12. Who is responsible for ensuring gate(s) to airside of the airport are closed and locked?
- a) Any person using the gate including passengers.

- b) Airport Maintenance staff including AVOP Holders.
  - c) Any person with need & right including AVOP Holders.
  - d) Airline employees, passengers and AVOP Holders.
13. There are many types of vehicles and equipment used on the airside of an airport. Who is responsible for ensuring that a vehicle operator knows how to operate the equipment he or she uses?
- a) The Motor Vehicle licensing authority.
  - b) The vehicle/equipment operator.
  - c) The vehicle operator's employer.
  - d) The Airport Manager or RCMP.
14. All vehicles with an enclosed cab operated on an airport apron area, except those under escort, must be equipped with:
- a) Headlights, taillights and an amber beacon on cab.
  - b) Flashing beacon and a radio on company frequency.
  - c) Rotating beacon lamp on cab and cell phone.
  - d) Flashing hazard lights, headlights and backup lights.
15. All non self-propelled equipment used on the airport aprons must be equipped with safety marking. Which of the following accurately describes that marking?
- a) Yellow reflective stripe along the sides, and black and yellow patches at the front and rear lower corners.
  - b) Headlights, taillights, a horn and flashing amber beacon.
  - c) Red reflective stripes along the sides with green and blue patches at front and rear lower corners.
  - d) Reflective material that can be seen from 300 m (1000 ft.) at night and slow moving sign.
16. Who has first priority or the right of way over all airside traffic?
- a) Maintenance vehicles in the performance of their duties.
  - b) Emergency vehicles.
  - c) Aircraft.
  - d) The vehicle approaching from the right.
17. Smoking on airside areas is:
- a) Permitted around aircraft.
  - b) Permitted on airside in vehicles with windows closed.
  - c) Prohibited any where airside
  - d) Prohibited in and around aircraft only.

- 18.** When is it permissible to cross with a vehicle directly behind an aircraft with engines running?
- a)** Not at any time.
  - b)** The red, anti-collision beacon of the aircraft is turned off.
  - c)** The Marshaller waves permission and the aircraft wheels are blocked (chocked).
  - d)** You have waited three minutes and the pilot has not indicated any intention to move the aircraft.
- 19.** When vehicles are parked in an approved airside parking space in the vicinity of Terminal Buildings or adjacent to heavy traffic areas, they shall be:
- a)** Left with beacon or flashing signal lamps in operation.
  - b)** Backed into the parking space with beacon and lights off.
  - c)** Driven in front first into parking space with beacon and light on.
  - d)** Left with engine running alongside building and all lights on.
- 20.** Whenever an aircraft carrying distinguished visitors is at an airport, unauthorized personnel and vehicles are required to:
- a)** Remain clear of the aircraft unless otherwise authorized by the Airport Manager.
  - b)** Drive slowly past the area to find out who the person is but do not take pictures.
  - c)** Conduct normal vehicle movements try not to stare at the person.
  - d)** There is no restriction on vehicle movement and you can drive up to the aircraft and ask to carry his/her bag.
- 21.** Vehicle operators must ensure that mud or ice is not deposited on aircraft movement surfaces because:
- a)** The material can cause damage to taxiing aircraft and engines.
  - b)** Erosion could occur if too much dirt is removed from the runway edge.
  - c)** The material can cause damage to aircraft land gear and engines in the air.
  - d)** Dirty vehicles are not permitted on airside of an airport.
- 22.** If a vehicle operator notices foreign materials (plastic bags, garbage or solid objects) on the apron, the vehicle operator is required to:

- a) Report the nature and location of the material to the police.
  - b) Stop, remove the material and report it to his/her supervisor and Airport Manager.
  - c) Report the location of the foreign material to the CARS Observer Communicator.
  - d) Leave foreign material for the wind to blow away as there is no special requirement for vehicle operators.
- 23.** If an aircraft were to crash on the airport, unauthorized vehicle operators are required to:
- a) Wait for the RCMP, Fire Department and Ambulance to arrive before going to crash site area.
  - b) Proceed immediately to the scene and render assistance.
  - c) Stay away from the area unless authorized by your employer.
  - d) Remain clear of the area unless otherwise authorized by the Airport Manager or Airport Contractor.
- 24.** The color of pavement markings related to aircraft movement guidelines and aircraft lead-in lines is:
- a) Green except in grassed areas.
  - b) Yellow.
  - c) White.
  - d) Different for each class and type of aircraft.
- 25.** The purpose of an aircraft movement guideline is:
- a) To indicate where aircraft movement is permitted.
  - b) To show where aircraft movement is not permitted.
  - c) To outline lanes on a taxiway for vehicle movement.
  - d) To serve as a center-of-aircraft guideline to aid aircraft traveling on taxiways and aprons.
- 26.** Aircraft lead-in lines are provided to:
- a) Lead the aircraft onto the runway when landing.
  - b) Assistance in the parking of an aircraft at a gate or parking position.
  - c) Indicate where aircraft are restricted on an apron.

- d) Indicate the limits of vehicle corridors.
27. What are apron safety lines?
- a) Defines an area(s) for the parking of airport maintenance equipment and vehicles.
  - b) Defines an area(s) for free movement of vehicles performing their duties related to aircraft.
  - c) Defines an area(s) where vehicle flashing lamps or beacon lamps must always be turned on.
  - d) Defines an area(s) used by ground vehicle(s) and other aircraft servicing equipment to park and provides for a safe separation from aircraft.
28. What are apron passenger path lines?
- a) Is a 15cm wide continuous white line that provides guidance from the edge of the apron to the entry door position of the aircraft for which the aircraft stand is normally intended to serve.
  - b) Is two white parallel lines with diagonal hatching between them giving a zebra stripe appearance and runs from the edge of the apron to the entry door position of the aircraft for which the aircraft stand is normally intended to serve.
  - c) Is a 1-meter wide continuous white line that provides guidance from the edge of the apron to the entry door position of the aircraft for which the aircraft stand is normally intended to serve.
  - d) Is two Yellow parallel lines spaced approximately 2 meters apart with diagonal hatching at 45 degree angles between them giving a zebra stripe appearance and runs from the edge of the apron to the entry door position of the aircraft for which the aircraft stand is normally intended to serve.
29. What color are aircraft stand markings?
- a) Red
  - b) Green
  - c) White
  - d) Yellow
30. When not in use, apron service vehicles or equipment may be parked?
- a) In a designated area(s) on the apron that is properly marked and approved.
  - b) In any apron area not used for the movement of aircraft.
  - c) In parking areas designated by the Airport Manager only.

- d) On groundside of the airport if space is not assigned on the apron.
31. What two documents must be carried at all times when operating a vehicle on airside of airport?
- a) Driver's license and AVOP.
  - b) Airport pass and AVOP.
  - c) Security pass and Restricted Radio Telephone Operators Certificate.
  - d) All of the above.
32. What sign is used to indicate a taxiway?
- a) A red sign with numbers to the side of the taxiway.
  - b) A yellow sign with black letter to the side of the taxiway.
  - c) A black sign with yellow letter to the side of the taxiway.
  - d) A green sign with white letter to the side of the taxiway.
33. The color of runway designator sign is:
- a) White with Red numbers.
  - b) Green with black letters.
  - c) Yellow with black letters.
  - d) Red with white numbers.
34. What color are passenger path lines?
- a) Red with white hatchings
  - b) Yellow with red hatchings
  - c) Green with black hatchings
  - d) White with white hatchings
35. To provide a vehicle escort on apron what must a person have?
- a) A valid AVOP, valid Learners Drivers License & vehicle equipped with Amber beacon.
  - b) Valid Driver License, AVOP, airside insurance and a properly equipped vehicle.
  - c) Radio License, a radio-equipped vehicle operated by an AVOP qualified employee responsible for requesting and acknowledging all ground control instructions.
  - d) Airside insurance, Driver License and No aircraft scheduled to land or take off from the airport for at least thirty minutes.



- 36.** As a D AVOP holder the vehicle your operating breaks down at night in the middle of the apron, what would you do?
- a)** Push the vehicle/equipment off to side of apron by the shortest route and get someone to tow disable vehicle/equipment off airside for repairs.
  - b)** Sound the horn until someone comes to your assistance, tow the disabled vehicle/equipment off apron to groundside for repairs.
  - c)** Wait until the next aircraft lands and have the passengers help you push the vehicle/equipment off the apron to groundside.
  - d)** Leave the vehicle/equipment, walk over to CARS or phone airport maintenance, advice them of situation, arrange for vehicle/equipment to be tow off apron to groundside for repairs and advise CARS or Airport Maintenance when vehicle is off airside.
- 37.** What is the color of taxiway lights?
- a)** White
  - b)** Blue
  - c)** Amber
  - d)** Red
- 38.** What the color of runway edge lights?
- a)** White
  - b)** Blue
  - c)** Amber
  - d)** Red
- 39.** What Color are threshold lights?
- a)** Half Green and Blue
  - b)** Half White and Red
  - c)** Half Amber and Green
  - d)** Half Red and Green
- 40.** What is the normal color of a windsock?
- a)** Yellow and white
  - b)** Red and white
  - c)** Green and red

d) Yellow and Red

41. What is an airport beacon?

- a) It is a white flashing light use to light up the highest building around apron.
- b) Is a white light usually located on building or tower, it can be activated by ARCAL or manually, when activated it flashes and is used by pilots to locate the airport.
- c) Is a white light usually located on building or tower, it can be activated by ARCAL or manually, when activated it flashes and advises the community of incoming aircraft.
- d) It's a rotating beacon that transmits a radio signal to with location of airport to aircraft.

42. Who is responsible for closing the airside access gate on an airport?

- a) Airport maintenance personnel
- b) Airport Manager or designate
- c) Passenger or pilot
- d) AVOP holder or last person using the gate

43. What is maximum speed limit on the apron?

- a) 50 KPH
- b) 30 KPH
- c) 25 KPH
- d) 15 KPH

44. Airport vehicle operators while on airside must:

- a) Be alert at all times; keep a lookout for arriving or departing aircraft and passengers.
- b) Leave the apron before an aircraft taxis to apron or starts its engines to depart apron.
- c) Leave the apron if you observe an aircraft makes a low pass over runway.
- d) Do all of the above.

45. What is the maximum speed limit on services roads?

- a) 25 KMPH
  - b) 50 KMPH
  - c) 60 KM/H
  - d) There is no speed limit.
46. Standard phraseology is used in radio communication with CARS. What is the purpose of using these standard ways of saying things?
- a) It is a habit of the old timers that is hard to change.
  - b) Because this method of communication has always been used.
  - c) A better system of spoken communication has not been developed.
  - d) To transmit clear instruction and messages efficiently (in the shortest time) with the fewest words and without misunderstanding.
47. How much aviation liability insurance coverage is required for vehicle/equipment to operate airside?
- a) \$500,000.00
  - b) \$1,000,000.00
  - c) \$1,500,000.00
  - d) \$2,000,000.00
48. Who is totally responsible and liable for vehicle being escorted airside?
- a) Regional Airport Manager
  - b) Company AVOP Holder providing escort service
  - c) Airport Service Maintenance Contractor
  - d) RCMP
49. How far away must an AVOP vehicle/equipment operator stay from any aircraft being fueled unless involved in servicing it?
- a) 5 meters
  - b) 10 meters
  - c) 15 meters
  - d) 20 meters
50. When passengers are being loaded or unloaded from an aircraft can a vehicle drive between aircraft and air terminal to service another aircraft?

- a) Only if aircraft servicing staff are escorting the vehicle/equipment operator and passengers are told to keep out of the way.
  - b) At no time will airside vehicle/equipment operator be allowed to drive between aircraft and air terminal when passenger are loading or unloading an aircraft.
  - c) It is allowed when marshaller stops passengers and waves to the vehicle operator to proceed.
  - d) Vehicle operators can proceed when there is an opening between passenger and air terminal.
51. If a vehicle operator notices foreign materials (plastic bags, garbage or solid objects) on the taxiway or runway, the vehicle operator is required to:
- a) Drive out and remove the material and report it to his/her supervisor and Airport Manager.
  - b) Leave foreign material for the wind to blow away as there is no special requirement for vehicle operators.
  - c) Notify Air Traffic Services of intentions, proceed out on to runway or taxiway for immediate removal.
  - d) Report the location of the foreign material to the CARS Observer Communicator so the proper official can remove it.
52. Which of the following examples most accurately describes the precaution that must be taken before operating a vehicle near radio navigational facilities?
- a) Get permission from the Airport Manager first.
  - b) Drive a small vehicle so that the signal will be affected as little as possible.
  - c) Get approval from ground control or Flight Services.
  - d) Stay away from this equipment at all times.
53. At controlled airports, the control tower is responsible for directing which of the following traffic?
- a) Vehicles and pedestrians on aprons.
  - b) Aircraft, vehicles and pedestrians on manoeuvring areas.
  - c) All vehicles, aircraft and pedestrians on the airport.
  - d) Aircraft on manoeuvring areas but not vehicles.
54. When required to operate a vehicle in the manoeuvring area of a controlled airport, the vehicle operator must first:

- a) Notify the Airport Manager.
  - b) Consult his/her supervisor.
  - c) Contact the Air Traffic Service Unit by radio for permission.
  - d) Contact apron management by radio for permission.
- 55.** Under what circumstances may a vehicle drive under the wing or tail of an aircraft?
- a) Only when servicing the aircraft.
  - b) Only when authorized by the pilot-in-command.
  - c) Only if the aircraft is choked and the marshaller waves permission.
  - d) Never.
- 56.** The instructions of an Air Traffic Service Unit:
- a) Apply to vehicles on runways but not taxiways.
  - b) Must be obeyed at all times.
  - c) Is a guide only, for vehicle operator information.
  - d) Apply to aircraft only.
- 57.** Standard procedures for a vehicle operator who has received instructions from an Air Traffic Service Unit is to:
- a) Acknowledge all instruction as understood or requested that the instruction be repeated.
  - b) Proceed immediately according to instruction heard.
  - c) Always ask for a repeat of the instruction to ensure they are fully understood.
  - d) Do nothing if all instruction are not fully understood.
- 58.** When instructed by an Air Traffic Service Unit to proceed into the manoeuvring area only along a specified route, the vehicle operator has the following options if he/she chooses to proceed:
- a) Proceed as originally planned regardless of instruction from ground control.
  - b) Proceed as directed or do not enter the manoeuvring area.
  - c) Request the reason why you may not use an alternate route.
  - d) Drive on the unpaved edge of the runway to reach your destination.

- 59.** When a vehicle is towing an aircraft on the manoeuvring areas of an airport, the vehicle operator must:
- a)** Ensure that the towing vehicle is diesel powered only.
  - b)** Maintain radio contact with ground control.
  - c)** Refrain from further radio contact with the tower after towing commences.
  - d)** Maintain radio contact with the pilot only.
- 60.** When is it permissible to operate a vehicle on taxiways or runways without first receiving permission by radio from ground control?
- a)** When radio contact with ground control cannot be made due to interference.
  - b)** Whenever you are unable to get permission by radio within a reasonably short period of time.
  - c)** Whenever use of part of a runway or taxiway is the most direct route to your destination.
  - d)** When the taxiway or runway have been designated to be used in this manner in the Local Airport Traffic Directives.
- 61.** Which of the following should be included in a request to operate a vehicle in the manoeuvring area?
- a)** Vehicle identification and location
  - b)** Requested destination and route within the manoeuvring area.
  - c)** Duration of time and purpose for being in the manoeuvring area.
  - d)** All of the above.
- 62.** When told to “Hold Short” or when awaiting permission to cross a paved runway, what must the vehicle operator do?
- a)** Stop at least 45 m (150 ft.) from the nearest edge of the runway or behind the solid yellow lines painted on the taxiway and wait for permission from ground control to proceed.
  - b)** Stop at least 60 m (200ft.) from the nearest edge of the runway or behind the solid yellow line on the taxiway. Look both to the right and the left and proceed only if aircraft are not landing or taking off.
  - c)** Remain out of the manoeuvring area, repeat holding short and do not proceed until the Air Traffic Service Unit gives permission.

- d) Keep all future transmissions as brief as possible.
63. Which of the following is used to indicate the “HOLD” position on a taxiway.
- a) A red sign to the side of the taxiway bearing the word “HOLD”.
  - b) A solid and broken yellow line across the width of the taxiway with the broken line closest to the runway.
  - c) Two solid and two broken yellow lines across the width of the taxiway with the broken lines closest to the runway.
  - d) Letters A and C.
64. The color of “HOLD” lines is:
- a) White.
  - b) Green.
  - c) Yellow.
  - d) Red.
65. As soon as a vehicle has left the runway of a controlled airport, the vehicle operator must:
- a) Turn off the rotating beacon light.
  - b) Reduce speed and use a lower gear.
  - c) Stop and hold short of the apron until given permission to proceed.
  - d) Advise the Air Traffic Service Unit that you are off the runway and give your location.
66. When instructed by the Air Traffic Service Unit to “Leave (or) Exit the Runway”, the vehicle operator must:
- a) Acknowledge the instruction.
  - b) Proceed to a holding position or to a safe position of to the side of the runway at least 60 m from the nearest runway edge.
  - c) Inform the Air Traffic Service Unit when off the runway and give your exact location.
  - d) All of the above

- 67.** When is it permissible to operate closer than 60 m (200 ft.) from the edge of a runway?
- a)** When the work to be performed is closer than 60 m (200 ft.) from the edge of the runway.
  - b)** When you see that other people are on the runway.
  - c)** Only on non-instrument runways.
  - d)** When the Air Traffic Service Unit has given permission.
- 68.** You are working in the manoeuvring area and your vehicle breaks down. You are unable to move the vehicle under your own power. What should you do?
- a)** Leave your vehicle with the lights on and walk to where you can get assistance.
  - b)** Wait until you shift ends and go home.
  - c)** Try to repair the vehicle on your own.
  - d)** Notify the Air Traffic Service Unit of your location and difficulty and ask for assistance and stay with the vehicle until help arrives.
- 69.** Vehicle Operators must monitor the ground control frequency:
- a)** When in the manoeuvring area.
  - b)** At all times and in all locations of the airport.
  - c)** Only when on the apron.
  - d)** When operating on aprons and service roads.
- 70.** A vehicle which is not equipped with a radio on the ground control frequency may be operated in the manoeuvring area when:
- a)** The vehicle weight exceeds 6,500 kg (14,000 lb.)
  - b)** A radio-equipped vehicle is not available.
  - c)** It is under escort of a radio-equipped vehicle operated by a qualified employee responsible for requesting and acknowledging all ground control instructions.
  - d)** No aircraft are scheduled to land or take off from the airport for at least thirty minutes.



- 71.** You are operating a radio-equipped vehicle in the manoeuvring area and your radio breaks down. What should you do?
- a)** Return to a non-manoeuving area by the shortest route for repairs.
  - b)** Try to repair the radio and if this fails, sound the horn until someone comes to your assistance.
  - c)** Wait until the next aircraft lands and follow it back to the apron.
  - d)** Turn your vehicle to face the control tower and flash you headlight on and off. Wait for the controller to respond using the light signals.
- 72.** A flashing green light signal from the control tower means:
- a)** Proceed.
  - b)** Stop, hold your position.
  - c)** Leave/vacate the runway.
  - d)** Return to the starting point on the airport.
- 73.** A steady red light signal from the control tower means:
- a)** Proceed.
  - b)** Stop, hold your position.
  - c)** Leave/vacate the runway.
  - d)** Return to the starting point on the airport.
- 74.** A flashing red light signal from the control tower means:
- a)** Proceed.
  - b)** Stop, hold your position.
  - c)** Leave/vacate the runway.
  - d)** Return to the starting point on the airport.
- 75.** A flashing white light from the control tower means:
- a)** Proceed.
  - b)** Stop, hold your position.

- c) Leave/vacate the runway.
  - d) Return to the starting point on the airport.
76. A vehicle with a disabled radio has received ground control instructions by light signal to “return to starting point on the airport”. To get there, the vehicle must cross a runway to reach the apron. The vehicle operator is required to:
- a) Proceed without stopping until off the manoeuvring area.
  - b) Sound the horn twice before crossing the runway.
  - c) Hold short of the runway and check for arriving or departing aircraft before proceeding across the runway.
  - d) Hold short of the runway and wait for a green flashing light from the control tower before proceeding.
77. The blinking on and off of runway lights means:
- a) Identify yourself to the tower by turning your beacon light off.
  - b) Leave the runway immediately.
  - c) The controller wants you to drive faster.
  - d) The runway lights are being tested.
78. An airport is considered to be uncontrolled when:
- a) There is no control tower at the airport or the existing control tower is not staffed (closed for the day).
  - b) There is no control tower or Flight Service Station at the airport.
  - c) The airport is a Flight Service Station that is located at another airport.
  - d) All of the above.
79. At uncontrolled airports with a Flight Service Station/CARS, vehicles may operate on or near manoeuvring areas only according to:
- a) Instructions issued by radio from the Airport Manager.
  - b) Instructions issued by the Air Traffic Service Unit.
  - c) Instructions issued by the Flight Service Station.
  - d) Instructions issued by the Airfield Maintenance Foreman.
80. A vehicle advisory from a Flight Service Station/CARS may indicate that there is “No reported traffic”. What does this term mean?

- a) No aircraft traffic has reported to the Flight Service Station/CARS but aircraft without a radio may still be present.
- b) There are no aircraft in the area of concern to the vehicle operator.
- c) Aircraft are known to be operating to and from the airport but are not big enough to bother reporting them to the vehicle operator.
- d) Secret military flights are operating into the airport that cannot be reported to the vehicle operator.

**81.** At all uncontrolled airports, every vehicle operator, before driving onto or crossing the runway, must:

- a) Check his brakes to ensure the vehicle will stop short of the "HOLD" position on taxiways.
- b) Ensure that all cigarettes and other smoking materials are extinguished.
- c) Flash the vehicle headlights on and off three times to notify the Flight Service Station of his intentions to cross the runway.
- d) Visually check to ensure that aircraft are not approaching or departing using the runway.

**82.** At uncontrolled airports with a Flight Service Station/CARS, a vehicle operator may not proceed into the manoeuvring area before:

- a) Receiving traffic advisory from the Flight Service Station and acknowledging all information received as understood.
- b) Checking the vehicle for safety and fastening the seatbelt.
- c) Turning on all vehicle lights.
- d) Checking first with the Flight Service Station to ensure that the vehicle has been registered with the Flight Service Station.

**83.** If all vehicle advisory information from a Flight Service Station is not fully understood, the vehicle operator must.

- a) Assume that he has enough knowledge of the airport to proceed in safety based on that portion of the instructions that he heard
- b) Assume that the Flight Service Station operator is too busy to ask for a repeat of the message ("say again") and proceed with the caution.
- c) Ask the Flight Service Station to repeat (say again") the message until it is understood and confirmed ("Roger") to the Flight Service Station.

- d)** Report the problem of communication to your supervisor and refuse to enter the manoeuvring area.
  
- 84.** A radio request from a vehicle to a Flight Service Station to operate on or near the manoeuvring area must include which of the following information?
  - a)** The vehicle identification and present location.
  - b)** The specific destination in the manoeuvring area where you wish to operate.
  - c)** The time that you will be in the manoeuvring area and purpose for being there.
  - d)** All of the information listed above.
  
- 85.** Hold lines painted on a taxiway always have the broken line:
  - a)** Closest to the runway.
  - b)** Furthest from the runway.
  - c)** Between solid yellow lines.
  - d)** In pairs.
  
- 86.** When must an AVOP D Permit Vehicle Operators make radio contact with FSS/CARS to request permission to proceed onto a Manoeuvring area?
  - a)** Before proceeding past the hold sign or hold line pavement markings or 45 meters from the edge of runway or taxiway.
  - b)** Before proceeding past the apron taxiway intersection or 60 meters from the edge of runway or taxiway.
  - c)** Before proceeding on to the runway or at least 60 meters from the threshold.
  - d)** There is no requirement for radio contact or the need to request permission to proceed onto a manoeuvring area at uncontrolled airports.
  
- 87.** When is it permissible to operate a vehicle within 60 m (200 ft.) of a runway edge at an airport with a Flight Service Station?
  - a)** When your work requires you to be there and permission has been given by the Flight Service Station to operate in that area.
  - b)** When the ground is dry and the vehicle will not sink into the soft shoulder.
  - c)** Whenever required in order to perform necessary maintenance.
  - d)** Any time if you ensure that the vehicle's rotating beacon is on at all times.

- 88.** When leaving the manoeuvring area, every vehicle operator is required to:
- a)** Proceed to the Flight Service Station and sound the horn to indicate that you are no in the manoeuvring area.
  - b)** Advise the Flight Service Station by radio when you are off the manoeuvring area.
  - c)** Proceed directly to the vehicle fueling location and refill the tank.
  - d)** Take a coffee break.
- 89.** When an aircraft makes a low pass over the runway, all vehicle operators on the runway must:
- a)** Wave vigorously to show the pilot where you are.
  - b)** Proceed with your duties until you receive direct instructions to leave the manoeuvring area.
  - c)** Park your vehicle parallel to the runway edge with headlights on and facing the direction of aircraft approach.
  - d)** Leave the runway immediately.
- 90.** At airports where vehicle radios are not required, before entering the manoeuvring area, every vehicle operator must:
- a)** Drive quickly to ensure the vehicle is on the runway for the shortest period of time.
  - b)** Issue a NOTAM and check the runway visually to ensure there are no aircraft arriving or departing.
  - c)** Wait until an aircraft makes a low pass and then proceed onto the runway.
  - d)** Always travel in company of a second vehicle so that both ends of the runway can be watched for approaching aircraft at the same time.
- 91.** At uncontrolled airports without a Flight Service Station, the vehicle operator must not:
- a)** Interfere with wild animals on the runway unless they have a license to do so from the appropriate authority.
  - b)** Perform snow removal or other maintenance during house of darkness.
  - c)** Drive in excess of the posted speed limit.
  - d)** Leave the vehicle unattended on the manoeuvring area.

- 92.** At uncontrolled airports without a Flight Service Station, vehicle operators must, while in the manoeuvring area:
- a)** Keep a lookout for arriving or departing aircraft.
  - b)** Leave the runway as soon as aircraft appear.
  - c)** Leave the runway if an aircraft makes a low pass.
  - d)** Be alert at all time and do all of the above.
- 93.** Signs used to identify the location of various surfaces giving direction to various movement area locations may be which of the following colors.
- a)** White with black or Green with yellow numbers/letters.
  - b)** Green with white or Yellow with black letters/numbers
  - c)** Red with white or Green with white letters/numbers.
  - d)** Blue with white or White with black letters/numbers.
- 94.** The color of threshold marker lights that face towards the runway is which of the following colors.
- a)** White.
  - b)** Green.
  - c)** Amber.
  - d)** Red.
- 95.** The “press to talk” switch on a microphone should be:
- a)** Clicked on and off between words or phrases while you think about what you want to say.
  - b)** Left open after you complete your transmission to show you are waiting for a reply.
  - c)** Depressed before beginning to speak and kept depressed for the full transmission.
  - d)** Clicked on and off rapidly to get the attention of the Air Traffic Service Unit or FSS as appropriate.
- 96.** When speaking into a microphone, you should always:
- a)** Speak plainly and distinctly without artificially accentuating words or running words together.
  - b)** Speak rapidly and loudly to ensure that the message received is loud enough and does not take up too much time.
  - c)** Accentuate every syllable to every word in a loud clear voice and slowly so that nothing is missed.
  - d)** Make sure that aircraft are listening so that everyone gets the message the first time.

- 97.** A radio “blind spot” is:
- a)** Any place on the airport where the control tower or Flight Service Station or the vehicle cannot receive radio signal to or from a vehicle.
  - b)** Any place where the vehicle operator cannot see the control tower or Flight Service Station.
  - c)** Any place in a vehicle where the vehicle operator cannot see the vehicle radio.
  - d)** A hold in the ionosphere through which radio signals will not pass.
- 98.** During a radio test, a readability signal response of ‘3’ indicates what to the vehicle/equipment operator?
- a)** Readable.
  - b)** Readable now and then.
  - c)** Readable but with difficulty.
  - d)** Perfectly readable.
- 99.** When is it permissible to use a personal entertainment device with headset or earphones when on airside?
- a)** Always, as long as you can hear the radio.
  - b)** Only during times when flights are not scheduled to depart or arrive.
  - c)** During your coffee break.
  - d)** Never.
- 100.** When referring to Crash Firefighting and Rescue Vehicles on the radio, they are known as:
- a)** Red
  - b)** Police
  - c)** Staff
  - d)** Emergency Vehicles
- 101.** The word “CONFIRM” in radiotelephone communication means:
- a)** Let me know that you have received and understood this message.
  - b)** Yes, or permission granted.
  - c)** My version is .... Is that correct?
  - d)** I will now repeat my last word (sentence) for clarification.
- 102.** What action must you take if the vehicle you are operating has a complete failure on the runway?

- a) Leave the vehicle on the runway and walk over to CARS/FSS to advise them to issue a NOTAM (Notice To Air Men).
  - b) Stand outside your vehicle and wave at aircraft to warn them of vehicle on runway.
  - c) Light and place red, road flares 30 m (100 ft.) ahead and behind the vehicle in a parallel line to nearest runway or taxiway as a warning to aircraft.
  - d) Use a flashlight to signal CARS/FSS that you need help and stay with the vehicle to warn aircraft using a flashlight.
- 103.** At uncontrolled airports, vehicle advisory for the airport manoeuvring areas may be provided by radio from:
- a) The CARS or FSS.
  - b) The airfield maintenance garage.
  - c) The Airport Manager's office.
  - d) A control tower at a remotely located airport.
- 104.** Which of the following groups of phonetic words would you use to spell the word "DRIVE"?
- a) DOG — ROGER — INDIA — VICTOR — ECHO.
  - b) DELTA — ROMEO — INDIA — VICTOR — ECHO.
  - c) DELTA — ROGER — INDIA — VICTOR — ECHO.
  - d) DATSUN — ROMEO — INK — VENT — EASY.
- 105.** Which of the following is the correct way to say: "12000"?
- a) ONE — TWO — THOUSAND.
  - b) TWELVE — THOUSAND.
  - c) ONE — TWO — ZERO — ZERO — ZERO.
  - d) TWELVE — ZERO — ZERO — ZERO.
- 106.** What is the minimum recommended distance an airside vehicle operator with a D permit can come to a RILS, PAPIS or VASIS:
- a) 1 m (3 ft.)
  - b) 2 m (6 ft.)
  - c) 3 m (9 ft.)
  - d) 15 m (50 ft.)



- 107.** Signs used to give direction to various movement area locations may be which of the following colors.
- a) Yellow characters on Black background.
  - b) Black characters on Yellow background.
  - c) White characters on Red background.
  - d) Red characters on White background.
- 108.** Which of the following most accurately describes that part of an aerodrome intended to be used for the taking off and landing of aircraft and the movement of aircraft associated with taking off and landings, excluding aprons:
- a) Restricted area.
  - b) Movement area.
  - c) Airport area.
  - d) Manoeuvring area.
- 109.** When a vehicle operator wishes to end a radio transmission, the proper procedure is:
- a) Say the name of the station called and the vehicle call sign.
  - b) Stop transmitting.
  - c) Say the vehicle call sign and word out.
  - d) There is no standard procedure.
- 110.** STAFF 27 is providing escort for two other vehicles that are not radio equipped. STAFF 27 is required to identify himself/herself to ground control as:
- a) STAFF 27 WITH GRADER AND TRUCK.
  - b) STAFF 27 ESCORTING TWO OTHER VEHICLES.
  - c) STAFF 27 PLUS 2.
  - d) STAFF 27.

- 111.** The readability of a radio signal may be reported numerically. A reported readability of four (4) means:
- a) Unreadable.
  - b) Readable.
  - c) Readable but with difficulty.
  - d) Perfectly readable.
- 112.** When phonetics are required for clarity in radiotelephone communications, what alphabet must be used?
- a) The Standard English (French) Alphabet.
  - b) The ICAO Phonetic Alphabet.
  - c) The Radio Technician's Alphabet.
  - d) Industry Canada Vehicle Communication Alphabet.
- 113.** Who is allowed to be the airside of an airport?
- a) All persons who have a need and right including ticketed passengers.
  - b) Every person who is not aircrew or a ticketed passenger.
  - c) Aircrew and passengers.
  - d) Airport security and maintenance staff only.
- 114.** What is the proper radio procedure for a vehicle operator to use to call CARS/FSS?
- a) Say the name of the station called and the vehicle call sign.
  - b) Say the name of person and vehicle call sign.
  - c) Say the vehicle call sign and the station you calling.
  - d) There is no standard procedure.
- 115.** What are aircraft lead-in lines?
- a) A single yellow line extending from the runway along a taxiway and in some cases to the apron. The purpose of this line centred on the taxiway is to ensure that the main wheels are on pavement and that the wings will not contact known obstructions.
  - b) Two parallel yellow lines between an aircraft guideline, a gate or parking position. The aircraft nose wheel is centred on these lines

to guide the aircraft into the parking position without hitting other parked aircraft or obstructions.

- c) A single white line extending from the runway along a taxiway and in some cases to the apron. The purpose of this line centred on the taxiway is to ensure that the main wheels are on pavement and that the wings will not contact known obstructions.
- d) Two parallel white lines between an aircraft guideline, a gate or parking position. The aircraft nose wheel is centred on these lines to guide the aircraft into the parking position without hitting other parked aircraft or obstructions.

**116.**

#### **14. Answers to Self Test Questions**

- |    |         |    |         |    |                     |    |           |
|----|---------|----|---------|----|---------------------|----|-----------|
| 1. | C (4.2) | 2. | D (4.3) | 3. | D(2.3)              | 4. | B(3.2.21) |
| 5. | B(4.2)  | 6. | C(1.2)  | 7. | B(1.3.2)<br>(1.3.7) | 8. | C(Intro)  |

9.	A(2.1)	10.	D(2.5)	11.	D(2.6)	12.	C(3.2.26)
13.	C(2.1)	14.	A(3.2.4)	15.	A(3.2.9)	16.	C(3.1.1)(3.2.1 7)
17.	C(1.6.2)	18.	C(3.1.15)	19.	B(3.2.22)	20.	A(3.1.17)
21.	A(3.1.13)	22.	B(3.1.14)	23.	D(3.1.17)	24.	B(4.4)
25.	D(4.4)	26.	B(4.4)	27.	D(4.4)	28.	B(4.4)
29.	D(4.4)	30.	A(3.2.12)	31.	A(2.7)	32.	C(4.3.2)
33.	D(4.3.1)	34.	D(4.4)	35.	B(1.5)	36.	D(3.1.18)
37.	B(4.2)	38.	A(4.2)	39.	D(4.2)	40.	B(4.2)
41.	B(4.2)	42.	D(3.2.26)	43.	C(3.2.20)	44.	A(3.1.1)
45.	B(3.1.16)	46.	D(5A.6)	47.	D(1.4)	48.	B(1.5)
49.	C(3.2.16)	50.	B(3.2.23)	51.	C(3.1.14)	52.	C(4.2) See VOR
53.	B(5A.2.1)	54.	C(5A.2.1)	55.	B(3.2.17)	56.	B(5A.2.6)
57.	A(5A.2.6)	58.	B(5A.2.10)	59.	B(3.2.29)	60.	D(1.2)
61.	D(5A.2.11) (5B.2.11)	62.	B(5A.2.11)	63.	D(4.3.1) (4.4)	64.	C(4.4)
65.	D(5.2.4) (5.2.5)	66.	D(5.2.12)	67.	D(5.2.1)	68.	D(5.2.13)
69.	A(5.2.3)	70.	C(1.5.1)	71.	D(5.2.14)	72.	A(5.2.14.1)
73.	B(5.2.14.2)	74.	C(5.2.14.3)	75.	D(5.2.14.4)	76.	D(5.2.14)
77.	B(5A.2.16)	78.	A(See Definitions)	79.	C(5B.2.1)	80.	A(5B.8.3)

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|----------------|----------------|----------------|---------------|
| 81. D(5B.2.7)  | 82. A(5B.2.10) | 83. C(5B.2.10) | 84. D(5.2.11) |
| 85. A(4.4)     | 86. B()        | 87. A(5A.2.1)  | 88. B(5A.2.5) |
| 89. D(5.C)     | 90. B(5.C)     | 91. D(5.C)     | 92. D(5.C)    |
| 93. B(4.3.2)   | 94. D(4.2)     | 95. C(5A.1.2)  | 96. A(5A.1.3) |
| 97. A(5.1.5)   | 98. C(5C.10)   | 99. D(10.4)    | 100. A(6.0)   |
| 101. C(5A.3.1) | 102. C         | 103. A         | 104. B        |
| 105. A         | 106. B         | 107. B         | 108. D        |
| 109. C         | 110. C         | 111. B         | 112. B        |
| 113. A         | 114. A         | 115. A         | 116.          |