North Bay Jack Garland Airport

Airport Traffic Directives
DX AVOP Study Guide and Practice Tests

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Copyright Information

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AIRPORT and AVOP INTRODUCTION

1.0   ABOUT THIS DOCUMENT

This Airport Traffic Directive for DX permits details airside rules and policies that govern all airside operators which utilize all areas of the airport. DX permits are issued to individuals who require regular access to areas such as taxiways, runways, service roads, and general-purpose airport aprons in the course of their day-to-day work. As such DX permit holders must be trained to these standards by their employer and have the skills necessary to comply with all directives outlined within this document.

Content in this document complies with the standards and practices published in Transport Canada's Aerodrome Standards and Recommended Practices, Canadian Aviation Regulations, and the Airport Traffic Regulations. Furthermore, this document also includes guidance and best practices from national and international associations, ensuring uniform standards are applied at the airport.

It is important to note however that the North Bay Jack Garland Airport Corporation has the authority to amend, update, or otherwise change these directives at its sole discretion to meet the safety needs of all users or to comply with changes to regulations from time to time. It is the operator's sole responsibility to ensure that they are current on all procedures before operating a vehicle airside.

This Airport Traffic Directive is intended to be used as a self-study guide for the written and practical exams. As such this document forms an excellent reference resource throughout your career, and the duration of your AVOP.

2.0 CURRENT ENVIRONMENT DESCRIPTION

The North Bay Jack Garland Airport ("Airport") is a critical component to the region's infrastructure that supports numerous aeronautical businesses and hundreds of their employees in addition to providing essential daily air services to North Bay and many communities within Northern Ontario. The Airport welcomed nearly 85,000 passengers and saw tens of thousands of aircraft visits annually, not to mention the numerous visitors for special events, medical transfers, and other aviation related activities. Due to runway lengths and other infrastructure considerations the Airport can be used by airlines as a diversionary airport, when weather or other considerations prevent them from reaching their originally intended destination.

The Airport is operated 24/7 year round (with limited Terminal hours), and includes services provided by business partners such as aircraft maintenance, fuel services, Flight Service Station, CBSA clearances, ground handling, flight training, and more.

To provide all these various functions the Airport maintains a wide variety of 'Airside Surfaces', including in no particular order:

Runways (6):	Taxiways (6):	Aprons (5):	Service Roads (16):
Rwy 08/26	Hotel	I	Garage Rd.
Rwy 18/36	Lima	II	Garage Rd. West
Rwy 13/31(turf)	Juliet	III	South Perimeter Rd.
	Echo	IV	West Perimeter Rd.
	Golf	V	08 Approach Rd.
	Foxtrot		Glide Path Rd.
			VOR Rd.
			Pad One Rd.
			13 Approach Rd.
			18 Approach Rd.
			Receiver Site Rd.
			AWOS Rd.
			Compound Rd.
			Localizer Rd.
			North Perimeter Rd.
			East Perimeter Rd.
Maneuvering Areas		**Movement Areas**	

Additionally NAV Canada, as a wholly independent operator, provides and maintains the following air navigation sites, accessible only using the above maneuvering and movement areas.

Air Navigation Sites:

Glide Path
Localizer Transmitter → Together these two systems comprise the Instrument Landing System (known as the ILS)
VOR
Receiver Site
Radar Compound (also known as the NAV Ball)
Weather Site (Automated Weather Observation Site - AWOS)
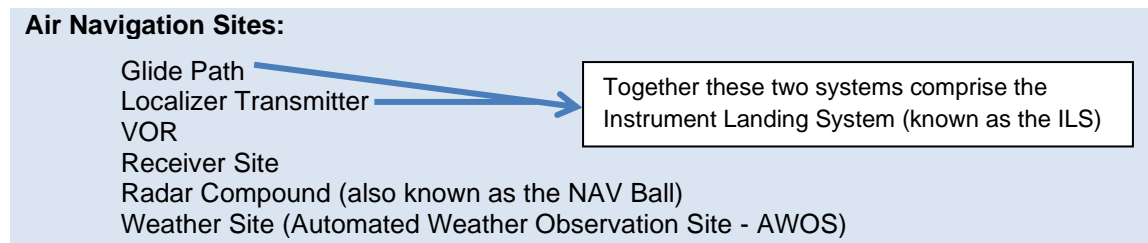
Understanding how to access and operate in these areas alongside aircraft, personnel, visitors, tenant employees, etc. is a critical component to these directives.

3.0   DEFINITIONS

The Airport operates on a 24 hour per day, 7 day per week, year round basis; however, the Terminal Building has limited hours. Airport services, through on field business partners, include:

Term	Definition
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.
Aircraft Movements	Aircraft landings and take offs.
Airport	An aerodrome in respect of which a Canadian aviation document is in force.
Airport Manager	The duly authorized representative in charge of the airport.
Airport Traffic	All traffic on the maneuvering area of an airport and all aircraft flying in the vicinity of an airport.
Airside	That area of an airport intended to be used for activities related to aircraft operations and to which public access is normally restricted.
Airside Vehicle Operator's Permit (AVOP)	Means a document issued by the Airport Manager certifying that the person named therein is authorized to operate vehicles in an airside area.
Apron	That part of an aerodrome, other than the maneuvering 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 to allow execution of those functions.
Airport Traffic	All aircraft, vehicles, equipment and pedestrians using the apron of an airport.
AVOP DA (Apron Only)	Airport Vehicle Operators Permit with restrictions to specific movement (Apron) areas.
AVOP D (Taxiway crossing 18/36 and Aprons ONLY)	Airport Vehicle Operators Permit with restrictions to limited maneuvering areas (taxiways, crossing runway 18/36 Only).
AVOP DX (All Areas)	Unrestricted Airport Vehicle operators permit to all airside areas of the airport.
Blind Transmissions	A transmission from one station to another when two-way communication cannot be established and it is believed that the called station can hear transmissions, but is unable to transmit.

Controlled Airport	An airport at which an air traffic control unit is provided.
Cross-Walk	Any portion of a road, an apron or any other area designated by a sign or surface marking as a pedestrian crossing.
Designated Vehicle Corridor	A road delineated by surface markings on an apron.
Designated Vehicle Crossing Point	A location on an apron, delineated by surface markings, where vehicles are to cross an aircraft taxi-line.
ERAP	Electronic Restricted Area Pass – a durable plastic card to replace temporary laminated ID cards. Identifies the holder; shows that the required police background check has been obtained; that the holder has been authorized by the Airport Manager for access to an employment-required restricted area; and, shows the holder has completed and understands the required Security Awareness Program. It also functions as access control card for airport facilities where applicable. Includes Airside Vehicle Operator Permit information (DX, D, and DA) when applicable.
Equipment	Any motor vehicle or mobile device, either self-propelled or towed or of a specialized nature, used for runway and airfield maintenance or in the maintenance, repair and servicing of aircraft including test equipment and cargo and passenger handling equipment.
Flight Service Specialist	A NAV Canada employee who provides advisory information to aircraft and vehicles using, or about to use, the maneuvering areas of an airport where control service is not available.
Flight Service Station	A NAV Canada operated facility from which aeronautical information and related aviation support services are provided to aircraft including airport and vehicle advisory services for designated uncontrolled airports.
Glide Path	That part of an instrument landing system that helps the pilot approach the runway on the correct descent angle to the designated touchdown zone.
Groundside	The area that is on airport property that is not intended to be used for activities related to aircraft operations and to which the non-travelling public has access. (As defined in: Traffic on the Land Side of Airports Regulations, 1992, SOR/2006-102) (i.e.) Groundside includes the Airport Terminal and Administration Buildings, general public roads, parking facility areas and approach light areas for runway 08/26 and 18/36.
Holding Bay	A defined area where aircraft can be held, or bypassed, to facilitate efficient surface movement of aircraft.
Hold Short	Instructions to hold at least 60 m (200 ft.) from the edge of a runway while awaiting permission to cross or proceed onto a runway.
Intersection	The point at which a road, runway or taxiway meets or crosses another road, runway or taxiway.

Localizer	That part of the instrument landing system (ILS) that helps the pilot remain lined up with the runway during his approach.
Maneuvering Area	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 landing, <u>excluding aprons</u>.
Mobile Phone/Digital Handhelds	Mobile phone (Cell & Satellite) and digital handheld devices that combines computing, telephone, internet and networking features. i.e. smart phones, tablets, etc.
NOTAM	Abbreviated form of "Notice to Airmen". It informs pilots of conditions hazardous to aircraft operations by means of message or radio.
Movement Area	That part of an aerodrome to be used for the surface movement of aircraft and includes the maneuvering areas and aprons.
Off all Maneuvering Areas	Indicates a vehicle is now no longer using any maneuvering areas, while still continuing to work airside (i.e. they're remaining on a service road or an apron)
Off the Runway	Indicates a vehicle is at least 60 m (200 ft.) to the side of the nearest edge of the runway in use, wherever practical.
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.
Operator	The person responsible for the operation and safety of the vehicle and equipment; usually referred to as the driver.
(PVAS) Positive Vehicle Advisor Service	Instructions issued by Flight Service Specialists at designated uncontrolled airports to: • Regulate vehicles entering, leaving or moving along runways; and, • Coordinate the movement of vehicle traffic on the airport maneuvering area other than runways.
(ROC-A) Restricted Radiotelephone Operator's Certificate	A document issued by the Department of Communications certifying that the holder may act as an operator on any aeronautical-land radio station fitted with radiotelephone equipment only, transmitting on fixed frequencies and not open to public correspondence.
Restricted Area	An area of an airport designated by a sign as an area to which access by persons or vehicles requires the production of valid identification.
Taxiway	That part of an aerodrome used for maneuvering aircraft and airport equipment between the apron area and runway.
Threshold	The beginning of that portion of the runway usable for landing.
Uncontrolled Airport	An airport that is "non-controlled" to the extent that the airport does not have an operating air traffic control tower.
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 Advisory Service	Information provided by the flight service station for the safe movement of known vehicles and aircraft on maneuvering areas at locations where no control tower is in operation.
Vehicle Corridors	Parallel 150 mm (6 in.) wide, solid white lines spaced 7.5 m apart to provide guidance to vehicle and equipment operators.
Warning Devices	A siren and flashing red light.

4.0   OPERATIONS OF VEHICLES ON AN AIRPORT

4.1   Applicable Traffic Directives

The standards within this document are formed as a cumulative manual of both the:

a) National Airport Traffic Directives
- based on Acts, Regulations and procedures applied nationally for the safe and orderly operation of vehicles on airport movement areas.

b) Local Airport Traffic Directives
- based on the considerable differences in the operating conditions at each airport because of the size and complexity of operation, climatic conditions, geographical location and other factors, detailing the specifics of the North Bay Airport.

4.2   Authorization to Operate a Vehicle Airside

To obtain authorization to operate a vehicle on airport airside, an applicant will: Apply to the Airport Manager or designate for airside vehicle operation training material (available on the YYB.ca website); and subsequent issuance of an Airside Vehicle Operator's Permit (AVOP), or Airport Manager written authorization to operate a vehicle airside;

a) Arrange with the Airport Manager or designate for AVOP testing and/or assessment.

b) Be issued by the Airport Manager or designate an Airside Vehicle Operator's Permit (AVOP), or written authorization to operate a vehicle airside;

c) In the case of aprons and service roads only; operators, airlines or service provider companies are responsible to train, test and certify their operators and staff.

Once training is completed a letter certifying the employee is trained and qualified will be provided to the Airport Manager or designate.

A vehicle is only to be operated on a maneuvering surface (runway or taxiway) as authorized by the FSS, Airport Manager or designate.

A vehicle is only to be operated on a movement area (apron) only as authorized by the Airport Manager or designate.

4.3 Minimum Requirements to Operate a Vehicle Airside

No person shall operate a vehicle in the airside area of an airport unless:

(a) that person is in **possession of an Airside Vehicle Operator's Permit (AVOP)**,
Note: This certificate is not required if vehicle operation is restricted to the tenant portions of aprons (pink areas on the map) and/or service roads only; or that person is escorted or accompanied by a person who is in possession of an Airside Vehicle Operator's Permit;

(b) that person is in **possession of a Restricted Radio Operator Certificate – Aeronautical (ROC-A)** issued by Industry Canada, or the appropriate Government of Canada Agency; and,

(c) that person is in **possession of a valid driver's licence of proper class** for the vehicle that is to be operated; and,

(d) that person is **authorized by the Airport Manager** or designate to operate a vehicle in that area, having provided:

  i. Proof of valid insurance in the amount of $5,000,000 General liability and comprehensive with no aviation exclusion.

  ii. Proof of valid insurance in the amount of $2,000,000 General liability and comprehensive with no aviation exclusion for general aviation tenants restricted areas as noted in red on the AVOP diagram in appendix B.

  iii. Successful completion Security Awareness training.

An Airside Vehicle Operator's Permit is issued by the Airport Manager on the basis of applicant's knowledge of both the national and local airport traffic directives for the airport named on the AVOP.

Application for an AVOP must be made to the local Airport Manager by the applicant in writing and must include the address of the applicant and reasons for the application.

To avoid delays in an application, you should check with the Airport Manager's office to ensure that all clearances and other certificates or licenses that you may be required to hold are available at the time of application for an Airside Vehicle Operator's Permit.

Expiry Note: Subject to being revoked or suspended, an Airside Vehicle Operator's Permit issued under the Airport Traffic Regulations is valid for the period stated on the permit and coincides with the expiry of the individuals Restricted Area Pass (RAP).

On the expiry of an Airside Vehicle Operator's Permit, the permit holder shall forthwith return the permit to the Airport Manager and apply for a recertification test as per the standards that are in force by the Airport at that time.

4.4   Process for AVOP Permits

4.4.1   DX Pass Requirements
(Unrestricted access to all areas)

a. Submit and supply consent to disclosure of personal information from the North Bay Police, Ontario Provincial Police or through the Commissionaires criminal records check:
<div align="center">

https://commissionaires.ca/en/services/criminal-record-checks/
</div>

b. All applicants must complete and submit an application for Restricted Area Access Pass to the Security Supervisor. <u>Please note that the background check cannot be older than six months or you will be required to provide a new background check/RAP application.</u>

c. Photos will be taken at North Bay Airport Security Office.

d. Applicants must study and pass an aeronautics radio operator's (ROC-A) test to acquire a radio operator's license.

e. Complete Security Awareness training.

f. Bring the completed AVOP application, driver's license and radio operator certificate to evaluation, in order to create a copy for your record.

g. Must hold a valid driver's license for the class of vehicle being operated.

h. Study manuals on Traffic Directives are supplied to the applicant (please see website for AVOP manual at YYB.ca).

i. All applicants must pass a theory and two stage practical (afterhours procedures and ride along) airside vehicle operator's permit test evaluation.

4.4.2   D Pass Requirements
(18-36 Taxiway Crossing and Aprons Only) – must study DX AVOP manual

a. Restricted to TAXIWAYS CROSSING 18/36 and APRONS ONLY

b. All applicants must complete and submit an application for Restricted Area Access Pass to the Security Supervisor.

c. Submit and supply consent to disclosure of personal information from the North Bay Police or the Ontario Provincial Police. <u>Please note that the background check cannot be older than six months or you will be required to provide a new background check/RAP application.</u>

d. Photos will be taken at North Bay Airport Security Office.

e. Applicants must study and pass an aeronautics radio operator's (ROC-A) test to acquire a radio operator's license.

f. Complete Security Awareness training.

g. Bring the completed AVOP application, driver's license and radio operator certificate to evaluation, in order to create a copy for your record.

h. Must hold a valid driver's license for the class of vehicle being operated.

i. Study manuals on air field procedures are supplied to the applicant.

j. All applicants must pass a theory and two stage practical (afterhours procedures and ride along) airside vehicle operator's permit test evaluation.

4.4.3   DA Pass Requirements
(Aprons Only) – may study DA AVOP manual instead of DX AVOP manual

a.   All applicants must complete and submit an application for Restricted Area Access Pass to the Security Supervisor.

b.   Submit and supply consent to disclosure of personal information from the North Bay Police or the Ontario Provincial Police. <u>Please note that the background check cannot be older than six months or you will be required to provide a new background check/RAP application.</u>

c.   Photos will be taken at North Bay Airport Security Office.

d.   Complete Security Awareness training.

e.   Bring the completed AVOP application and driver's license to evaluation in order to create a copy for your record.

f.   Must hold a valid driver's license for the class of vehicle being operated.

g.   Study manuals on airfield procedures are supplied to the applicant.

h.   All applicants must pass a theory and practical (ride along) airside vehicle operator's permit test evaluation.

4.4.4   Training for Airside Vehicle Operators

The operator of a vehicle on the movement area will be appropriately trained for the tasks to be performed and will comply with the instructions issued by:

(a)   The Air Traffic Services Unit/Flight Services, airport operator or designate when on the maneuvering area; and

(b)   The appropriate designated authority, when on the apron.

All testing of vehicle operators will be conducted by the Airport Manager or designate, prior to allowing an individual to operate any vehicle and/or mobile equipment on the Airport maneuvering areas.

A copy of individual training and vehicle operation authorization records, i.e., for both airside vehicle operator's permit (AVOP) and/or Airport Manager written authorization, will be retained on the employee's and/or contractors' file at the Airport.

Training for drivers that are restricted to tenant portion of aprons (pink areas on the map) and service roads will be designated to the respective airline, service provider or tenant operator and then tested by the Airport Manager or tenant designate where required.

Airside vehicle operator training (AVOP) is based on the reference North Bay Airport Traffic Directives for the Operation of Vehicles on Airport Movement Areas (AVOP Manual).

4.4.5 Arrangements for AVOP Test

AVOP and Restricted Area Pass applications can be obtained from Airport Security in the Airport Terminal. When the applicant is prepared to attempt the written and practical AVOP tests, arrangements can be made by contacting:

Regulatory Compliance Manager
Ph. 705-474-3026 ext. 5305.

NOTE: Any AVOP tests scheduled between November 1 and April 1 may be cancelled and rescheduled with minimal notice, as weather and operational requirements permit during the winter.

4.4.6 Evaluation of Airside Vehicle Operators

Once the operator has successfully completed the necessary training, the operator will be required to schedule an evaluation with the Airport Manager or designate.

The certification evaluation will comprise of the following.

DX AVOP	D AVOP	DA AVOP
Written Test	Written Test	Written Test
After Hours Verbal Test	After Hours Verbal Test	DA AVOP Practical Test
DA AVOP Practical Test	DA AVOP Practical Test	
DX AVOP Practical Test	DX AVOP Practical Test	

Alternatively, tenants authorized to issue DA AVOPs, as per Section 1.2 Vehicle Operator Authorization, may evaluate and issue AVOPs as required for their specific operations and within their designated areas as outlined within their approved lease.

Once training is completed a letter certifying the employee is trained and qualified will be provided to the Airport Manager.

4.4.7 AVOP Knowledge Confirmation

In order to maintain a high degree of airside safety when operating vehicles, and to ensure that all AVOP holders remain current with both the theoretical and the practical components of the entire Airside Traffic Directives, every AVOP holder is required to confirm their knowledge using the methods below.

a) Provide semi-annually, in writing, a statement confirming they have used their AVOP a minimum of six times within the six month period from Jan 1, or July 2 whichever is closer, until expiry.
   (1ˢᵗ reporting period is 1 Jan – 1 July. | 2ⁿᵈ reporting period is 2 July – 31 Dec)

All completed knowledge confirmation forms can be submitted to:

Mail: **Attention: Management - AVOP Confirmation**
       50 Terminal St., Suite #1, North Bay, ON, P1B 8G2

Email: operations@yyb.ca

b) Should the AVOP holder not be able to provide written proof that they have used their AVOP a minimum of six times during the specific reporting periods listed above, a check ride must be scheduled within 90 days with an Airport Evaluator, as listed below, to validate their knowledge of all current traffic directives.

> Regulatory Compliance Manager
> Phone: 705-474-3026 ext. 5305

c) Should an AVOP holder be unable to confirm their knowledge by one of the above methods their AVOP will be revoked immediately. Once an AVOP is revoked the individual will need to reapply for an AVOP, and if approved by the Airport Manager or designate will be required to fully certify again.

AVOP Knowledge Confirmation Form

For All Airport Staff, Tenants, Clients, and Other Users.

1. AVOP Holder Details

Please indicate the individuals who have used their AVOP within the past 6 months.

First Name:	Last Name:	AVOP Issue Date:	AVOP Expiry Date:	Date of Last AVOP Use:	AVOP #
					NBA -
					NBA -
					NBA -
					NBA -
					NBA -
					NBA -
					NBA -
					NBA -
					NBA -
					NBA -

2. Authorizing Information

Confirmation Statement: I confirm that the above individuals have used their AVOP at the North Bay Jack Garland Airport at least six (6) times within the past 6 month reporting period, most recently on the date listed above. An update will be provided again within the subsequent six (6) month reporting period. *(1st reporting period is 1 Jan – 1 July. | 2nd reporting period is 2 July – 31 Dec)*

Supervisor / Manager / Designate Full Name and Signature: Date:

Please forward the completed form via e-mail or fax to: **operations@yyb.ca** *or* **(705) 474-3020**.

Excerpt from Airport Traffic Directives:

4.4.7   AVOP Knowledge Confirmation

In order to maintain a high degree of airside safety when operating vehicles, and to ensure that all AVOP holders remain current with both the theoretical and the practical components of the entire Airside Traffic Directives, every AVOP holder is required to confirm their knowledge using the methods below.

1. Provide semi-annually, in writing, a statement confirming they have used their AVOP a minimum of 6 times within the 6 month period from Jan 1, or July 2 whichever is closer, until expiry. (1st reporting period is 1 Jan – 1 July. | 2nd reporting period is 2 July – 31 Dec)

    All completed knowledge confirmation forms can be submitted to:

    Mail: 50 Terminal St., Suite #1   **Email:** operations@yyb.ca   **Fax:** 705-474-3020
    North Bay, ON, P1B8G2

2. Should the AVOP holder not be able to provide written proof that they have used their AVOP a minimum of 6 times during the specific reporting periods listed above, a check ride must be scheduled within 90 days with an airport evaluator, as listed below, to validate their knowledge of all current traffic directives.

    Regulatory Compliance Manager
    Ph. 705-474-3026 ext. 5305

3. Should an AVOP holder be unable to confirm their knowledge by one of the above methods their AVOP will be revoked immediately. Once an AVOP is revoked the individual will need to reapply for an AVOP, and if approved by the Airport Manager or designate will be required to fully certify again.

4.4.8   Arrange for a Five-Year Recertification AVOP Test

All AVOP holders must recertify their AVOP every 5 years, in addition to the intermediary requirements listed previously. When the applicant is prepared to attempt the AVOP recertification arrangements can be made by contacting:

> Regulatory Compliance Manager
> Phone: 705-474-3026 ext. 5305

AVOP recertification is to be scheduled between April 1st and November 1st of the calendar year the AVOP is set to expire. This is done to ensure that the AVOP recertification is not cancelled and rescheduled due to weather and operational requirements, as is experienced during the winter.

The re-certification evaluation of a valid AVOP will comprise of a practical test, as appropriate by the operators AVOP classification. If an AVOP is not recertified within the five years it is issued for the AVOP will be revoked immediately and the individual will need to reapply.

4.4.9   Issuing of Airside Vehicle Operator Permits

After successfully completing an evaluation, the operator will be issued an AVOP from the Airport Manager or designate.

5.0   DUTIES AND RESPONSIBILITIES

Each employer must ensure that their employees have received adequate training and are qualified to operate vehicles and equipment, which they are required to use in the course of performing their duties on the airside. This includes ensuring that employees are in compliance with all Provincial/Territorial Driver's License requirements and restrictions.

Before operating a motor vehicle on the airside of the Airport the vehicle operator must become familiar with the regulations and procedures in this manual and obtain authorization from the Airport Manager.

The vehicle operator must determine that their vehicle is operating satisfactorily (Do a walk around and check wipers, mirrors, lights, beacon, tires, leaking fluids, rocks in tires, mud, loose parts, etc.) and has the required safety equipment and markings by doing a walk around the vehicle (See Section 6.90, Recommended Safety Equipment for Vehicles). All operators shall notify their immediate supervisor of any equipment malfunction.

If you encounter any obstruction or potentially hazardous condition on any aircraft movement surface, report its nature and location to your supervisor and to Airport Security in order that corrective action may be taken.

All personnel with a Transport Canada RAIC or a North Bay Airport Restricted Area Pass shall wear these on outer clothing, above the waist, on the front of the body, ensuring they are always visible when in the restricted areas.

A person who is not in possession of a valid identification shall not enter or remain in any area of the Airport that is designated by a sign as a restricted area unless authorized to do so by the Airport Manager.

Persons not displaying a RAIC from Transport Canada or a valid Restricted Area Pass from the North Bay Jack Garland Airport should have a valid pilot's licence and matching medical certificate or they should be considered unauthorized and should be reported immediately to the Airport Manager or representative. All designated gates must be kept closed and locked to prevent unauthorized personnel or vehicles assess to the airside.

6.0　VEHICLE OPERATION PROCEDURES

This section outlines the 'How' an individual will safely operate a vehicle airside.

6.1　Right of Way Hierarchy

Aircraft always have the right-of-way. A vehicle operator, therefore, shall yield to any aircraft. Before entering an airport movement area, the vehicle operator shall always visually check and ensure that aircraft are not approaching or departing.

> Following aircraft, vehicle operators shall yield right of way in the following order:
>
> 1. Emergency Vehicles responding to an emergency with lights/sirens
>
> 2. Pedestrians, including passengers, crew, tenants, airport staff, etc.
>
> 3. Vehicles and equipment engaged in snow removal, pavement ice control activities or other airfield activities
>
> 4. Vehicles towing aircraft; and,
>
> 5. Other vehicles, such as tenant vehicles, air carrier vehicles (such as cargo vans and aircraft service equipment) and all vehicles being used during training or evaluation.

6.2　Vehicle Corridors

When operators within the same classification arrive at the same location the operator entering from the right will always be given the right of way (i.e. if a baggage tractor and a fuel truck are evaluating who should be given the right of way it will be provided to the vehicle on the right, and other will hold their position until it is safe to proceed).

a) Vehicles already in a designated vehicle corridor have right of way over all other vehicles attempting to enter.

b) Vehicle corridors are not "guaranteed safe routes".

c) Taxiing or parked aircraft may at times encroach on vehicle corridors, and you must avoid such aircraft.

d) Every person operating a vehicle on an apron shall yield the right of way to pedestrians being escorted between an aircraft and the terminal building.

e) Every operator of a vehicle shall yield the right of way to a pedestrian who is within a pedestrian crosswalk.

6.3 Operating Speed Limitations

Vehicle operators shall use service and perimeter roads to reach field locations when these roads are available, and time permits.

Location:	Maximum Speed Limit
Movement Areas (Aprons)	25km/h
Service Roads	50km/h
Maneuvering Area	50 km/h (with limited operational/emergency exceptions)

Ensure a safe and efficient operation of the vehicle, in the thorough completion of the tasks of the operator, taking into consideration factors such as vehicle and attachments operational limits, weather, other operations on the maneuvering area, etc.

It is the sole responsibility of the vehicle operator to ensure that the vehicle is always operated in a safe manner. Failure to operate the vehicle safely at any time will result in the individuals AVOP to be revoked immediately by the Airport Manager or designate.

6.4 Vehicle Registration

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

6.5 Personal Prohibitions

No person shall operate a vehicle in an airside area while under a prohibition from operating the vehicle imposed by a court or judge.

6.6 Apron II Access at Gate 1, Gate 2, and Gate 2A

Gates are also Emergency Access points therefore they are not to be blocked for any length of time. Vehicles waiting for aircraft to arrive will be parked so they are not blocking the gate. Proceed to gate for airside access only after the aircraft has parked and engines are shut down.

When the vehicle is ready for airside access, proceed to gate and either press the Call Button or phone Airport Security at 705-840-9965, if the vehicle is not equipped with an authorized gate opener.

At no time are unescorted vehicles permitted to follow any other vehicle through the gates. After your vehicle has proceeded through the gate, wait until the gate fully closes behind you before continuing to worksite.

6.6.1   Gate 1 - between Terminal and Administration Building
Gate 1 will remain locked and secured at all times. Airport Security will be responsible for granting airside access through Gate 1 at all times.

Select organizations, i.e. North Bay Ambulances, have permission and procedures to access Apron II through Gate 1 if Airport Security is not present overnight; however, they must still be screened by Security during regular Terminal hours.

Without preauthorized arrangements all vehicles must be granted access by Airport Security.

6.6.2   Gate 2 - to Garage Compound

During normal business hours from approximately 07:00 – 18:00 Gate 2 will remain open to allow courier access to the Maintenance Garage. On weekends, stat holidays, and off hours the same procedure for Gate 1 will apply for Gate 2. These times are approximate and can change for a number of reasons from time to time and without notice.

6.6.3   Gate 2A - Garage Airside Access

Other than authorized personnel and vehicles, airside access through Gate 2A must first be authorized by Airport Management.

6.6.4   Garage Road Access to Apron II

If Apron II access is only available through Gate 2 and or 2A, vehicles will proceed past the Maintenance Garage then along Garage Road to the Apron. Because Garage Road crosses a Helicopter Flight Path, vehicles will stop at the stop signs and look for **any helicopter traffic and the helicopter's suspended load** – which could be hanging quite low. Only when no helicopter traffic is present along this Flight Path will it be safe to proceed.

When entering the Apron from Garage Road, stop and check for traffic and be extremely cautious not to encroach traffic on Hotel Taxiway and Apron II, see the diagram below. Always give aircraft the right of way.
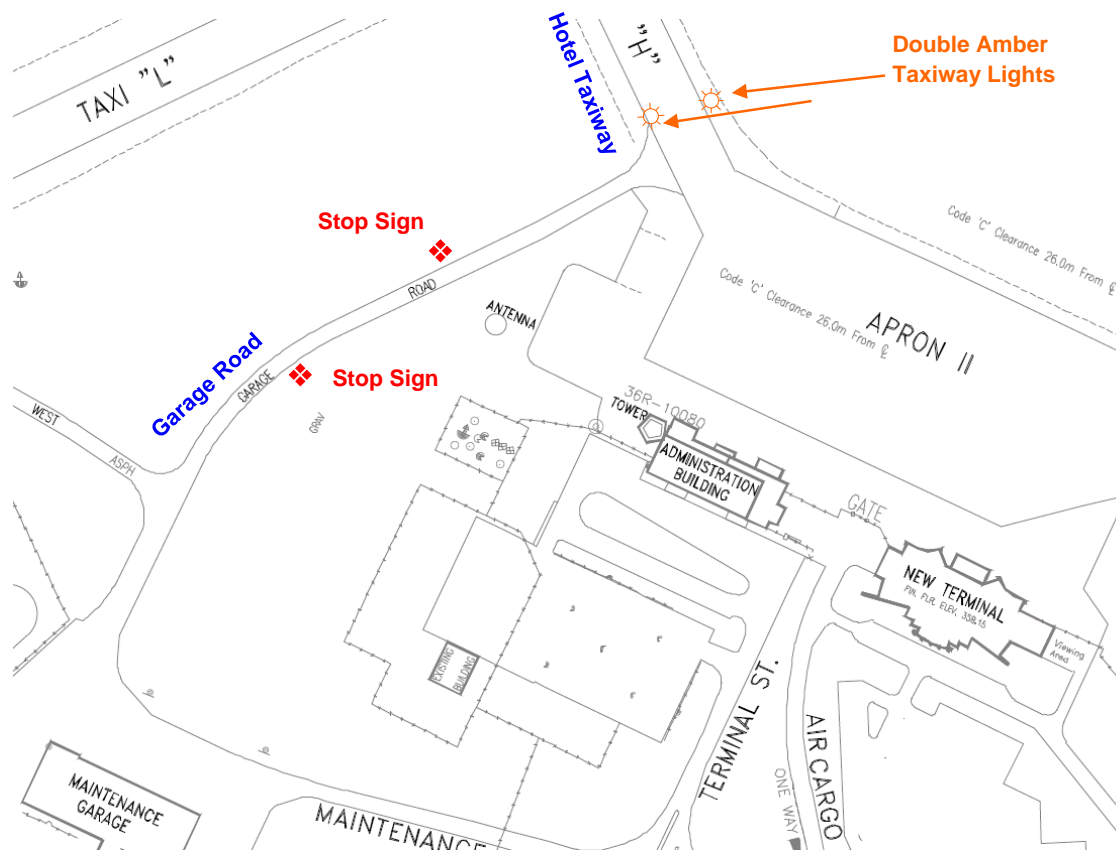
6.7   Functional Vehicle Requirements

All vehicles operating on airside shall have safety equipment and display markings as described below:

6.7.1   Rotating / Flashing Beacon

All vehicles that will be operated or driven on designated movement and maneuvering areas **must** be equipped with a rotating (bulb equipped) or flashing (LED cycling to simulate rotating) warning/beacon light that must be turned on while a vehicle is on these areas. **If equipped with headlights, these must also be turned on while in the maneuvering area.**

The rotating warning lights shall be mounted on the vehicle in a location that will permit the beam to be seen by aircraft, FSS or ground traffic from any position within 360°.

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

Failure to have a 360° beacon will require the vehicle to be escorted by a fully equipped vehicle (i.e. Airport Security will escort a single courier or rented vehicle if it arrives without a beacon, however a single courier can be escorted by another courier from the same company [assuming escort responsibility and liability] if the vehicle is equipped with an appropriate beacon).

Note: Also see TP312 5th Edition Section 6, Subsection 6.3.2 Mobile Objects for specific information relating to the marking of mobile equipment.

Exceptions:

Aircraft fueling vehicles, and other Airport Manager pre-approved vehicles, which have an overall height in excess of 3.5 m 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.

Additionally emergency response vehicles which have operational flashing lights on all sides of the vehicle are permitted to be used in the course of their duties (emergency response, staging, training, etc.) as rooftop equipment may impede the visibility of a roof mounted beacon.

6.7.2   Safety Marking and Equipment Requirements for Aprons

All self-propelled vehicles (e.g. motorized tractors, trucks, etc.) must be equipped with head lamps, tail lamps, parking lamps and, if licensed for off airport use, a license plate lamp.

Vehicles with a cab must also be equipped with a rotating or flashing beacon lamp mounted on top of the vehicle. Vehicles without a cab must be capable of operating the parking and tail lamps so that they flash on and off in unison.

Whenever a self-propelled vehicle is moving from one place to another on the airport apron, those equipped with a flasher (beacon lamp only for vehicles with a cab) must be in operation. The purpose of this procedure is to indicate to taxiing aircraft that the vehicle is being operated in the active apron area.

These lamps should not, therefore, be left flashing when the vehicle is parked and left unattended. Improper use of flashing lamps is potentially distracting to taxiing aircraft and down-grades their value as a warning indicator that the vehicle is in motion.

Headlamps and non-flashing tail and parking lamps must be operated during hours of darkness and reduced visibility and may be left on as required while engaged in service to parked aircraft. All vehicle lamps should be turned off when the vehicle is parked in approved parking locations.

All non-self-propelled equipment (e.g. baggage cart, air-stairs), is required to have 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.

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 should always be kept clean and in good condition.

All vehicles and equipment operating on aprons shall be equipped with standard safety markings prescribed for apron service vehicles.

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 (i.e. Airport Security will escort a single rented vehicle if it arrives without markings, or a contractor can be escorted by a tenant vehicle that is equipped).

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

I. Self-propelled Vehicles with Cab
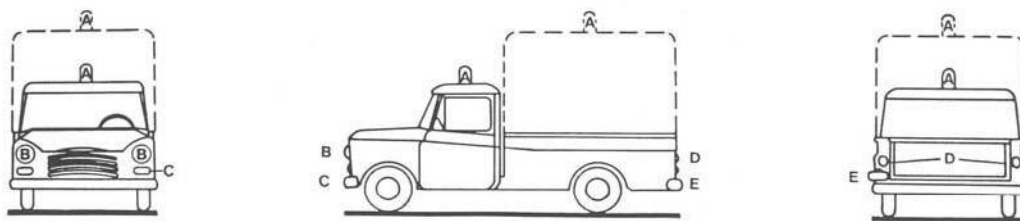
II. Self-propelled Vehicles without Cab

A - Beacon Lamp
B - Head Lamps
C - Parking/Signal Lamps
D - Tail/Signal Lamps
E - License Plate Lamp
F - Reflectorized Strip
G - Reflectorized Panel

III. Non-self-propelled Vehicles and Equipment

6.8 Parking a Vehicle Airside

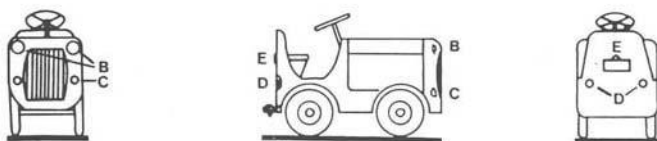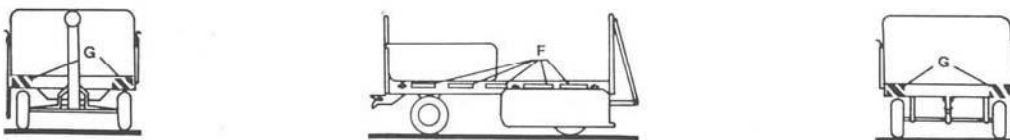Wherever possible and practical, vehicles and equipment should be backed into parking areas. This is particularly important around air terminal buildings, loading bridge areas, and other heavy traffic areas. Should backing into a parking area be impossible, the vehicle will be parked in a manner to allow the vehicle to drive forward when departing. Both are intended to provide maximum visibility for the vehicle operator when departing from a parking area.

No person shall park a vehicle in any area designated by a sign as an area in which parking is prohibited.

No person shall, without the permission of the Airport Manager, park a vehicle in any area of the Airport not intended for the use of vehicles.

No person shall park a vehicle in any area of the Airport designated by a sign as a loading area.

Equipment and vehicles shall not be parked or left unattended on vehicular routes or aircraft movement areas without the permission of the Airport Manager. Vehicles must be parked only in approved areas when not in immediate use.

6.9 General Safety of Others

No person shall operate a vehicle in an airside area in a manner that, having regard to all the circumstances, including the amount of traffic, is dangerous to aircraft, equipment, persons or vehicles.

6.10 Additional Recommended Safety Equipment

Vehicles operated alone (not in company of another vehicle or vehicles) in the maneuvering 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.

6.11 Reporting of Hazards and Accidents

The operator shall report all accidents, incidents, and occurrences of hazardous debris, to their direct supervisor as well as Airport Security. Incidents also include near misses.

6.12 Vehicle Identification

For radiotelephone communication, airport vehicles are given the following identifiers:

Function	Generic Identifiers	Numbers Allocated
Crash Firefighting and Rescue Vehicles	Red, Pump, Car	1 - 19
Staff vehicles (cars, station wagons, pick-ups, panels) airport operations, NAV Canada telecommunications, and air traffic services)	Staff Tech	20 - 79
Trucks (dump, snowplow, stake, etc.)	Truck Sander	80 - 119
Snow blowers	Blower	120 - 149
Tractors, Graders	Small Tractor (Kubota's)/Grader	150 - 179
Passenger Transfer Vehicles (PTV)	PTV	180 - 204
Police and Security	Police	205 - 219
Other vehicles and equipment not covered above	Type of Vehicle (Loaders)	220 - 239
Voyageur Vehicles (Except fuellers/deicers)	Type of Vehicle	240 - 275
Commercial, maintenance, and construction vehicles and mobile equipment rented or contracted to the airport operator	Type of Vehicle	276 - 299
Air carrier and service agency vehicles and equipment servicing aircraft	Type of Vehicle (Deicing, fueling, etc.)	300 - 499
National Defense Vehicles (Except Airport Emergency Services Vehicles)	Type of Vehicle consistent with the above	500 - 599

Note:

- The identification assigned to a vehicle must be used in-full in every radio-telephone transmission from that vehicle.

- All identifiers/call signs are assigned by the Airport and provided to NAV Canada.

- Please see Annex E for a detailed list of approved vehicles.

6.13 Prohibited Actions

1) **Open Flame:** Smoking or open flame, of any material, using any method, is not permitted airside. This prohibition applies to persons both inside and outside vehicles and equipment.

2) **Restricted Areas**: Operators shall not walk or drive a vehicle within **150 m (500 ft.)** from an Instrument Landing System (ILS) transmitter building except with permission of the Control Tower or Flight Service Station as can seriously interfere with electronic equipment. This includes both the Localizer, and the Glide Path.

North Perimeter Rd. is also an area to use caution as it runs the entire length of Rwy 08-26 and Rwy 18; however, it is NOT outside the runway strip in many areas; therefore; if you drive on North Perimeter Rd. you are blocking three runways from being used and must request the Runway sections from the Tower or you will be causing an incursion. Any time you are approaching a stop sign it means you are approaching the runway strip and must ask permission from the Tower.

As you can see from the diagram, many sections are within the Runway Strip and not off a maneuvering area; therefore there is a possibility of an incursion on each runway unless you have permission for the individual runways.
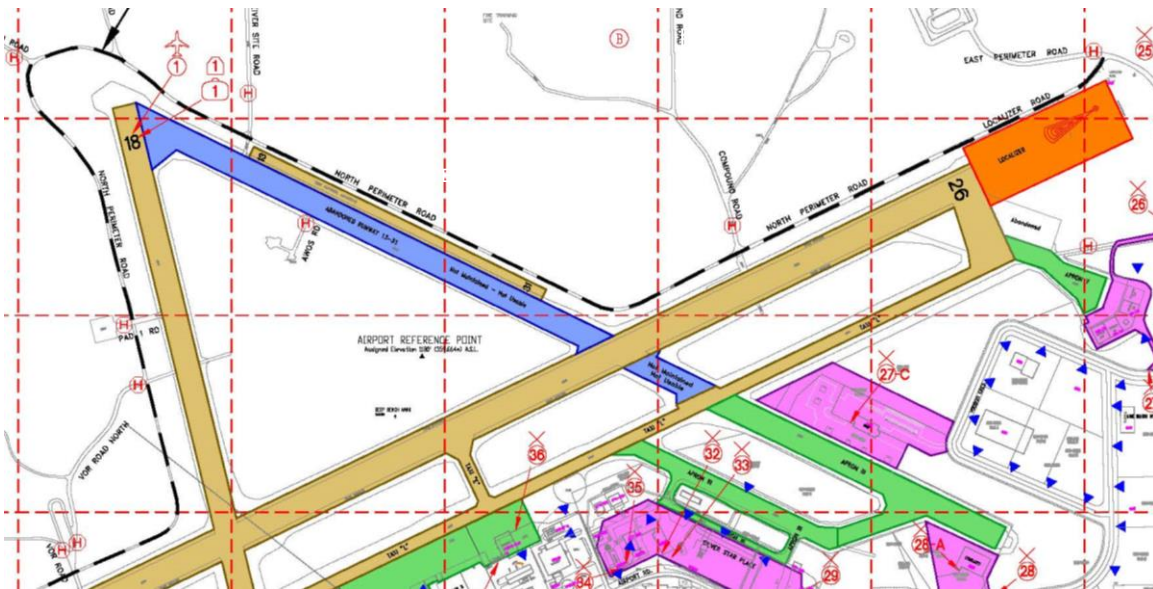
3) **Accident:** Operators shall not convene on the scene of an accident

4) **Distinguished Visitors:** Operators shall not travel to or near aircraft carrying distinguished visitors unless authorized by the Airport Manager, or where a tenant has a commitment to fulfil a business function (baggage handling, fueling, etc.)

5) **Aircraft Fueling:** Operators shall not operate a vehicle within 15 m (50 ft.) of an aircraft being fueled or defueled except for the purpose of servicing that aircraft or as required when operating within a designated vehicle corridor.

6) **Cords:** Operators shall not drive over any cords/plugs of equipment or aircraft. Cords and plugs on the ground should be marked with heavy pylons to prevent them from becoming FOD.

7) **Hands Free:** Operators shall not use mobile phones, tablets, or other mobile communication or computing devices while operating vehicles or equipment.

The use of hands-free mobile phones should be kept to a minimum when driving. To make or receive calls:

- Pull over and stop; (clear of the maneuvering areas when airside)
- Allow a passenger to operate the phone;
- Make use of voice mail and respond to the call at a safer time; or
- Let someone else drive, freeing you up to make or receive calls.

AVOP holders who choose to violate this directive shall have their permit suspended and face legal responsibility if they are involved in an accident and there is evidence that they were using a cell phone while driving.

8) **Studded Tires:** Operators shall not use studded tires airside, due to the potential damage they can cause to infrastructure or aircraft as FOD.

9) **Runway Strip:** An Operator must exercise caution while operating a vehicle on the grass infield area or on a service road as they must not come within 60m (200') of a runway edge [indicated as 'Area A' in the image below] without authorization from Flight Service Station (during operational hours) or without first announcing your intentions and confirming there is no conflicting air traffic (when Flight Service Station is not operational).
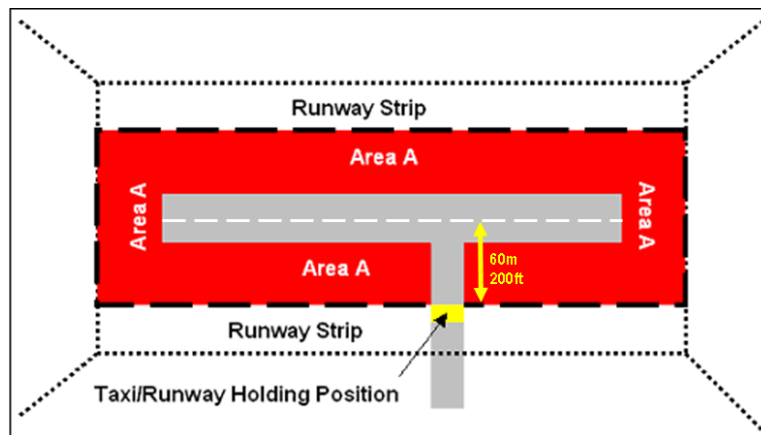
6.14 Foreign Object Debris (FOD)

No person shall:

    (a) throw, deposit or knowingly leave on a road, apron or maneuvering area at the Airport any wood, tools, glass, nails, tacks, scraps of metal, chemical substance or other material that may damage any aircraft or vehicle; or

    (b) throw, deposit or knowingly leave any form of trash or garbage at the Airport except in a container provided for that purpose as it attracts wildlife/birds which endangers air traffic.

    (c) Use salt anywhere at an aerodrome.

Foreign material such as mud and gravel can seriously damage aircraft engines. Vehicle operators, therefore, should ensure that the surfaces of movement areas are kept clean by **checking that wheels and tires are clean before they enter these areas** (such as stones, mud, ice, salt, etc.)**.** If foreign material is deposited on these surfaces, operators shall remove the FOD if he/she is able and it is safe to do so. You must also notify your immediate supervisor as well as Airport Security and arrange for its immediate removal if you are not able to remove it. Any FOD removal by Airport staff shall be at a cost recovery basis as per established fee rates at the time. Any foreign material that poses a threat to an aircraft and its safe operations is referred to as Foreign Object Debris (FOD).

6.15 Jet Blast / Prop Wash

Vehicle operators shall remain a safe distance from areas affected by jet blast or prop wash of maneuvering aircraft, and not pass in front of or closely behind aircraft with engines running.

You may pass behind at a maximum distance if the wheels of the aircraft are chocked or the marshal waves permission.

Turboprop Hazard Areas

Jet Engine Hazard Areas
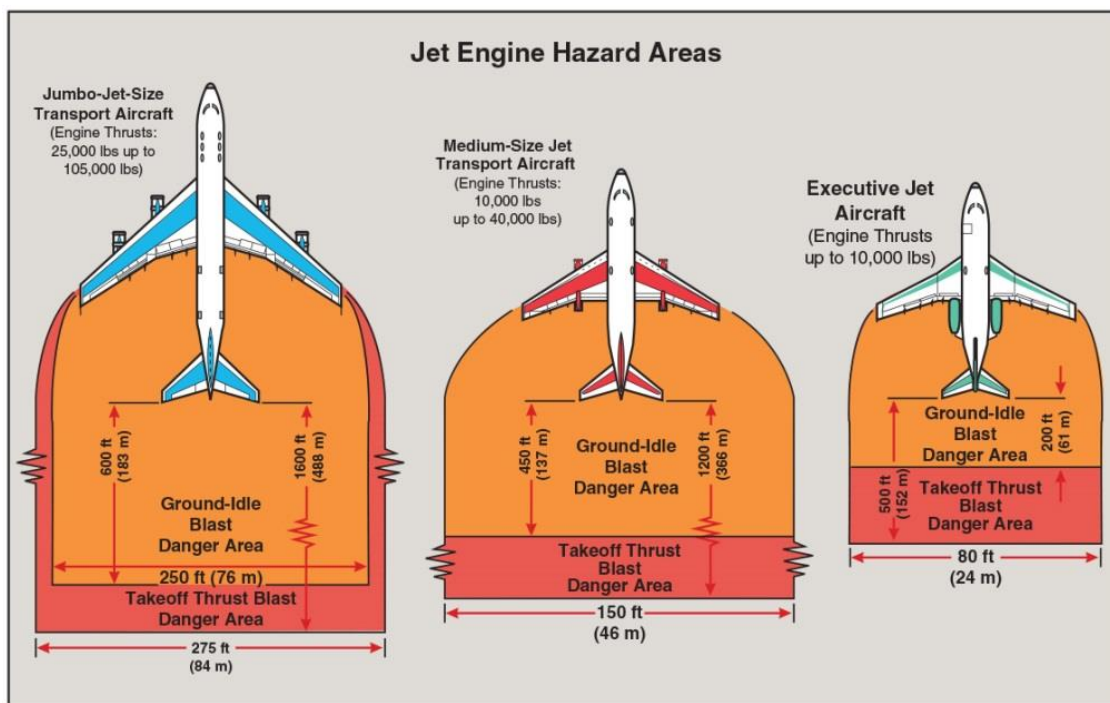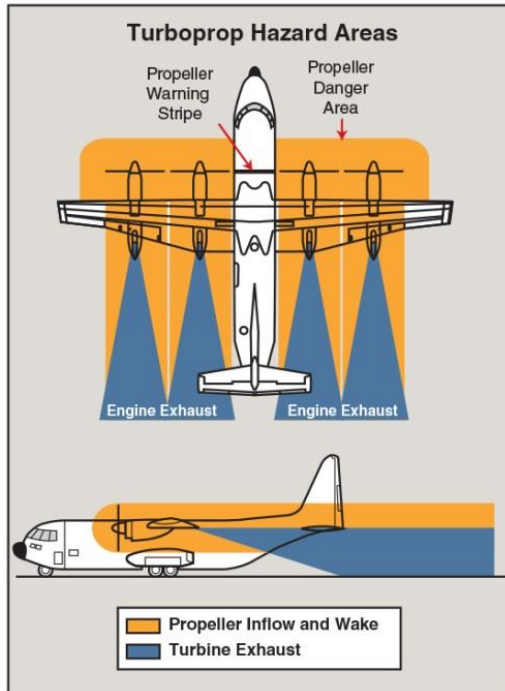
6.16 Radio Equipment and Use

All vehicles and equipment operating on airport maneuvering areas at the North Bay Jack Garland Airport must have a functioning two-way radio operated by a person with a valid restricted radio-telephone operator's certificate (aeronautical) or be

escorted by a vehicle so equipped and operated. Each operator should ensure that the two-way radio is working before the vehicle enters the airport maneuvering area.

All vehicles equipped with the proper FSS radios are expected to monitor the appropriate frequencies **(121.9 daytime and 118.3 after hours)** when operating airside.

Refer to Section 10.0 Radio Telephone Procedures for instructions on how to communicate using a radio, including several examples that you may experience regularly.

6.17 Other Handheld or Mounted Devices

The same rules exercised on Ontario roads apply on airside. Communication via cell phone may be done so if a vehicle has been stopped and parked in a safe location. The use of company and aeronautical radios is permitted during the performance of work-related duties. Texting during the operation of vehicles or while walking on airside is NOT permitted, you must always pay full attention to your surroundings.

7.0   PAVEMENT MARKINGS

Vehicle operators must understand the pavement marking system.

(a) White lines pertain to vehicle movement and control.

VEHICLE = WHITE

    i.   Vehicle corridors used on busy aprons are marked by two solid white lines 7.5m (25 ft.) apart centered by a single broken line.

    ii.   Security lines are solid white lines 150 mm (6 in.) wide, used to denote the parking area for ground service vehicles and equipment.

(b) Yellow lines pertain to aircraft movement and control.

AIRCRAFT = YELLOW

    i.   Aircraft movement guidelines, a solid yellow line 150 mm (6 in.) wide, are continuations of taxiway centerlines that serve as a center-of-aircraft guideline to aid aircraft traversing the apron. (These lines may not be required on some small aprons.)

    ii.   Aircraft lead-in lines are marked by 150 mm (6 in.) solid yellow lines. The spacing and angle vary, depending on the "design aircraft" and local operating procedures.

7.1   Vehicle Corridors

On aprons where vehicle corridors have not been designated, like at North Bay Jack Garland Airport, you should use extra care to:

- Avoid driving near cords/plugs that cross in front of aircraft or operating in aircraft taxi lanes.
- Give aircraft the right-of-way at all times, corridors are not guaranteed safe routes.
- Stop well clear of aircraft and wait until it has been backed out or chalked and the marshal clears you to pass.
- Keep a maximum distance from parked aircraft (min. 15 meters).
- Be sure to cross aircraft taxi lanes and t-lines only at right angles to allow for maximum visibility.
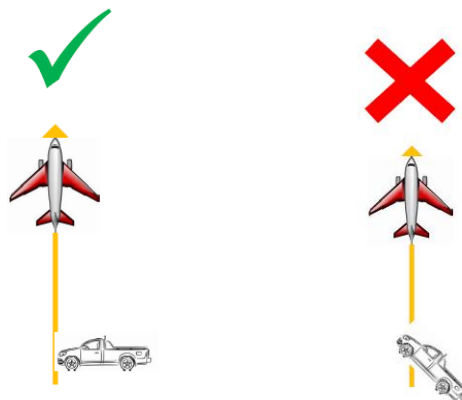
7.2 Aircraft Guide Lines, T-Lines, Lead-in Lines, and Stands

Aircraft Movement Guide Lines

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 guide-lines at right angles.

Movement Guide Lines
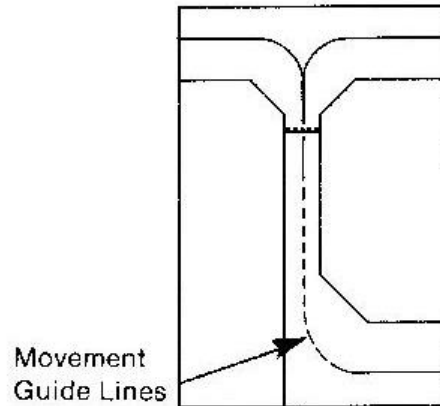
Aircraft Lead-in / Stands/ T- Lines

A yellow line between an aircraft guide line and a gate or parking position. The aircraft nose wheel is centered on this line to guide the aircraft into the parking position without hitting other parked aircraft or obstructions. Also referred to as "**T-Lines** or **Stands**".

There are (6) six stands on Apron 2; stands 1-4 are on the controlled side and stands (1) one and (2) two are in the restricted area.

Lead-in Lines
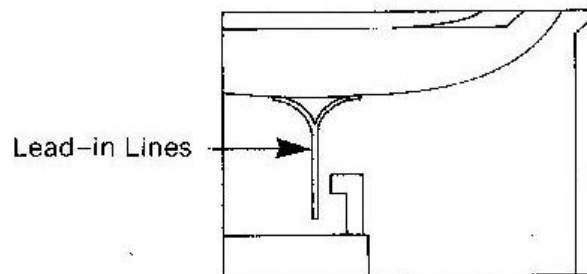
Example of T-Lines/Stands:

⚠ **T-lines are only located on Apron II. There are two located in the Restricted Area of the Apron, and four in the Controlled Area of the Apron. Remember that the Restricted Area is used to park aircraft for embarking and disembarking passengers, which includes additional security considerations.**

Refer to the Airport Security Awareness Program for additional information.

7.3 Hold Lines

Hold Lines

A solid and a broken yellow line or two solid and two broken yellow lines across the width of a taxiway with the broken line(s) closest to the runway. Vehicles and aircraft must stop behind the solid line(s) and not proceed unless and until permitted to do so by the Air Traffic Controller or Flight Service Specialist.
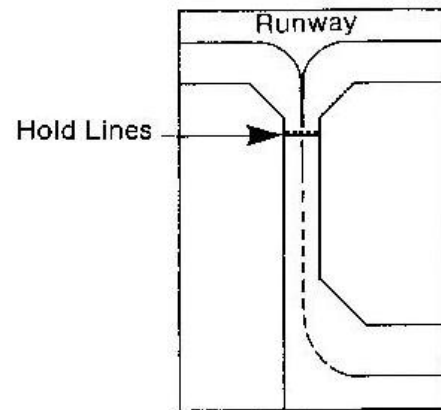
*** Further notes regarding holding short are found in section 10: Radio Procedures

Hold Short Line Example:

When you are instructed to hold short of a runway your vehicle must be on this side of the solid double line.
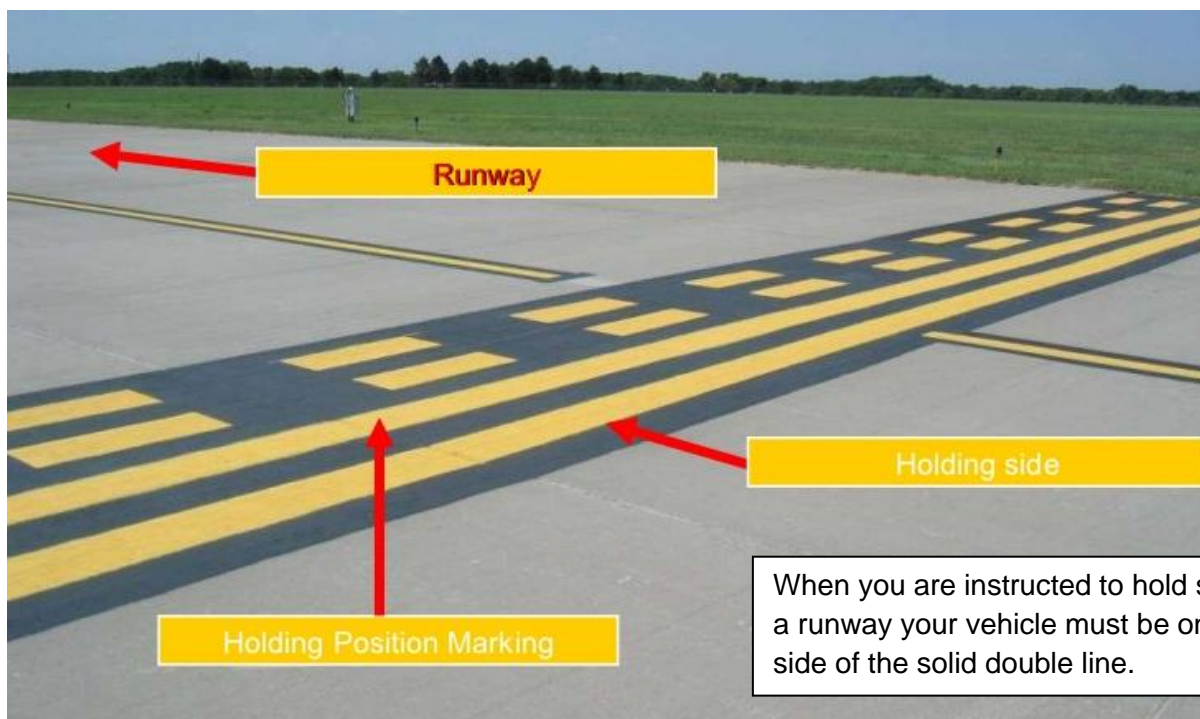
Incursion Awareness

What is an Incursion?

It is any occurrence at an airport, which involves the unapproved presence of an aircraft, vehicle or person on a taxiway or runway or within 60 m (200') of the runway strip on the grass infield or service road.

Examples Include:

FSS Operational: Driving on any maneuvering surface (runway or taxiway) without prior approval of FSS

FSS Unattended: Being on any maneuvering surface that you have not announced your intent to be on and previously confirmed that there is not a conflict with air traffic in the area.

The FSS <u>must</u> be able to tell that you are not past the double ambers, stop sign or hold line or it will immediately be reported as an incursion to Transport Canada and your AVOP will be suspended, pending further investigation, training, or competency evaluation.

 If the FSS feels you are over the hold short line, they will report it as such; therefore leave space so that there is no question.

Please note the following section on "Incursion Prevention".

Failure to Follow Route

A "Failure to Follow Route" is:

- Asking for a specific route but changing the order of the surfaces you proceed onto
- Backtracking after leaving a surface

It is not an incursion as you have permission to be on each surface; however, you <u>do not have</u> permission in a different order from what you requested.

For example, if you request:

> "Currently on Apron 2 and would like to proceed via Hotel, Lima West onto Runway 08-26, cross Runway 18-36"

If you drive straight on Hotel onto Runway 08-26, passing the 08-26 hold-short line then this is a Failure to Follow Route as you did not drive onto Lima West and approach the Runway from the previously requested entrance.

If you request and proceeded via Hotel, Lima West onto Runway 08-26 then FSS then removes you from the Lima surface and you cannot enter back onto Lima again unless you request it.

⚠ **Incursion Prevention**

How can you prevent incursions?

- Only request the surfaces that you are using rather than long distances and multiple surfaces over extended periods of time.

- If you must leave the vehicle for any amount of time, announce your intention to FSS/Air Traffic.

- Once you are back in the vehicle; reconfirm your route in case you missed a radio call or your route had been changed for any reason.

- Use external speakers (where equipped) if working outside so you can hear FSS they need to change your permission.

- Be aware of your surroundings and have situational awareness; if you are on an apron and cross the double ambers without permission it is an incursion.

- If you see another vehicle proceeding onto a maneuvering surface without hearing the call/permission – stop the other vehicle – safety is everyone's business!

- Communication is key. If you aren't sure if you have permission or if the instructions were not clear – clarify before proceeding!

- Do not call or state that you are "off" until you are no longer on any maneuvering areas – crossing a hold line does not mean you are off all maneuvering areas – it just means you are out of the runway strip.

- FSS has asked that drivers do not "rush" or "creep" the hold line as it distracts the Tower from other parts of their job if they have to continue monitoring your vehicle while in a hold position.

- Attempting to stop too fast or too close will not give you the space required to completely stop if the surface is slippery (i.e. ice) or if you were routed in a different direction and need to turn the vehicle around.

- To allow for other traffic to pass and allow you space to turn if redirected you should stop completely to one side (where practical) and must be far enough back to give yourself space to turn around without going near the line.

7.4 Runway Markings

Runway Heading Markings

Each end of a runway is numbered in tens of degrees corresponding to the direction of the runway in relation to a magnetic compass. The compass of an aircraft will read 260 when approaching the end of a runway marked with the number 26. The numbers are painted white and face towards the end of the runway. Vehicle operators should know the various runway headings (numbers) and their location on the airport. These will be illustrated in the site plan in section 10 of this manual (Local Airport Traffic Directives).

Runway Center Line
The center of a runway may be marked with a broken white line made up of several lines close together each group is 100' in length with 100' between.

Aiming Point Marking
The aiming point marking serves as a visual aiming point for a landing aircraft. These two rectangular markings consist of a broad white stripe located on each side of the runway centerline and approximately 1,000 - 1,500 feet from the landing threshold.

Threshold Markings
The beginning of the usable part of a runway for aircraft landing may be marked with a series of solid white lines parallel to the length of the runway. The lines are in groups. The number of lines in group, and the number of groups of lines varies according to the width of the runway.

Displaced Threshold Markings
If for any reason, the threshold is set-in from the end of the runway, white lines painted close together to form arrows, pointed to a bar across the runway, indicate the beginning of the usable runway for aircraft.

Threshold Markings

Runway Heading

Runway Centreline

Aiming Point Marker

Touchdown Zone Markings

Runway Heading

Displaced Threshold Markings
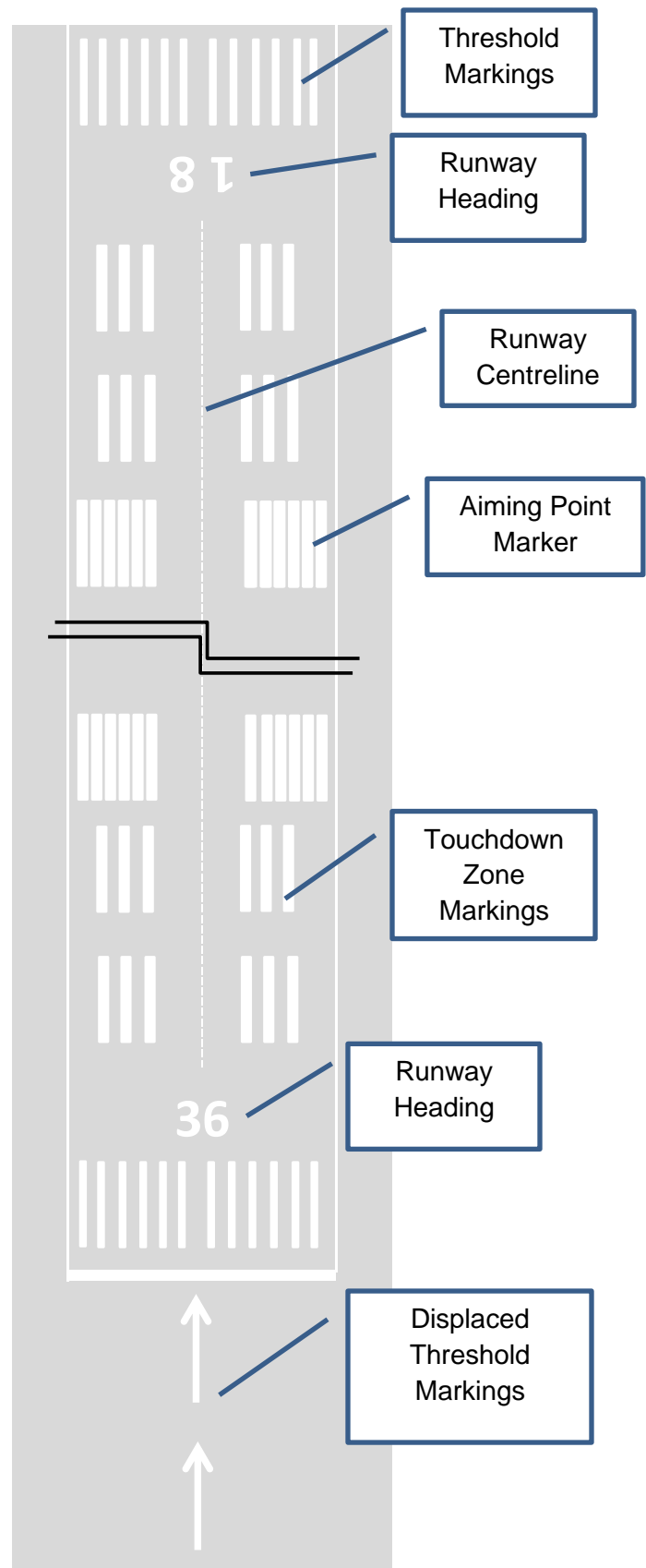
8.0   AIRFIELD LIGHTING

A variety of lights are used airside to provide information and direction to pilots and vehicle operators. Every vehicle operator must know the meaning of these lights to avoid entering areas where they are not permitted to be and as a guide to vehicle movement when within the maneuvering areas (runways and taxiways) of the airport.

8.1   Aerodrome Beacon

The aerodrome beacon is a large rotating white light mounted at a location such as on top of the Flight Service Station Control Tower. It is provided for visual identification of the airport by aircraft but is also a good reference point for vehicles on the airfield.

8.2   Edge Lighting on Movement and Maneuvering Areas

White lights are used along the edge of runways.

Blue lights are used along the edge of aprons and taxiways. Alternatively a blue 'pylon/marker' can also be used on aprons.

Amber lights are used at the intersection of aprons and taxiways. Also known as '<u>double ambers</u>', these lights identify the maximum allowable distance a vehicle operator can proceed up to before they must have authorization from FSS to proceed from an apron to a taxiway.

Two Sided Red and Green lights are located at the runway threshold and are used to identify the end of a runway, for aircraft landing, with the green half pointing toward the approach of the runway.

Two Sided White and Yellow lights are used at the runway end to indicate the approaching end of the runway, for aircraft taking off, with the white half pointing toward the approach of a runway.
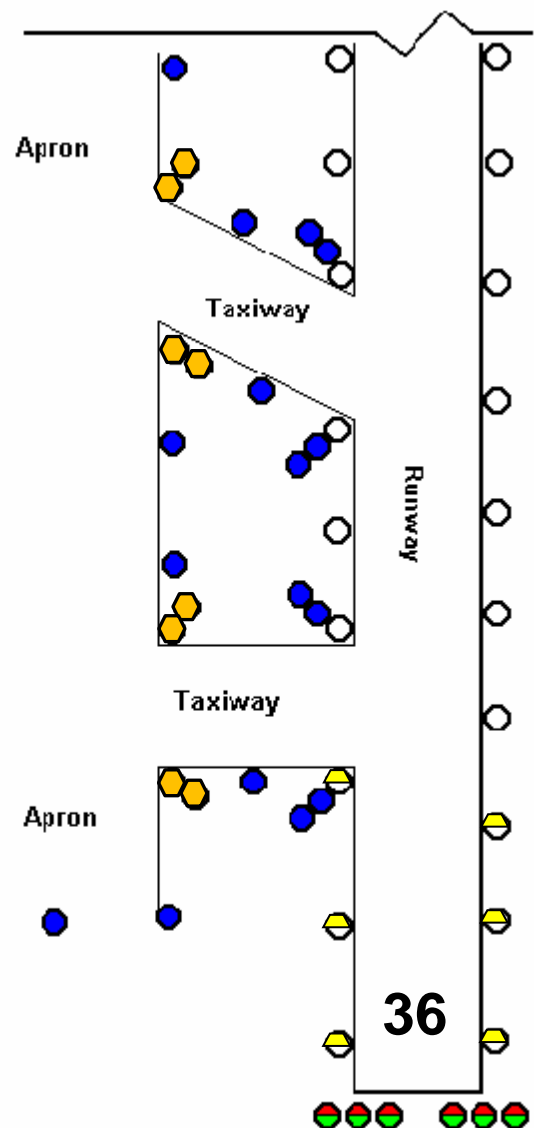
8.3 Runway Guard Lights (aka Wig-Wags)

The Runway Guard Lights are a pair of amber light fixtures, one on either side of hold lines for the main Runway 08-26 (south entrances only) with two flashing amber lights in each fixture, which provide a distinctive warning to pilots and vehicle operators that they are approaching a runway holding position and are about to enter an active runway, essentially enhancing the hold-short line/position.

These lights are visible in all weather conditions however in inclement weather (rain, snow, etc.), in low visibility, or at night these lights provide an especially bright/vibrant notification to the operator.

> ⚠️ In order to prevent runway incursions and to provide greater visibility of hold-short lines these guard lights (wig wags) are found on taxiways that intersect with Runway 08-26 (south side only) and Runway 36 (south of Runway 08-26). (Taxiways Lima, Juliet, Echo, and Hotel)

9.0 AIRFIELD SIGNS

Throughout airside there are three different types of signs which are used to provide information and direction to pilots and vehicle operators. Each of these signs are unique in appearance, and provide different information.
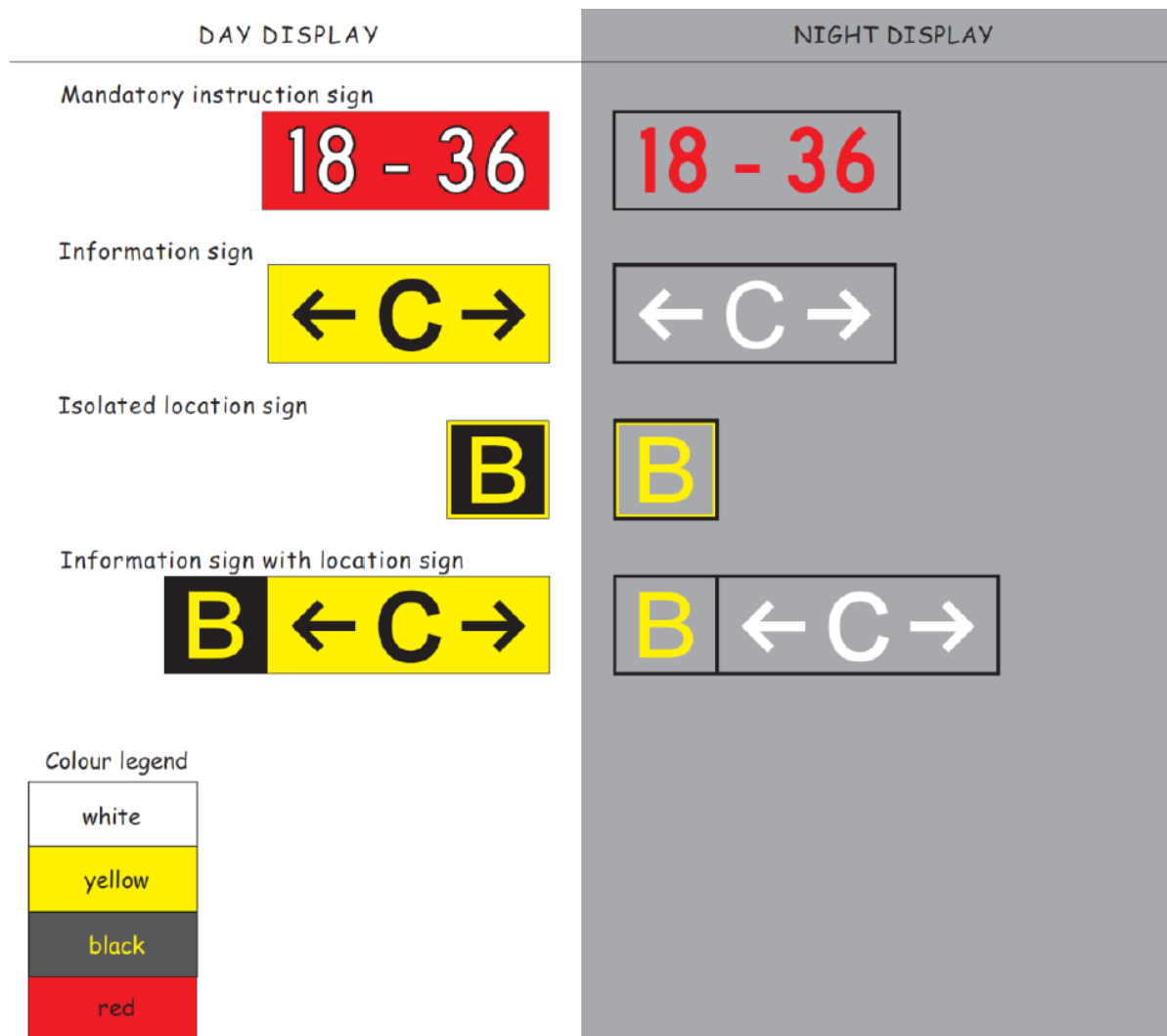
Above Sign Display Diagram from TP312 5th Edition.

Important Note:

At the North Bay Jack Garland Airport a "Location" sign and a "Mandatory" sign are often collocated together on the same sign face. In this case this sign face is providing an operator with two 'parts' of information – Where the operator is currently located, and the mandatory hold short position for the upcoming runway.

Above: An example of a 'Location' Sign in conjunction with a 'Mandatory' Sign.

9.1 Mandatory Signs = STOP

These signs are red with white lettering, and provide mandatory instructions, such as 'Hold Short' or a Stop Sign.

"Runway Designator" These signs are red, indicating the mandatory instruction to "Hold Short". The sign also indicates the runway designation of the upcoming runway.

Above: An example of a standalone 'Mandatory' Sign.

"Road Holding Position" These signs are red, indicating the mandatory instruction to "hold short". The sign also indicates the contact information to obtain clearance to proceed onto the runway designation of the upcoming runway.
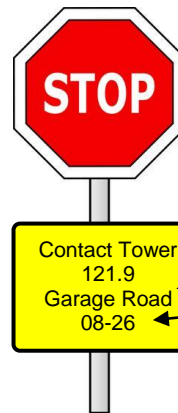
FSS Instructions

Current Road Name

Crossing Runway Designation

IMPORTANT NOTE:

While 'Road Holding Position Signs' are used at the intersection of service road and a runway, these signs are also placed at specific traffic flow locations.

In this case the FSS instructions will be replaced with local traffic information, such as, but not limited to, "Watch for Helicopter Traffic". These should be treated as any other "STOP Sign" on a road.

"White on red – stop ahead"

9.2   Location Signs = Current Location

These signs are black with yellow lettering, and identify the name of the maneuvering surface you are currently on.

Location Signs, like street signs, identify the names of the maneuvering area/surface you are currently on. These signs can either be mounted independently, as a standalone sign, however they are commonly found with Mandatory Signs at the intersection of a Taxiway and a Runway.

Above: An example of a standalone 'Location' Sign.

Above: An example of a 'Location' Sign in conjunction with a 'Mandatory' Sign. This type of sign is often found at the North Bay Jack Garland Airport.

"Yellow on black –

tells where you're at"

9.3 Information Signs = What is Ahead

These signs are yellow with black lettering, and typically have an arrow to provide you with information about what areas are nearby.

Information Signs normally have an arrow indicating the direction of travel to exits, aprons, terminal buildings, or other facilities named on the sign. These signs can either be standalone, or grouped with other signs, including Location Signs and Mandatory Signs.

"Black on yellow – tell a fellow"

9.4 Overview of Signs and Markings Used Together
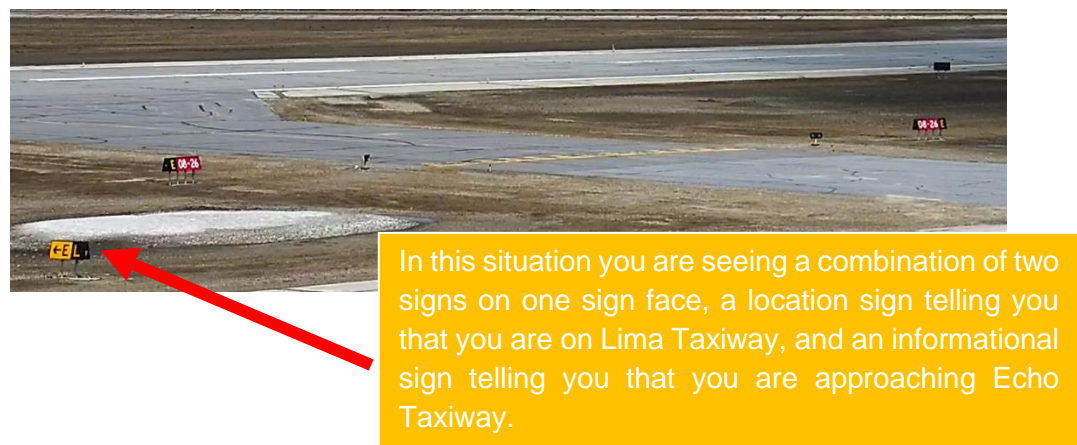
Remember that taxiways are referred by using the phonetic alphabet so that taxiway "A" is spoken of as "Taxiway Alpha"; Taxiway "B" is "Taxiway Bravo", etc.

10.0 RADIO TELEPHONE AND COMMUNICATION PROCEDURES

10.1 Radio Telephone and Voice Techniques

Hold background-noise-cancelling microphones as close to the lips as possible.

Hold most other microphones approximately 6.5 cm (2-3 in.) in front of the mouth.

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.

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

Use standard procedure words and phrases and standard airport terminology.

Blind Spots: 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 on the Airport site plan in the Local Airport Traffic Directives (Section 10).

Always:

1) **Call Sign** - Communicate/use the proper and complete call sign of the vehicle you are operating.

2) **Permission** - Obtain permission from FSS before entering any maneuvering area such as a taxiway, a runway, the runway strip or a service road and within 60 m (200 ft.) of the side of a runway if you're already operating airside. Failure to do so will result in an incursion and the suspension of your AVOP.

3) **Monitor** - Monitor the radio, at all times, when in the maneuvering area. No vehicle operator may leave a vehicle radio unattended while in the maneuvering area except with the specific permission of the Flight Service Specialist.

4) **Report Off** - Advise Flight Service Station when your vehicle has exited the maneuvering area and give your location in a short radio call.

   a. E.g. North Bay Radio, Staff 47 is off all maneuvering areas on Apron 2.

   a) Report off all maneuvering areas only after you are completely clear i.e. after your vehicle is completely past the stop sign or double amber. Being past the hold-short line does not mean you are out of maneuvering areas – it only means you are out of the Runway Strip.

b) <u>Do not</u> report holding short of a runway until the vehicle is at least 60 m (200 ft.) away from the Runway edge (past the hold-short line) not while you are still in the process of leaving. Failure to do so, and making this announcement too early, means that you're still on a runway and have therefore caused a runway incursion. This will result in a suspension of your AVOP.

5) **Clarification** - Ensure that you fully understand all instructions given by a controller or Flight Service Specialist (FSS) before entering within a maneuvering area.

    a) Read back complete instructions to confirm everyone is on the same page.
    b) Use techniques such as 'Say Again' if you're unsure of the provided instructions.

NOTE: As a newly permitted airside operator at the North Bay Jack Garland Airport you are required to request and read back full routes/directions/instructions for a period of not less than two (2) years to ensure competency, familiarity, and to provide others the opportunity to correct any concerns as they develop.

6) **Visual Check** - In addition to any permission given by FSS to proceed into or within the maneuvering area, check visually to ensure that you will not interfere with any aircraft on or approaching the path you have been given permission to follow. If there looks like there is approaching aircraft – exit immediately and confirm with FSS before proceeding as not all areas are visible to the Tower.

Never:

a) Participate in superfluous communications/conversations. Restrict transmissions to authorized messages. No unnecessary signals are permitted, such as non-operational conversations between vehicles.

b) Use profane and/or offensive language on the radio frequency. Any person who violates the regulations relative to unauthorized communications or profane language is liable, upon summary conviction, to a penalty not exceeding $1,000 and costs, or to imprisonment for a term not exceeding six months.

c) Transmits, or causes to be transmitted, a false or fraudulent distress signal, call, or message, or who, without lawful excuse, interferes with or obstructs any radio-communication, is guilty of an offence. If liable, on summary conviction, you could receive a penalty up to $25,000, or to imprisonment for a term not exceeding 12 months, or to both fine and imprisonment.

d) Share correspondence or information learned from listening to a radio transmission or divulge contents except through authorized channels, in order to ensure the privacy / secrecy of the communication system.

10.2 ICAO Phonetic Alphabet and Pronunciation of Numbers

When communicating on any frequency the operator must always use the ICAO Phonetic Alphabet for clarity in radiotelephone communications. Although this information was covered as part of your Radio Operator Certificate training, as a reminder the phonetics are:

Letter	Word	Pronounced as
A	ALFA	**AL** FAH
B	BRAVO	**BRAH** VOH
C	CHARLIE	**CHAR** LEE or **SHAR** LEE
D	DELTA	**DELL** TAH
E	ECHO	**ECK** OH
F	FOXTROT	**FOKS** TROT
G	GOLF	GOLF
H	HOTEL	HOH **TELL**
I	INDIA	**IN** DEE AH
J	JULIET	**JEW** LEE **ETT**
K	KILO	**KEY** LOH
L	LIMA	**LEE** MAH
M	MIKE	MIKE
N	NOVEMBER	NO **VEM** BER
O	OSCAR	**OSS** CAH
P	PAPA	PAH **PAH**
Q	QUEBEC	KEH **BECK**
R	ROMEO	**ROW** ME OH
S	SIERRA	SEE **AIR** AH
T	TANGO	**TANG** GO
U	UNIFORM	**YOU** NEE FORM or **OO** NEE FORM
V	VICTOR	**VIK** TAH
W	WHISKEY	**WISS** KEY
X	X-RAY	**ECKS** RAY
Y	YANKEE	**YANG** KEY
Z	ZULU	**ZOO** LOO

Numbers are pronounced as follows:

Number	Pronounced as	Number	Pronounced as
0	**ZEE-RO**	7	**SEV** EN
1	WUN	8	AIT
2	TOO	9	**NIN** ER
3	TREE	Decimal	**DAY**-SEE-MAL
4	**FOW** ER	Hundred	**HUN**-DRED
5	FIFE	Thousand	**TOU**-SAND
6	SIX		

Note: Stress the syllables printed in BOLD letters. For example, give the two syllables in ZE-RO equal emphasis, but give the first syllable for FOW-ER primary emphasis.

Transmit all numbers, except whole thousands, by pronouncing each digit separately. Transmit whole thousands by pronouncing each digit in the number of thousands followed by the word "thousand".

Examples:

| Number	Spoken as
10	ONE ZERO
75	SEVEN FIVE
100	ONE ZERO ZERO
583	FIVE EIGHT THREE
12,000	ONE TWO THOUSAND
38,143	THREE EIGHT ONE FOUR THREE
118.1	ONE ONE EIGHT DECIMAL ONE
465.2125	FOUR SIX FIVE DECIMAL TWO ONE TWO FIVE

10.3 Standard Procedures and Words

While it is not practical to lay down a precise phraseology for all radiotelephone procedures, the following words and phrases should be used where applicable.

Do not use words and phrases such as "OK", "REPEAT", "HOW IS THAT", "10-4", "OVER AND OUT", or other slang expressions.

Word	Meaning
ACKNOWLEDGE	Let me know you have received the message
AFFIRMATIVE	Yes
APPROVED	Permission granted
BREAK	Separation between portions of the message
BREAK BREAK	Separation between messages for two different vehicles/aircraft
CHECK	Examine a system or procedure (e.g.: check the runway lights)
CONFIRM	I request verification of: (clearance, instruction, action, information)
CONTACT	Establish communication with
CORRECT	True/accurate
CORRECTION	An error was made in transmission, the correction will follow
DISREGARD	Ignore
EXPEDITE	Follow instructions expeditiously, specifically and safely
HOW DO YOU READ	Can you hear my transmission clearly
I DO NOT UNDERSTAND	I do not understand, please rephrase your last transmission
I SAY AGAIN	I repeat for clarity or emphasis
IMMEDIATELY	Immediate action is required for safety reasons
MONITOR	Listen to (frequency)
NEGATIVE	No/permission not granted/not correct/not capable
NO DELAY	Follow instructions expeditiously, specifically and safely
OVER	End of transmission, require response
READ BACK	Repeat all, or specified part of message back
ROGER	I have received your transmission (generally used by ATS)
SAY AGAIN	Repeat all, or specified part of last transmission
SPEAK SLOWER	Reduce rate of speech
STAND BY	Wait and monitor frequency, caller will re-establish contact
UNABLE	Cannot comply with instruction/clearance/request
WILCO	I understand the message and will comply
WITHOUT DELAY	Follow instructions expeditiously, specifically and safely (used primarily by FSS)

10.4 Call-up Procedures
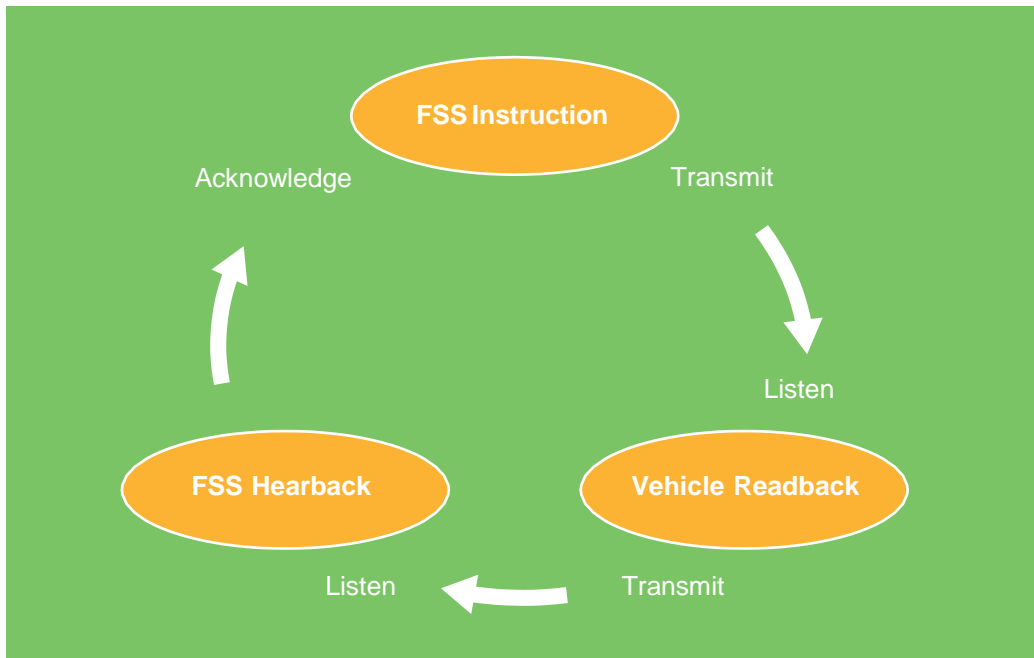
A "call-up" is a procedure used to establish two-way communication between an airport vehicle and Flight Service Station. Before making a "call-up", listen out to avoid cutting into a transmission from other users. Proceed only when the frequency is not being used by others.

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:

Driver	**North Bay Radio, Staff Four-Zero**
FSS	**Staff Four-Zero, North Bay Radio**

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

It is possible that the staff at FSS may be completing concurrent tasks, such as updating the ATIS or calling Toronto Center for aircraft clearances. Although they may have heard your call they may not be able to immediately respond.

10.5 Initial Request

After your call-up you will make your initial request; inform FSS of who you are (using your full call sign), where you are, and what your intent is. This will give them a better idea as how to proceed with your request.

Please note that, as per the government issued ROC-A Study Manual, "This is Staff 40" may be shortened to "Staff 40" after the initial call. However, with our local FSS they would prefer removing "This is" completely. It is not incorrect either way; however, you may get a NAV specialist asking you to refrain from saying "This is."

Example:

Driver	**North Bay Radio, Staff Four-Zero on Apron 2, requesting to proceed via Hotel onto Runway 08-26, crossing Runway 18-36.**
FSS	**Staff Four-Zero, roger, proceed via Hotel, onto Runway 08-26, crossing Runway 18-36 until further advised.**
Driver	**North Bay Radio, Staff Four-Zero proceeding via Hotel, onto Runway 08-26, crossing Runway 18-36 until further advised.**

<u>Note</u> that the Runway should be read "Runway Zero-Eight / Two-Six" and "Runway One-Eight / Three-Six", <u>not</u> "Runway Eighteen/Thirty-Six".

10.6 End of Transmission

To end any two-way communication, you may say the name of the vehicle call sign, i.e. Staff 47, or Red 10, or Blower 123; however, you have to use full read back for the first <u>two years</u> of having your AVOP.

Example:

Driver	**North Bay Radio, Staff Four-Zero requesting to proceed onto Golf.**
FSS	**Staff Four-Zero, roger, proceed onto Golf.**
Driver	**North Bay Air Radio, Staff Four-Zero, proceeding onto Golf.**
Driver	**If you have had an AVOP for <u>over two years</u> you can sign off using; "Staff Four-Zero"**

10.7 Following Acknowledged Route – Failure to Follow Route

After you have requested/acknowledged a route with local air traffic or FSS you must follow the requested route and not deviate from it.

For example if you ask for the following route you cannot deviate from it and follow Hotel directly onto Runway 08-26, bypassing Lima. If you bypass Lima you may come into contact with an aircraft taxiing onto Hotel as the Tower was expecting you to go West on Lima and not still be on Hotel.

Driver	**North Bay Radio, Staff Four-Zero on Apron 2, requesting to proceed via Hotel, Lima West onto Runway 08-26, crossing Runway 18-36.**
FSS	**Staff Four-Zero, Roger, proceed via Hotel, Lima West, onto Runway 08-26, crossing Runway 18-36 until further advised.**
Driver	**North Bay Air Traffic, Staff Four-Zero proceeding via Hotel, Lima West, onto Runway 08-26, crossing Runway 18-36 until further advised.**

10.8 Gv Standard Phraseologies

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

10.8.1   Stand By

"Stand by" is generally used when time is needed between transmissions. This may be to verify or gather information, or because there is another task being performed. "Stand by" means wait, the individual that initiated the standby will re-establish contact when they are ready to do so.

Driver	**North Bay Radio, Staff Four-Zero**
FSS	**Staff Four-Zero, stand by.**
FSS	**Staff Four-Zero, North Bay Radio, say your request.**

10.8.2   Report Your Position

FSS may ask you to report your position. Be sure to be as precise as possible in your response. Use runway numbers, taxiway letters, etc.

> If the frequency is busy, FSS will ensure the highest priority calls are made first. If you have contacted FSS and they do not respond immediately, wait; they may be attending to a higher-priority task. FSS personnel may be doing other tasks that do not require the use of the frequency, but are equally important. Radio silence does not mean that FSS personnel are not occupied.

FSS	**Red One-Zero, report your position.**
Driver	**North Bay Radio, Red One-Zero currently on Apron 2.**

10.8.3   Proceed "Via"

Every route that is given to you will be specified following the words "proceed via."

10.8.4   Proceed "Onto"

The word "onto" will always be provided as a function of the work area requested. If you are plowing a runway, FSS will use "onto Runway 08-26, crossing Runway 18-36" because you can keep plowing and crossing until further advised.

10.8.5   "Turn on" vs "Turns on"

If you are plowing snow and FSS uses the term "You may proceed with **a "turn on"** vs **"turns on"** it means you are only given permission to make one turn onto another runway, not multiple turns.

"Turns on" is associated with the instruction to "proceed until further advised", allowing for multiple turns to be completed as needed or until advised otherwise.

Note that the route you are given may not be exactly as you anticipate.

Driver	**North Bay Radio, Red One Zero on Apron 2 request to proceed via Hotel, Lima West to Apron 4.** (The driver is anticipating instructions via Hotel, Lima West, to Apron 4, which is often the normal route).
FSS	**Red One Zero, negative, proceed via Hotel, Runway 08, Juliet onto Apron 4.**
Driver	**North Bay Radio, Red One Zero, proceeding via Hotel, Runway 08, Juliet onto Apron 4.**

> 🔍 **Be mindful that FSS may have to redirect you on a different route than usual due to different factors including: traffic, construction, obstacles, etc.**
>
> **Listen carefully so you don't over-anticipate the instructions.**

10.8.6   Hold Short and Read Back

When you are told to "Hold Short," you are required to read back the instruction. When this occurs, read back the complete instruction given.

FSS: (vehicle ident) Hold Short of (runway, on taxiway ident).
Driver: (vehicle ident) ROGER, Holding Short of (runway/taxiway ident).

🎧 **FSS**	**Staff Four-Two proceed onto Golf, report holding short of Runway Three-Six.**
🚗 **Driver**	**North Bay Radio, Staff Four-Two, Roger, will proceed onto Golf and report holding short.** (Then proceed to drive to hold-short position and make a second call)
🚗 **Driver**	**North Bay Radio, Staff Four-Two, holding short of Runway Three-Six on Golf.**

> ⚠️ **An instruction to HOLD SHORT of a runway must be read back.**

> ⚠️ **Your speed should change according to weather conditions, as it could be slippery at hold short lines.**

10.8.7 Taxiway Permissions – Special Memorandum

The North Bay Jack Garland Airport Corporation and the NAV Canada Flight Service Station has a Memorandum of Understanding in place that states vehicles which have been given access to Runway 18-36 have the authority to exit the runway onto either Apron I (via Foxtrot Taxiway) or Apron II (via Golf Taxiway) at their discretion and without the need to contact FSS for permission to proceed onto these surfaces.

However, when a vehicle is operating on Runway 08-26 or Lima Taxiway the operator must ask for permission to proceed onto Hotel Taxiway or Lima Taxiway.

This is done to coordinate potential situations where FSS has provided clearance for an aircraft to proceed to/from Runway 08 and a vehicle using Hotel Taxiway at the same time.

Therefore, when you would like to use Hotel Taxiway, from either Runway 08-26 or Lima Taxiway to Apron II you must request permission to do so.

10.8.8   Crossing a Runway

If you need to cross a runway, you must get specific permission and instructions from FSS first. FSS will give you the instruction to either "cross" or "hold short" of each runway.

FSS: (vehicle ident) CROSS RUNWAY (runway number).

FSS	**Blower One-Two-Three, cross Runway 08-26.**
Driver	**North Bay Radio, Blower One-Two-Three, Roger, proceeding Runway 18-36, cross Runway 08-26**

> ⚠ **Before crossing a runway, you must be given clearance from FSS.**

10.8.9   Report Off vs Holding Short

You may be required to notify FSS when you are no longer on a runway or taxiway. FSS may instruct you to either "report off", or "advise off", or "report holding short of."

When off/past of the runway, contact FSS and advise that you have vacated the runway and are now 'holding short of' the specified runway and your location. Do NOT report "off" unless you are actually off ALL maneuvering areas.

FSS	**Staff Four-Zero, advise holding short of Runway 08-26 on Runway 18.**
Driver	**North Bay Radio, Staff Four-Zero, Roger, proceeding Runway 18-36, cross Runway 08-26, Will report holding short.** Proceed to drive until safely past the hold-short line of Runway 08-26 on Runway 18 and call back…
Driver	**North Bay Radio, Staff Four-Zero now holding short of Runway 08-26 on Runway 18.**
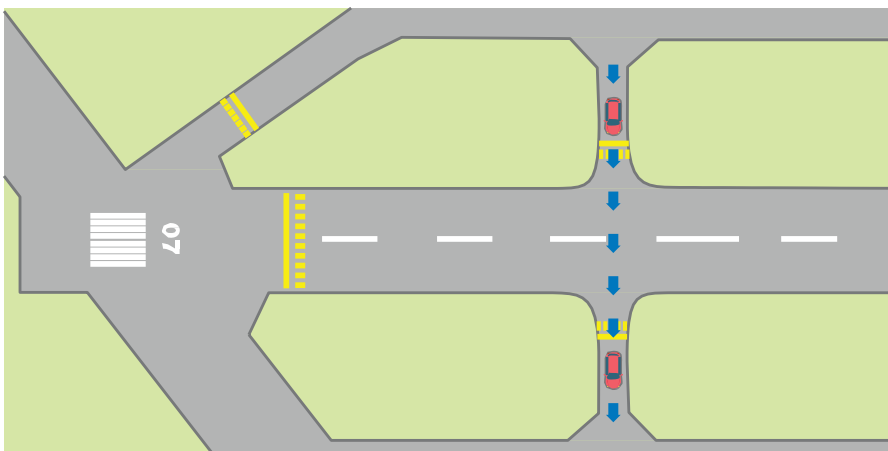
> ⚠️ **When asked to hold-short do not "report off" or report "off the maneuvering areas" as you're likely still on a taxiway or different runway; however, you must report "holding short" of the surface as per FSS.**

10.8.10 Without Delay

You may be asked by FSS to safely increase your speed while on the airfield. This must be done with caution and within reason. The phrases "without delay" or "expedite" are used for this instruction; however, this is not common.

FSS: EXIT/PROCEED/CROSS (runway, taxiway) WITHOUT DELAY

FSS	**Pump Two, cross Runway 08-26 without delay and report Holding Short on Runway 36.**
Driver	**North Bay Radio, Pump Two, Roger, will cross Runway 08-26 without delay and will report Holding Short once on Runway 36.**
FSS	**Roger**

> ⚠️ **If unable to comply with the promptness of the instruction do not proceed and advise FSS immediately unless the instruction is to vacate a runway!**

10.8.11 Negative

FSS may at times refuse or delay your request. FSS may inform you as to why and, if they are able, they will give you an alternative option or further instructions as shown below;

After the initial call-up:

Driver	**North Bay Radio, Truck Eight-Zero, plus one, request to cross Runway 18.**
FSS	**Truck Eight-Zero, plus one, negative, hold-short of Runway 18, landing traffic due in three minutes.**
Driver	**North Bay Radio, Truck Eight-Zero, plus one, Roger, holding current position, short of Runway 18.**

10.8.12 Radio Check Test Procedures

On-the-air radio tests, when necessary, should be short (not more than 10 seconds). Do not interfere with other communications.

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

1   Unreadable

2   Readable now and then

3   Readable but with difficulty

4   Readable

5   Perfectly readable

Example of Radio Check Communications:

Driver	**North Bay Radio, Truck Eight-Zero, radio check?**
FSS	**Truck Eight-Zero, North Bay Radio. I read you three.**
Driver	**North Bay Radio, Truck Eight-Zero, Roger.**

10.8.13 Repetitive Operations

During times of repetitive ground traffic operations, FSS may instruct you to operate on a single runway and through a runway intersection. Multiple vehicles may be authorized to operate on different runways, but each vehicle is limited to a single runway at a time.

FSS: (vehicle ident) PROCEED onto (runway ident), CROSS (runway ident) UNTIL FURTHER ADVISED.

> **FSS**
>
> **Blower One-Two-Zero, proceed onto Runway 08-26, crossing Runway 18-36 until further advised.**

10.8.14 Multiple Vehicles / 'Plus #' Escorting

The lead vehicle in a group of vehicles is the one contacting FSS. They must inform FSS of the number of vehicles (e.g. "plus three"), the operation/task being performed.

The vehicle leading the group is <u>the only one who will be in contact with FSS</u>. They inform FSS when a vehicle needs to leave the group, join the group etc.

If the lead vehicle needs to leave, it is their job to identify a new vehicle contact – this new contact should establish communication with FSS.

> **Have a briefing for all drivers before moving onto the airfield. Set up communications between all drivers, have a plan before starting, and set up a response route for vehicles that might join the group.**

Driver	**North Bay Radio, Truck Eight-Zero plus three**
FSS	**Truck Eight-Zero plus three, North Bay Radio.**
Driver	**North Bay Radio, Truck Eight-Zero, plus three, request to plow Runway 08-26 full length.**
FSS	**Truck Eight-Zero plus three, proceed onto Runway 08-26, crossing Runway 18-36 until further advised.**
Driver	**North Bay Radio, Truck Eight-Zero, plus three, requesting to proceed via Hotel to Apron 2. Blower One-Two-Two is now lead vehicle.**
FSS	**Truck Eight-Zero, Roger, proceed via Hotel to Apron 2.**
FSS	**Blower One-Two-Two, plus two. You are now the contact vehicle on Ruwnay 08-26.**
Driver	**North Bay Radio, Blower One-Two-Two, plus two, roger.**

10.8.15 Broken Down Vehicle

If your vehicle breaks down, inform FSS of your exact location immediately. They will send another vehicle to assist.

Driver: (station ident) (vehicle ident) BROKE DOWN (location).

Driver	**North Bay Radio, Staff Two-Seven, broken down on Runway 26, East of Echo.**

> **Best Practice – If possible pull to the side of the maneuvering surface and advise how long it will take to repair or remove the vehicle if you know. You should then immediately initiate a recovery plan to ensure continued airport operations.**

10.8.16 Towing an Aircraft

Before towing an aircraft on the field or on the maneuvering area, you must first contact FSS for instruction. You must also inform them of the aircraft type (primarily at smaller airports).

Driver: (station ident) (vehicle ident) REQUEST TOW (location).

Driver	**North Bay Radio, Tug Two-Nine, currently on Apron 5, requesting to tow Dash Eight to Apron 3 Maint. Hangar.**
FSS	**Tug Two-Nine, Roger, proceed via Lima East onto Apron 3.**
Driver	**North Bay Radio, Tug Two-Nine, proceeding via Lima East onto Apron 3.**

Best Practice – Always state aircraft type when towing an aircraft.

10.8.17 Wildlife

It is common for ground vehicle operators to spot wildlife on the airfield. It is important to report these sightings as soon as possible to FSS or to airside operations. Birds or animals can be a hazard to aircraft, causing major damage or potential accidents. **Please make note of the Tower, Security and Operations contact numbers so they are handy at all times for such observations.**

10.8.18 Foreign Object Debris (FOD)

FOD is a substance, debris, or article alien to a vehicle or system which could potentially cause damage. Ingesting FOD into a jet engine or a propeller hit can cause significant damage and pose a major safety risk.

> ⚠️ **Foreign object debris (FOD) at airports can cause damage that costs airlines, airports, and airport tenants millions of dollars every year.**

> 🔍 **If you see it, pick it up.**

FSS	**Staff Four-Zero, North Bay Radio.**
Driver	**North Bay Radio, Staff Four-Zero.**
FSS	**Staff Four-Zero, FOD reported at intersection of Juliet and Runway 08.**
Driver	**North Bay Radio, Staff Four-Zero, roger. Request to proceed via Hotel, Lima West, Juliet onto Runway 08 to collect FOD.**
FSS	**Staff Four-Zero, roger, proceed via Hotel, Lima West, Juliet onto Runway 08. Hold short of Runway 18-36.**
Driver	**North Bay Radio, Staff Four-Zero, roger, proceeding via Hotel, Lima West, Juliet onto Runway 08, holding short of Runway 18-36**

10.8.19 Standard After Hours Radio Announcement – When FSS is not operational ('After Hour Procedures')

1) Remember: there are three aerodromes in North Bay so air traffic may be landing at another aerodrome and still hear and answer your calls as they are in the same zone.

2) After Hours you must ALWAYS use full Lima, never East vs West and ALWAYS say "Runway ## - ##" with both ends of the Runway noted; NEVER use a partial Runway.

3) Prior to proceeding onto the maneuvering areas:

Example:

Driver	**North Bay Air Traffic, this is Staff Four-Seven at the North Bay Airport. I am currently on Apron 2 and will be proceeding via Hotel, Lima, cross Runway 18-36 onto Apron 3. Any conflicting traffic, please report on 118.3 at the North Bay Airport.**

4) If you <u>do not</u> receive any radio transmission from other conflicting traffic you may proceed following the broadcast route.

If you receive a radio transmission from an aircraft, acknowledge the transmission, and respond accordingly.

Example: After announcing your intensions to proceed across Runway 18-36 you get the following transmission:

✈ Air Traffic	**Staff Four-Seven, Jazz 7779**
🚗 Driver	**Jazz 779, Staff Four-Seven, go ahead.**
✈ Air Traffic	**Staff Four-Seven, Jazz 7779, we are ten miles out, planning on landing on Runway 36.**
🚗 Driver	**Jazz 779, Staff Four-Seven, roger, holding short of Runway 18-36 on Lima.**
✈ Air Traffic	**Staff Four-Seven, Jazz 7779, Roger.**

Note: Wait until the aircraft is clear of the runway then rebroadcast your intentions before proceeding on route.

5) Always broadcast your intentions before proceeding to a new location and listen for conflicting traffic.

6) When leaving the maneuvering area, always announce that you are off the maneuvering areas.

🚗 Driver	**North Bay Air Traffic, Staff Four-Seven is off all maneuvering areas on Apron 3.**

NOTE: <u>Always</u> use full lengths of runways and taxiways <u>after hours</u>.

✓ For example, do not use Lima West/East, use just "Lima".

✓ Do not use partial runways, use Runway 08/26 or 18-36 as someone may get confused and not realize you are on the same surface.

✓ Separation of surfaces is only a local directive to be used when FSS is operational. (Example Lima West vs Lima East or Runway 36 instead of Runway 18-36 can only be used if FSS is present and allows it)

** **Note**: To turn on the lights after hours use the radio transmission switch and click it three (3) or five (5) times for different brightness. You must be on the proper After-Hours frequency, 118.3 or the lights will not turn on. The lights will automatically shut-off after approximately 10-15 minutes.

> ⚠️ **ANNOUNCING ENTIRE RUNWAY SURFACES IN USE – AFTER HOURS**
>
> While the Flight Service Station is operational they can provide instruction to use or cross specific portions of a maneuvering surface (for example 'Lima East', or 'Cross 36') while separating you from traffic on nearby surfaces.
>
> This is intended to provide you the necessary access airside, while continuing to provide other operators (air and ground) with the space to complete their work. For example you can cross Runway 36 while FSS instructs a helicopter to land on Rwy 18.
>
> When operating beyond the Flight Service Station hours of operation you are talking directly to aircraft operators who will not understand this concept, or realize that you're intending to use the same or reciprocal surface. Therefore you must announce the entire surface name to ensure there is no conflict.
>
> Therefore when crossing the southern portion of Runway 36 after hours you would announce 'Crossing Runway 18/36'. When operating on Lima East you would announce 'Lima' (a pilot does not know where the separation of East and West is as this is a local ground operator differentiation).
>
> By announcing the entire surface you avoid any confusion or misunderstanding when you, as the ground operator, want to cross Runway 36 but an aircraft operator is landing on Runway 18. Without announcing the complete surface name the pilot, yourself, or another ground operator, may mistake that the surface they intend to use is free of obstructions or vehicles.
>
> This can lead to an unsafe situation, and unintended incursion, or significant harm if left unaddressed.
>
> If both operators hear that another is using the same surface they can take the appropriate actions to maintain safe operations and avoid the hazard.

10.9 Communication by Light Signals (Radio Failure)

Should you, an aircraft or the Flight Service Station be unable to communicate using a radio (such as an electronic failure), position yourself facing the tower and look for the following;

- Flashing of the runway edge lights
- Having an aircraft conduct a low and over (this indicates they are looping around to land and do not have radio communication)
  Note: If this happens you must communicate your situation, leave the runway immediately and report holding short.

If your own radio is not able to communicate, call the Tower, Garage Operations or Security using a cell phone to be escorted from the maneuvering area.

If you do not have a cell phone, position yourself facing the Tower and flash your headlights on and off until someone comes to escort you.

You can also turn the runway lights on and off if the Tower is not in service to get someone's attention.

10.10 Working Outside of a Vehicle / 'On-Foot'

At times it may be necessary for an individual to work inside of the Runway Safety Area (aka "Runway Strip") during flight operations; however, a vehicle is not permitted in this space.

When this occurs the individual will be required to park the vehicle outside of the runway safety area, where it is safe to do so and won't interfere with other operations, and then coordinate with Flight Service Specialists to enter the runway safety area on foot.

Airfield maintenance and other authorized ground personnel are required to:

(a) Have available to them, a portable radio capable of two-way communications, capable of being set to the ground traffic service (FSS) frequency 121.9 MHz or air traffic services 118.3 MHz;

(b) Carry this radio whenever they are on the maneuvering area and it becomes necessary for them to work outside of the vehicle; or,

(c) Have an external speaker on the vehicle and be able to respond in an acceptable time frame;

(d) Continuously monitor the appropriate frequency.

WORKING IN THE RUNWAY PROTECTED AREA ON FOOT

People and their hand tools can be within the 60m (200ft) runway safety area when the runway is in operation as long as:

1) All their vehicles, trailers, etc. are outside of the protected area; and,
2) FSS is advised that people will be working in the runway safety area (not on the operational runway).
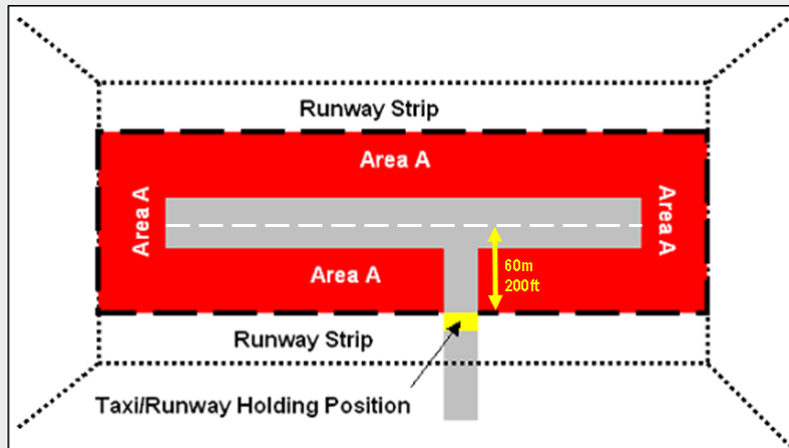
Advisory Circular 302-003: Authorized persons with light equipment (such as hand tools) are permitted in Area A for the purpose of in-flight inspection of navigational aids or airport operational maintenance.

(This must be coordinated and approved before work is to begin.)

10.11 Aircraft Rescue and Fire Fighting

When an emergency situation takes place on the airfield, FSS will give emergency crews specific instructions and routing in order to address it in the safest manner possible.

During emergency situations, ground vehicles responding must always ensure communication with FSS. FSS will provide emergency crews with specific instructions and follow emergency procedures established by both parties.

As a rule, Aircraft Rescue and Fire Fighting (ARFF) responding to an emergency situation have priority over other vehicles.

10.12 Understanding Aircraft Positioning While Airborne

To improve your situational awareness it is important that you understand where other operators are and what their intentions are. This includes aircraft both on the ground and in the air.

As a vehicle operator you will be able to easily recognize aircraft that are taxiing, positioning to use a runway, or entering/exiting an apron. Not only are these actions that you too would do but you can also see them happen.

Aircraft that aren't visible, because they are airborne or at the other end of the airport, are equally important to recognize too.

An aircraft circuit is comprised of four components, known as 'Legs'.

     1 – **Downwind**   – as the aircraft join the circuit and prepare for landing

     2 – **Base**   – as an aircraft turns perpendicular to the runway, further descending

     3 – **Final**   – as the aircraft finishes descending, eventually landing

     4 – **Departure**   – as the aircraft takes –off, either to repeat the circuit or depart on route to another destination.
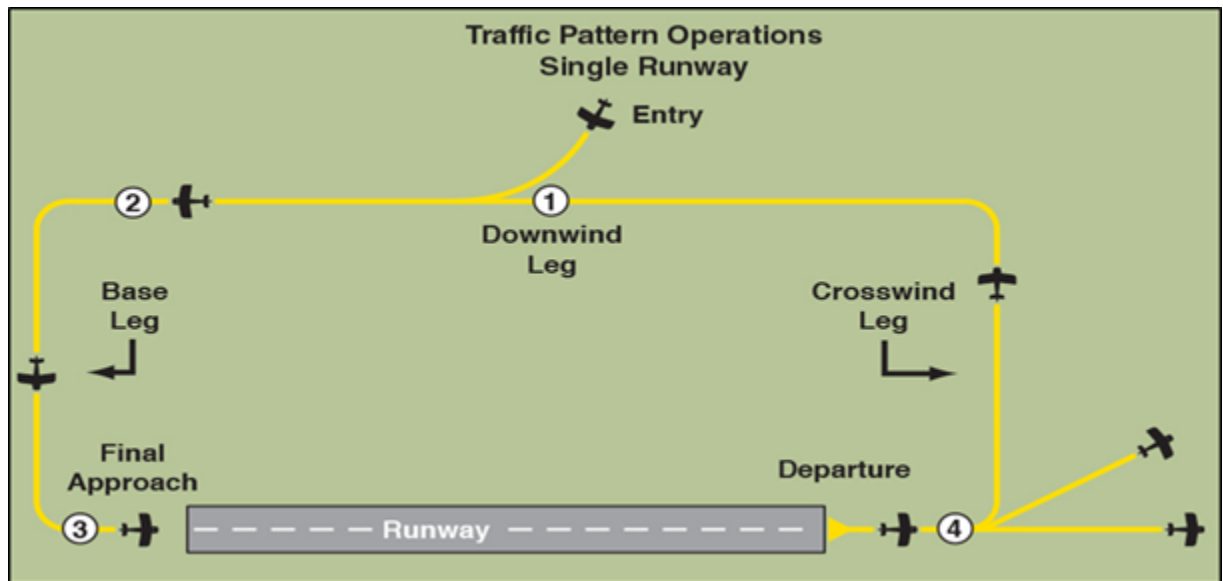
This information can help you in understanding what runways are being used currently, how many aircraft are in circuit, and where they are. Understanding this, and actively listening to the radio for updates, can assist in preparing ground routings.

For example, if you want to drive from Apron V to the Glidepath Rd. while an aircraft is downwind you know that a) you will likely be told to hold short before using the runway, and b) you may be redirected on a different route than intended (Lima vs. Rwy 08/26).

11.0 ANNEX A – NORTH BAY AIRPORT APRON II SITE PLAN

LEGEND

A FENCING
B GATE
C AIRLINE TERMINAL BLDG
D PAINTED WHITE LINE
    LABELED AS "RESTRICTED AREA"

NOTE
- Gate 1 access is controlled
  by Airport Security.
- Entire airport property is fenced.
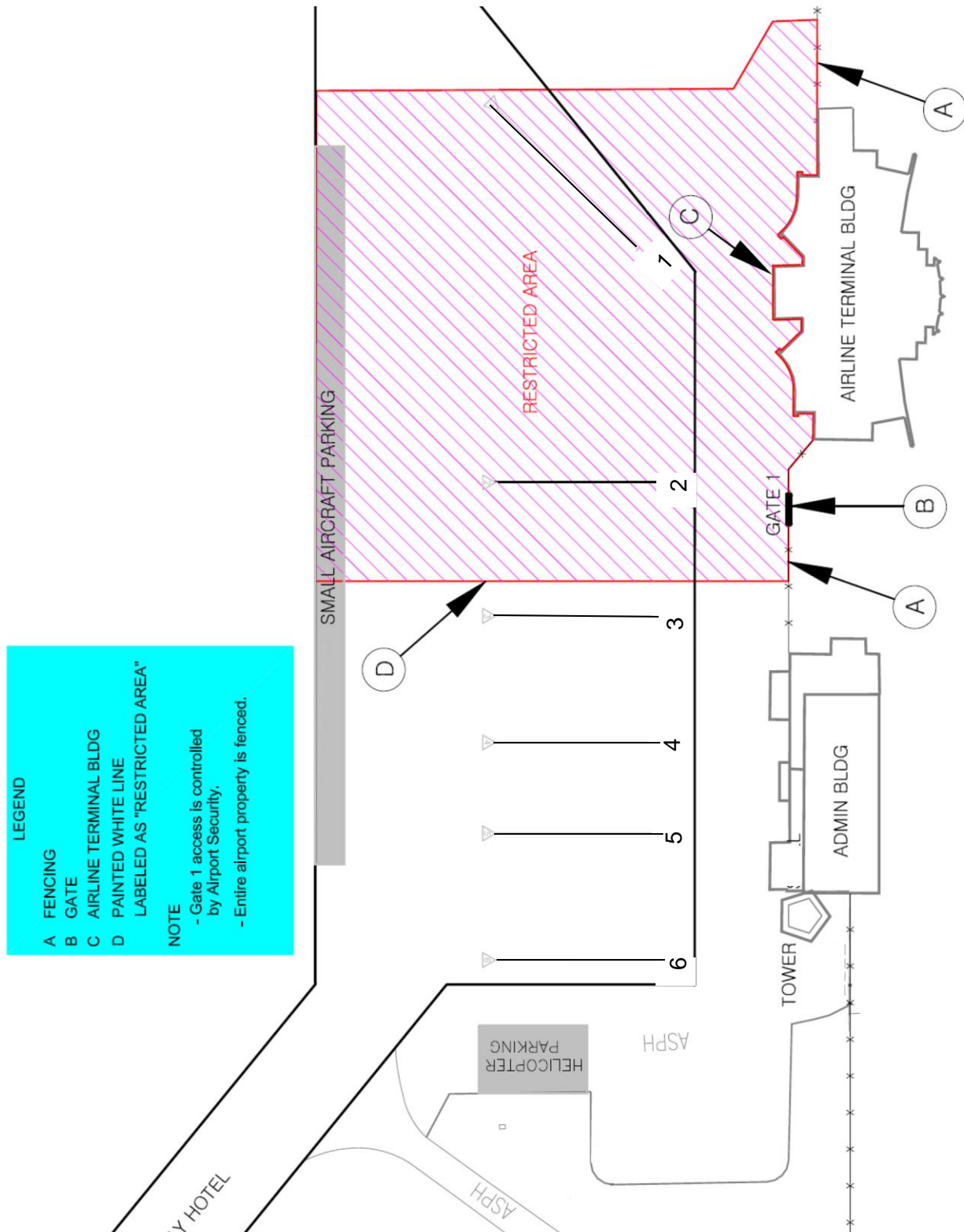
12.0   ANNEX B – NORTH BAY AIRPORT VEHICLE OPERATOR PERMIT PLAN

This page was intentionally left blank. Refer to the follow page.

LEGEND

GRID = 400m X 400m

△ City ▲ Fed
FIRE HYDRANT

AIRCRAFT ISOLATION AREA

BOMB DISPOSAL AREA

SECURITY/CRASH GATES

BAGGAGE SEARCH AREA

ILS CRITICAL AREA

FUEL FARMS

ACCESS CONTROL POINT

STAGING AREA

CARGO HOLDING AREA

INTERUPTABLE POWER UNIT (A5, C8)

CONTROL TOWER (B5)

PARKING AREA (A5, B5)

ROAD HOLD POSITIONS

FIELD ELECTRICAL CENTER (C8)

RESTRICTED AREA
(North Perimeter Road)

HIJACK

**AIRPORT VEHICLE OPERATION
PERMIT PLAN**

AIRCRAFT MANOEUVERING SURFACES

CLOSED MANOEUVERING SURFACES

APRON VEHICLE OPERATION PERMIT AREA

RESTRICTED NAVIGATION AREA

TENANTS RESTRICTED AREA

13.0   ANNEX C – EXAMPLE WRITTEN TEST QUESTIONS

1) 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) Maneuvering area

2) Which of the following most accurately describes the beginning of that portion of the runway usable for landing?

   (a) Taxiway
   (b) Apron
   (c) Threshold
   (d) Button

3) An airport at which an air traffic control unit is provided is called a:

   (a) Aerodrome
   (b) Controlled airport.
   (c) Flight Service Station
   (d) Uncontrolled airport

4) Local Airport Traffic Directives:

   (a) Apply at all Transport Canada airports.
   (b) Apply only to commercial vehicles.
   (c) Apply only at the airport where issued.
   (d) Apply only to government vehicles.

5) Who has authority for the issuing, suspension or cancellation of permission to operate a vehicle on the airside of North Bay Airport?

   (a) The Minister of Transport.
   (b) The Airport Manager.
   (c) The Officer in Charge of Security.
   (d) A Police Constable

6) Who is to ensure that employees are qualified to operate vehicles and equipment on the airside?

   (a) Airport Security
   (b) The Employer
   (c) The Airport Manager
   (d) Transport Canada

7) The person responsible for determining that his or her vehicle is operating satisfactorily and has the required safety equipment and markings is:

   (a) The owner of the vehicle.
   (b) The operator of the vehicle.
   (c) The police
   (d) The Airport Manager

8) If you encounter a condition on an aircraft movement surface that is likely to cause damage to an aircraft, you should immediately report it to:

   (a) The Airport Mechanic or Foreman.
   (b) Your immediate supervisor and the local Security Office.
   (c) All aircraft operators
   (d) The local security office

9) Who is responsible for reporting any vehicle malfunction or dangerous condition to the supervisor?

   (a) Any other driver.
   (b) The base supervisor.
   (c) The mechanic.
   (d) The vehicle operator.

10) Who is required to wear a Transport Canada or North Bay Airport Restricted Area Pass while in the restricted section of the airport?

   (a) All persons on the airside of an airport.
   (b) Every person who does not carry a valid boarding pass or a private pilot licence with a valid medical certificate.
   (c) Aircrew and passengers.
   (d) Security staff only.

11) How is a restricted area pass (or ERAP) carried while in the restricted area?

   (a) On the outside of the clothing, above the waist on the front of the body.
   (b) In your wallet.
   (c) In the vehicle glove compartment.
   (d) Not required to be carried.

12) Who is responsible for reporting a person found on the airside of an airport who is not wearing a restricted area pass?

   (a) The Security Officer.
   (b) The company chief representative.
   (c) Everyone who has a restricted area pass.
   (d) Any passenger.

13) Who is responsible for ensuring that all designated gates to the airside of the airport are closed and locked when not in immediate use?

      (a) Everyone.
      (b) Airport Security staff.
      (c) Airport Management staff.
      (d) Airline employees only.

14) 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 licensing authority.
      (b) The vehicle operator.
      (c) The vehicle operator's employer.
      (d) The security office.

15) All vehicles operated on the airport maneuvering areas, except those under escort, must be equipped with:

      (a) Headlamps and tail lamps and reflective tape on both sides.
      (b) A flashing beacon and radio on your own company frequency.
      (c) An approved rotating beacon lamp and radiotelephone on the appropriate radio frequency.
      (d) A reflective yellow material on the sides and striped black and yellow patches on the lower left and right corners of the vehicle.

16) All vehicles with a cab while operating without escort on the airport aprons must be equipped with which of the following lights or markings?

      (a) An approved amber flashing or rotating beacon, headlamps, parking and tail lamps.
      (b) Headlamps, tail lamps and reflective tape on both sides.
      (c) A two-way radio on the citizens band or company frequency.
      (d) None of the above.

17) All non-self-propelled equipment, such as air-stairs, trailers, baggage cart, etc. used on the airport aprons must be equipped with safety marking. Which of the following most accurately describes that marking?

      (a) Yellow reflective stripe along the sides, and black and yellow patches at the front and rear lower corners.
      (b) Headlamps, tail lamps and a horn.
      (c) Both 1 and 2 above.
      (d) Any reflective material that can be seen from 300 m at night.

18) Which of the following traffic has first priority, (right of way) over all other traffic?

  (a) Maintenance vehicles in the performance of their duties.
  (b) Emergency vehicles
  (c) Aircraft
  (d) The vehicle approaching from the right.

19) Which of the following examples most accurately describes the precaution which 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 Flight Services.
  (d) Stay away from this equipment at all times.

20) Smoking of any kind or open flame airside is:

  (a) Permitted.
  (b) Permitted in vehicles only.
  (c) Prohibited both inside and outside vehicles.
  (d) Permitted if no aircraft are within 100 m of the smoker.

21) It is permissible to operate a vehicle in front of or over 50' or 15 meters behind an aircraft with engines running when:

  (a) Not at any time.
  (b) The red, anti-collision beacon of the aircraft is turned off.
  (c) The marshal waves permission or the aircraft wheels are blocked (chocked).
  (d) You have waited three minutes and the pilot has not indicated any intention to move the aircraft.

22) When vehicles are parked in an airside approved parking space in the vicinity of the Terminal or Administration buildings or adjacent to heavy traffic areas, they should be:

  (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.

23) 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 but do not take pictures.
  (c) Conduct normal vehicle movements but do not stare.
  (d) There is no restriction on vehicle movement.

24) Vehicle operators must ensure that mud and gravel are not deposited on aircraft movement surfaces because:

    (a) This 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 in the air.
    (d) Dirty vehicles are not permitted on airport property.

25) If a vehicle operator notices foreign materials (tools, garbage, mud, gravel, solid objects) on an aircraft movement surface, the vehicle operator is required to:

    (a) Report the nature and location of the material to the police.
    (b) Stop and remove the material immediately if it is safe and you are able to.
    (c) Report the nature and location of the material to your supervisor and Airport Security.
    (d) No special requirements exist for vehicle operators.
    (e) Both B and C

26) If an aircraft were to crash on the airport, unauthorized vehicle operators are required to:

    (a) Wait until Crash Firefighting and Rescue is over before entering the area.
    (b) Proceed immediately to the scene and render assistance.
    (c) Stay away from the area unless authorized by your supervisor.
    (d) Remain clear of the area unless otherwise authorized by the Airport Manager or designate.

27) The colour of pavement markings which outline vehicle corridors and security lines is:

    (a) Green except in grassed areas.
    (b) Yellow.
    (c) White.
    (d) Red at intersections, white in other areas.

28) The colour 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.

29) 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 delineate lanes on a taxiway for vehicle movement.
    (d) To serve as a center-of-aircraft guideline to aid aircraft travelling on aprons.

30) Aircraft lead-in lines/t-lines are provided to:

      (a) Lead the aircraft onto the runway when landing.
      (b) Assist in the docking of an aircraft at a gate or into a parking position that is free of obstacles.
      (c) Indicate where aircraft are restricted on an apron.
      (d) Indicate the limits of vehicle corridors.

31) You are operating a vehicle and you need to pass behind an aircraft with engines running, what are some safety considerations:

      (a) Stop well clear of the aircraft and wait until the aircraft has been backed out or the marshal clears you to pass.
      (b) Pass behind the aircraft at the maximum distance possible, but not within 15 meters/50'.
      (c) Both A and B.
      (d) Turn your vehicle around and return to your starting point on the apron.

32) Vehicle Corridors are:

      (a) Required to be used at all times regardless of circumstances.
      (b) Not guaranteed safe routes and caution must always be exercised to avoid parked and moving aircraft.
      (c) Guaranteed safe routes for vehicles under all circumstances.
      (d) Suggested routes that you don't need to follow most of the time.

33) Vehicle operators must always exercise caution:

      (a) When runway, taxiway and apron markings are obscured due to faded paint, snow cover or any other reason.
      (b) When entering and leaving the active apron area.
      (c) When operating in front of or behind aircraft with engines running.
      (d) When any of the conditions indicated above are encountered.

34) When not in use, Apron Service Vehicles may be parked:

      (a) Anywhere on the apron where you see space is available.
      (b) In any apron area not used for the movement of aircraft.
      (c) Only in parking areas pre-approved by the Airport Manager.

35) Three documents must be carried at all times when operating a vehicle without escort on the maneuvering area of the Airport. Which of the following most accurately describes these documents?

      (a) Provincial Driver's License, AVOP, Airport Security Pass.
      (b) Restricted Area Pass (RAP), AVOP and a Restricted Operator Certificate-Aeronautical (ROC-A) or an ERAP which replaces the other three documents.
      (c) Security pass, parking permit, radio operators hand book.

36) At the Airport, the control tower is responsible for directing which of the following traffic?

      (a) Vehicles and pedestrians on aprons.
      (b) Aircraft, vehicles and pedestrians performing operational duties on maneuvering areas.
      (c) All vehicles, aircraft and pedestrians at the airport.
      (d) Aircraft on maneuvering areas but not vehicles.

37) When required to operate a vehicle in the maneuvering area of a controlled airport, the vehicle operator must first:

      (a) Notify the Airport Manager.
      (b) Consult his/her supervisor.
      (c) Contact FSS for permission if they are operational or clear it with local air traffic.
      (d) Contact Security for permission.

38) The instructions of FSS:

      (a) Apply to vehicles on runways but not taxiways or service roads.
      (b) Must be obeyed at all times.
      (c) Are a guide only for vehicle operator information.
      (d) Apply to aircraft only.

39) Standard procedures for a vehicle operator who has received instructions from a FSS is to:

      (a) Acknowledge all instructions as understood or request that the instructions be repeated. ("Say Again")
      (b) Proceed immediately according to instructions heard.
      (c) Always ask for a repeat of the instructions to ensure they are fully understood.
      (d) Do nothing if all instructions are not fully understood.

40) When instructed by FSS to proceed into the maneuvering 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 instructions from FSS.
      (b) Proceed as directed or do not enter the maneuvering 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.

41) When a vehicle is towing an aircraft on the maneuvering areas of an airport, the vehicle operator must:

      (a) Ensure that the towing vehicle is diesel powered only.
      (b) Maintain radio contact with FSS.
      (c) Refrain from further radio contact with the tower after towing commences.
      (d) Maintain radio contact with the pilot only.

42) When is it permissible to operate a vehicle on taxiways or runways without first receiving permission by radio from FSS?

    (a) When radio contact with FSS 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 part of a runway or taxiway is the most direct route to your destination.
    (d) When you have announced your intentions to local air traffic, confirmed that there is no conflicting traffic and FSS is not operational.

43) Which of the following should be included in a request to operate a vehicle in the maneuvering area?

    (a) Vehicle identification and location.
    (b) Requested destination and route within the maneuvering area.
    (c) Duration of time and purpose for being in the maneuvering area if helpful for coordinating traffic.
    (d) All of the above.

44) When told to "Hold-short" or when awaiting permission to cross a runway, what must the vehicle operator do?

    (a) Read back the Hold-short instructions.
    (b) Proceed to where FSS directed you to hold-short (at least 60 m from the nearest edge of the runway or behind the solid yellow lines painted on the taxiway)
    (c) Report holding-short at the new location.
    (d) Remain out of the maneuvering area that you were instructed to remain short of and do not proceed until FSS gives permission.
    (e) All of the above.

45) Which of the following illustrations most accurately illustrates how yellow hold lines are painted on a taxiway?

A.

Runway

- - - - - - - - - - - - - - - - -
_____
- - - - - - - - - - - - - - - - -

Taxiway

B.

Runway

_____
_____
- - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - -

Taxiway

C.

Runway

- - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - -
_____
_____

Taxiway

D.

Runway

- - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - -
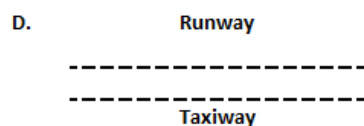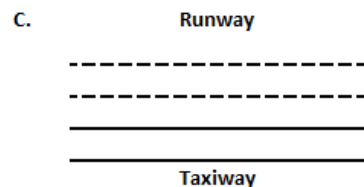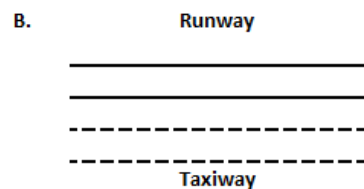
Taxiway

46) Which of the following is used to indicate the "HOLD" position on a taxiway:

(a) Where the concrete and asphalt meet and create a colour different in the surface.
(b) Two solid and two broken yellow lines across the width of the taxiway with the broken lines closest to the runway.
(c) Where there are red mandatory hold-short signs.
(d) All of the above.
(e) Both B and C

47) The colour of a "HOLD" line is:

(a) White
(b) Green
(c) Yellow
(d) Red

48) As soon as a vehicle has left the maneuvering area of the 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 FSS/air traffic that you are off all maneuvering areas and give your location.

49) When instructed by the FSS to "Leave (or) Get Off the Runway", the vehicle operator must:

      (a) Acknowledge the instruction.
      (b) Proceed to a holding position or to a safe position off to the side of the Runway at least 60 m from the nearest runway edge.
      (c) Inform the FSS when off the runway and give your exact location. .
      (d) All of the above.

50) When is it permissible to operate closer than 60 m from the edge of a runway?

      (a) When the work to be performed is closer than 60 m from the edge of the runway.
      (b) During grass cutting only.
      (c) Only on non-instrument runways.
      (d) When the FSS has given permission.

51) Vehicle operators must monitor the appropriate local frequency:

      (a) When in the maneuvering 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.

52) A vehicle which is not equipped with a radio on the FSS frequency may be operated in the maneuvering area when:

      (a) The vehicle weight exceeds (14,000 lb) - 6,500 kg.
      (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 FSS instructions.
      (d) No aircraft are scheduled to land or take off from the airport for at least thirty minutes.

53) 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.

54) At airports with an active Flight Service Station, vehicles may operate on or near maneuvering areas only according to:

      (a) Instructions issued by radio from a supervisor.
      (b) Instructions issued by the tenant.
      (c) Instructions issued by the Flight Service Station.
      (d) Instructions issued by coworkers.

55) A vehicle advisory from a Flight Service Station may indicate that there is "No reported traffic". What does this term mean?

      (a) No other vehicles are performing airside at the moment.
      (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 which cannot be reported to the vehicle operator.

56) Before driving onto or crossing the Runway, the vehicle operator must:
      a) Check his brakes several times to ensure the vehicle will stop short of the "Hold-Short" position.
      b) Ensure all cigarettes and other smoking materials are extinguished.
      c) Flash the vehicle headlights on and off to notify FSS that you are waiting to cross.
      d) Visually check to ensure that aircraft are not approaching or departing using the Runway.

57) At airports with an operational Flight Service Station, a vehicle operator may not proceed into the maneuvering area before:

      (a) Flight Service Station approves and you acknowledge all information received as understood.
      (b) Checking the vehicle for safety and FOD.
      (c) Turning on your beacon and headlights.
      (d) Checking first with the Flight Service Station to ensure that the vehicle has been registered with the Flight Service Station.
      (e) A, B and C

58) 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 and proceed with caution.
      (c) Ask the Flight Service Station to "Say Again" 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 maneuvering area.

59) 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.

60) When is it permissible to operate a vehicle within 60 m of a runway edge at an airport with an operational 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 operational maintenance.
    (d) Any time if you ensure that the vehicle's rotating beacon is on at all times.

61) What are you required to do if your vehicle breaks down while in the maneuvering area at an airport with a Flight Service Station?

    (a) Abandon the vehicle and walk as quickly as possible to the Flight Service Station to advise the location of the vehicle.
    (b) Stay in the vehicle and hope that aircraft see the rotating beacon in time to avoid collision.
    (c) Complain very strongly to vehicle maintenance staff for not maintaining the equipment.
    (d) Immediately notify the Flight Service Station and ask for assistance.

62) When leaving the maneuvering area, every vehicle operator is required to:

    (a) Proceed to the Flight Service Station and sound the horn to indicate you are no longer in the maneuvering area.
    (b) Advise the Flight Service Station/local air traffic by radio when you are off the maneuvering area.
    (c) Proceed directly to the vehicle fueling location and refill the tank.
    (d) Proceed as directed and exit immediately at the nearest gate.

63) When vehicles are operating in a group or fleet in the maneuvering area under guidance of one radio-equipped vehicle, the operator of the radio-equipped vehicle is responsible to:

    (a) Display a red flag on the right front fender to indicate that the vehicle is radio equipped.
    (b) Display red flags on all vehicles in the group which are not radio equipped.
    (c) Request and acknowledge all Flight Service Station advisories for all vehicles in the group.
    (d) Ensure that all the operators of vehicles without a radio know the meaning of light signals used to direct vehicles during radio failure at controlled airports.

64) If at the Airport your radio fails while you are in the maneuvering area, you must:

      (a) Stay where you are and sound the horn repeatedly until someone is sent to escort you out of the area.
      (b) Leave the vehicle and proceed, on foot, directly to the Flight Service Station for assistance.
      (c) Wait until an aircraft lands and then follow it as it taxies out of the maneuvering area.
      (d) Advise the Flight Service Station immediately by telephone or other appropriate means.

65) When an aircraft makes a low pass over the runway without making an audible radio call, 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 maneuvering 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.

66) The vehicle operator must not:

      (a) Interfere with wild animals on the runway unless they have approval to do so from Airport Management.
      (b) Perform snow removal or other maintenance unless they have approval to do so from Airport Management.
      (c) Drive in excess of the posted speed limit.
      (d) Leave the vehicle unattended in the maneuvering area.
      (e) All of the above.

67) While in the maneuvering area vehicle operators must;

      (a) Keep a lookout for arriving or departing aircraft.
      (b) Keep FSS up-to-date each time you turn around to plow the other direction.
      (c) Leave the Runway if an aircraft makes a low pass to get your attention.
      (d) Drive quickly so you don't annoy FSS who has to watch you the whole time.
      (e) Both A and C.

68) Maneuvering surfaces at an airport that are designated by a letter are:

      (a) Aprons
      (b) Runways
      (c) Service Roads
      (d) Taxiways

69) Runway edge lights are what colour:

       (a) Red
       (b) White
       (c) Blue
       (d) Amber (Yellow)

70) Apron and taxiway edge lights are what colour:

       (a) Red
       (b) White
       (c) Amber (Yellow)
       (d) Blue

71) How can you tell on an apron where the maneuvering area begins?

       a) Where the concrete meets the pavement and forms a line.
       b) Where there are double amber lights on either side of the intersection.
       c) At the yellow line.
       d) Both B and C.

72) Lights used to indicate the intersection of a taxiway and an apron are what colour:

       (a) Amber (Yellow)
       (b) White
       (c) Red
       (d) Green

73) Signs used to identify the surface you are currently on ("location sign") may be which of the following colours:

       (a) White with black numbers/letters.
       (b) Black with yellow letters/numbers.
       (c) Red with white letters/numbers.
       (d) Blue with white letters/numbers.

74) Two coloured (double faced) threshold marker lights are what colours:

       (a) Blue and white.
       (b) Red and white.
       (c) Red and green.
       (d) Green and amber.

75) The colour of threshold marker lights which face towards the approach of the runway is which of the following colour:

    (a) White
    (b) Green
    (c) Amber
    (d) Red

76) Microphones which <u>have</u> background noise-cancelling capability should be held how close to the lips?

    a) 6.5 centimeters (2-3 inches) in front of the mouth.
    b) As close to the lips as possible.
    c) Not too close as they are very precise.

77) Most microphones which are <u>not</u> background noise-cancelling should be held how far in front of the mouth?

    (a) 6.5 centimeters (or 2-3 inches) in front of the mouth.
    (b) As close to the lips as possible.
    (c) To the side of but near the mouth.

78) The "press to talk" switch on a microphone should be:

    (a) Clicked on and off between words or phrases.
    (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 FSS as appropriate.

79) 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 of every word in a loud clear voice and slowly so that nothing is missed by FSS or air traffic.
    (d) Make sure that aircraft are listening so that everyone gets the message the first time.

80) A radio "blind spot" is:

    (a) Any place on the airport where radio signal to or from a vehicle cannot be received by Flight Service Station or the 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 hole in the ionosphere through which radio signals will not pass.

81) When phonetics are required for clarity in radiotelephone communications, what alphabet must be used?

  (a) The Standard English (French) Alphabet.
  (b) The Radio Technician's Alphabet.
  (c) The ICAO Phonetic Alphabet.
  (d) The Ground Controller's Alphabet for Vehicle Communication in Canada.

82) Circle the correct phonetic word for each of the following letters of the alphabet:

	1	2	3	4
A	Apple	Australia	Alpha	Able
B	Boston	Bravo	Baker	Baron
C	Canada	Charlie	Cocoa	China
D	Delta	Doughnut	Datsun	Dog
E	Equator	Easy	Echo	Empty
F	Fox	Frigid	Foxtrot	Fan
G	Golf	Golden	Gantry	Girl
H	Handle	How	Hostle	Hotel
I	Income	India	Item	Ink
J	Juliet	John	Jig	January
K	King	Kangaroo	Kilometer	Kilo
L	Love	Liter	Lima	Lost
M	Mary	Mexico	Matron	Mike
N	Neilson	November	Nugget	Nancy
O	Oslo	Oboe	October	Oscar
P	Papa	Police	Peter	Poland
Q	Quart	Quebec	Quick	Queen
R	Romeo	Rose	Roger	Rat
S	Sugar	Sam	Sierra	Spitfire
T	Tang	Taxi	Tear	Tango
U	Uncle	Uniform	Unit	Under
V	Victor	Vision	Vapour	Vent
W	Walter	Whiskey	Wing	West
X	Xebec	Xanadu	X-Ray	Xerox
Y	Yak	Young	Yoke	Yankee
Z	Zebra	Zipper	Zip	Zulu

Which of the following is the correct way to speak numbers?

83) 2330

       (a) Twenty-three, thirty.
       (b) Two thousand, three hundred and thirty.
       (c) Two-three-three-zero.
       (d) Two-thirty-three-zero.

84) 583

       (a) Five hundred and eighty-three.
       (b) Five-eighty-three.
       (c) Fifty-eight-three.
       (d) Five-eight-three.

85) 12000

       (a) One two thousand
       (b) Twelve thousand
       (c) One-two-zero-zero-zero
       (d) Twelve-zero-zero-zero

86) In the space opposite to the following words and phrases, enter the number which corresponds to the correct meaning listed below.

       (a) Repeat all, or the following part, of your last transmission.
       (b) Wait and listen. I will call your again.
       (c) Let me know that you have received and understood the message.
       (d) My transmission is ended and I expect a response from you.
       (e) Yes.
       (f) Separation between messages for two different vehicles/aircraft
       (g) I understand the message and will comply.
       (h) I will now repeat my last word (sentence) for clarification.
       (i) Repeat all, or the specified part, of this message back exactly as received.
       (j) I have received all of your last transmission. (generally used by FSS)
       (k) An error has been made in this transmission. My correct version is. ...
       (l) This conversation is ended and no response is expected.
       (m) No, or permission not granted, or that is not correct, or I do not agree.
       (n) I request verification of (clearance, instruction, action, information)
       (o) Can you hear my transmission clearly?

Acknowledge	_____	Affirmative	_____	Break-Break	_____
Confirm	_____	Correction	_____	Say Again	_____
Wilco	_____	How do you read?	_____	Stand By	_____
I say again	_____	Negative	_____	Roger	_____
Over	_____	Out	_____	Read Back	_____

87) Before making a radio "call-up", the vehicle operator must:

(a) Ask for a radio check.
(b) Click the switch to let others know your intention.
(c) Turn up the volume of the transmitter to maximum.
(d) Listen out to make sure the frequency is not is use.

88) A "call up" consists of:

(a) The call sign of the station called and the call sign of the station from which the call is made.
(b) The name - number (call sign) of your vehicle and your request.
(c) The station called and your request.
(d) No special procedures have been developed for radio "call up".

89) If a vehicle operator does not receive a response to a call up, he/she should:

(a) Repeat the call until he gets an answer.
(b) Wait a reasonable time and call again.
(c) Try a different frequency.
(d) Proceed, there is no conflict.

90) When Flight Services transmits directions or instructions that are not fully understood or not clearly transmitted, the vehicle operator must:

(a) Assume that the portion of the message heard is adequate and proceed.
(b) Guess at what is meant on the basis of past experience.
(c) Request a repeat of the message, "Say Again", and fully understand it before proceeding.
(d) Consult the manual for possible meanings for what was heard.

91) When Flight Services transmits directions or instructions which are heard clearly and fully understood, the vehicle operator must:

(a) Acknowledge the directions or instructions and then proceed.
(b) Proceed immediately according to directions/instructions.
(c) Ignore the direction/instruction if not suited to your needs.
(d) Call back to ensure that the instructions given were exactly what was wanted / intended.

92) When a vehicle operator wishes to end a radio transmission, the proper procedure is:

(a) Stop transmitting.
(b) Say the vehicle call sign.
(c) Say "Over and Out"
(d) Complete a full read back for the first two years of AVOP use.
(e) B or D

93) Standard phraseology is used in radio communication with Flight Services. Why is this type of phraseology used?

    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.

94) Staff 27 is providing escort for two other vehicles which are not radio equipped. Staff 27 is required to identify himself/herself to FSS as:

    (a) Staff 27, with grader and truck.
    (b) Staff 27, escorting
    (c) Staff 27, plus 2.
    (d) Staff 27. (The Tower can see the two other vehicles already.)

95) What is the correct meaning for the following FSS instruction to a vehicle, "Proceed onto Runway 08-26, cross 18-36 for a field inspection."?

    (a) You are authorized to go to the edge of Runway 08-26 or Runway 18-36 to look at the field but not enter onto the pavement.
    (b) You are directed to inspect Runway 08-26 and Runway 18-36.
    (c) You may inspect Runway 08-26 and Lima as it borders on the field between the two surfaces.
    (d) You are authorized to drive on Runway 08-26 for the purpose of inspecting that runway, but not Runway 18-36 and are required to advise FSS by radio when you need to continue onto another surface for further inspections.

96) What is the correct meaning of the following FSS instruction: "Hold-short Runway 08-26."

    (a) Stop and hold your vehicle 60 m from the nearest edge of Runway 08-26 or behind the solid yellow line on a taxiway so marked until given permission to cross.
    (b) Stop and hold your vehicle at the edge of the grass area, past the runway lights and await permission to cross.
    (c) Go to the closest apron by the fastest route and await further instructions.
    (d) Hurry up and complete your work and leave the Runway when you see the plane approaching.

97) Which of the following call ups to FSS is correct?

    (a) North Bay Radio, this is truck eighty-eight.
    (b) North Bay Radio, staff twenty-nine.
    (c) North Bay Radio, staff four-zero.
    (d) North Bay Radio, staff four-zero on Apron 2 requesting a route to Apron 1.

98) On-the-air radio check tests, when necessary, should be:

     (a) Conducted only by a supervisor.
     (b) At least three (3) minutes long to ensure they need not be repeated.
     (c) Should be short (not more than 10 seconds).
     (d) Conducted using the ICAO phonetic alphabet only.

99) The readability of a radio signal may be reported numerically. A reported readability of three (3) means:

     (a) Perfect
     (b) Readable but with difficulty.
     (c) Unclear
     (d) Fair

100) The readability of a radio signal may be reported numerically. A reported readability of four (4) means:

     (a) Readable.
     (b) Unclear
     (c) Not really clear
     (d) Fair

101) The readability of a radio signal may be reported numerically. A reported readability of five (5) means:

     (a) Fair
     (b) Perfectly readable.
     (c) Unclear
     (d) Readable but with difficulty.

102) The readability of a radio signal may be reported numerically. A reported readability of one (1) means:

     (a) Perfect
     (b) Fair
     (c) Unclear
     (d) Unreadable

103) How many stands / t-lines are on Apron 2?

     (a) Four, one is on the restricted side
     (b) Six, two are on the restricted side
     (c) North Bay Airport does not currently have stands
     (d) Five, one for helicopters, one on the restricted side

104) Using the ICAO alphabet the word RUNWAY is phonically spelled;

        (a) Romeo, Uniform, November, Whiskey, Alpha, Yankee
        (b) Roger, Uncle, November, Water, Alpha, Yodel
        (c) Roger, Uniform, November, Winter, Alpha, Yankee
        (d) Romeo, Unicorn, Nation, Winter, Alpha, Yelp

105) If you see your cousin getting on a plane to Mexico it's okay to run across the apron to greet him;

        (a) As long as you are wearing your ERAP or temporary RAP.
        (b) As long as Security sees you and gives you the "thumbs up".
        (c) As long as there are no other planes on the apron and it is safe.
        (d) False, it is never acceptable if the passengers are screened.

106) If you request a route to Compound Rd. and once you get there you realize it is not plowed and you cannot enter; you should;

        a) Turn around and go back to where you started.
        b) Go to the next closest road.
        c) Request a new route with FSS.
        d) Call off where you are.

107) An incursion is;

        a) Not counted if you just went slightly over a hold line when you turn with a vehicle.
        b) Not counted if FSS is not open to see it and report it.
        c) Only counted if it includes a runway.
        d) Being on any maneuvering surface that you don't have permission to be on.
        e) Not counted if there is no air traffic.

108) Failure to follow route is;

        a) Always viewed as an incursion.
        b) Driving on a surface you didn't ask for or have permission for.
        c) Driving a route out of sequential order or deviating from the route of maneuvering surfaces authorized to you by FSS.
        d) You failed to follow the aircraft after it landed and was leading you in.

109) When approaching a Hold-short line you should always;

        a) Creep slowly to the line so FSS knows you won't cross it.
        b) Approach quickly and stop quickly.
        c) Drive normal speed, stop a good distance prior to the line and remain stopped.
        d) Pull up close to the line so FSS can see that you are waiting to cross.

110) Select the most appropriate radio response call;

   a) North Bay Radio, Staff 40, proceeding via Hotel, Lima, crossing Runway 18-36 to Apron 1. Will call off.
   b) Good morning North Bay Radio, this is Staff 40. I will proceed along Hotel to Lima and cross 18-36 to Apron 1 at Voyageur.
   c) North Bay Radio, Staff 40, proceeding via Hotel, Lima, cross Runway 36 to Apron 1.
   d) Staff 40 proceeding via Taxiway Hotel, Taxiway Lima, crossing Runway 18-36 to Apron 1 at Voyageur.

111) Gate safety is important because;

   a) Transport Canada as deemed it as a risk to air traffic.
   b) Animals could get in and put passengers at risk.
   c) To protect the airport and country from any threatening events.
   d) To prevent unauthorized traffic on maneuvering surfaces.
   e) To limit FOD coming in on vehicles.
   f) All of the above.

Example Written Test Answers

Listed below are the correct answers to questions in section 13.0.

#	Ans	#	Ans	#	Ans			#	Ans
1	D	36	B	71	B			92	E
2	C	37	C	72	A			93	D
3	B	38	B	73	B			94	C
4	C	39	A	74	C			95	D
5	B	40	B	75	B			96	A
6	B	41	B	76	B			97	C
7	B	42	D	77	A			98	C
8	B	43	D	78	C			99	B
9	D	44	E	79	A			100	A
10	B	45	C	80	A			101	B
11	A	46	E	81	C			102	D
12	C	47	C	82	See Section 10.2 ICAO			103	B
13	A	48	D	83	C			104	A
14	C	49	D	84	D			105	D
15	C	50	D	85	A			106	C
16	A	51	A	86	Acknowledge	C		107	D
17	A	52	C		Confirm	N		108	C
18	C	53	B		Wilco	G		109	C
19	C	54	C		I say again	H		110	C
20	C	55	B		Over	D		111	F
21	C	56	D		Affirmative	E			
22	B	57	E		Correction	K			
23	A	58	C		How do you read?	O			
24	A	59	A		Negative	M			
25	E	60	A		Out	L			
26	D	61	D		Break-Break	F			
27	C	62	B		Say again	A			
28	B	63	C		Stand By	B			
29	D	64	D		Roger	J			
30	B	65	D		Read Back	I			
31	C	66	E	87	D				
32	B	67	E	88	A				
33	D	68	D	89	B				
34	C	69	B	90	C				
35	B	70	D	91	A				

14.0 ANNEX D – EXAMPLE PRACTICAL TEST EVLAUTION FORM

North Bay Airport Airside Vehicle Operators Permit
Practical Test Evaluation Form

YYB JACK GARLAND AIRPORT

Applicants Name:		**Restrictions:**	D/A D D/X
			Circle Applicable

"D/A" Permit

		Yes	No				Yes	No
A.	***Airside Entry/Exit***				**H.**	***Communication Procedures***		
	Stops for Security Personnel / Security Gate					Listens Out/Transmits Only on Clear Frequency		
	Closes Gate After Entry and Secures Gate Completely					Good Microphone Position, Switching		
	Wears Security Pass Visibly Displayed					Clear / Confident Speech		
B.	***Equipment***					Confirms traffic information with FSS (when required)		
	Turns Lights On/Off (Beacon/Flashing Lights-Other)					Phonetic Alphabet and Standard Phraseology Used		
	Lights On-Before Entering Active Apron Area					Call-Up-Uses Full Vehicle Identifier		
	Lights Off-After Parking/Within Aircraft Perimeter					Request Structure - Vehicle I.D., Location, Intended Route, Destination and Traversing Time (if required)		
	Completes Circle Check of Vehicle Prior to Operating					Acknowledges Instructions Correctly		
C.	***Parking***					Ends Transmission Correctly		
	Backs Into Defined Parking Spot				**I.**	***Driving Along***		
	Turns Head/Uses Mirrors for Backing Up					Obtains Authorization Before Entering Manoeuvring Area - Does not drive into maneuvering before full readback.		
	Parks Only in Spaces Authorized for Vehicle in Use					Holds Short: Taxiway/Runway - Explains and demonstrates		
D.	***Driving Along***					Service Road At Twy/Rwy - Uses properly ('Off Areas')		
	Follows Prescribed Routes (Vehicle Corridors/Other)					Follows Approved Route as provided by FSS		
	Maintains Speed but does not Exceed 25km/h					Maintains Visual Check for Aircraft		
	Proper 15m/50' Clearance Around Parked Aircraft					Uses Service Roads Wherever Possible		
	Right of Way Observance; A/C, Pedestrians, Vehicles					Checks Vehicle For Mud, Gravel Before Entering Paved Surface From Unpaved Service Roads		
	Obeys Signs, Signals, Pavement Markings					Speed Limit of 50km/h not Exceeded		
	Crosses Aircraft T-Lines at Right Angles				**J.**	***Recognition - Lights and Markings:***		
	Exercises Caution Around Corners, Buildings, Cords, Intersections, Exits, Other Vehicles, Aircraft					Hold Short Lines - Able to explain and demonstrate actions to take when instructed / prior to line.		
E.	***Orientation***					Runway Headings - Explains how they're named		
	Is Able To Locate (From the Vehicle):					Aircraft Movement Lines and Threshold Markings - ID's		
	Aircraft Gates & Operational Stands By Number - Explains					Lights (Edge): Apron/Taxiway/Runway (white and ambers)		
	Primary Security Gates - Explains for Apron (1, 2, 2A) apron					Lights (Other): Intersections/Thresholds/Hold Shorts (08/26)		
	Service Roads - Explains which have entrances to apron					**Signs:**		
	Hangars, Assigned Parking (Cargo Facilities, Maintenance Facilities, Other) - Able to identify on apron					Mandatory: Runway Hold and Road Hold		
	Restricted Areas on Apron II - Explains where and why					Location: Runway/Taxiway		
						Information: Taxiway/Apron		

"D & D/X" Permit (*must be taken after D/A Permit practical test*)

		Yes	No				Yes	No
F.	***Equipment***				**K.**	***Orientation***		
	Rotating Beacon Turned On					Able to Locate Directly from Vehicle:		
	Radio On At Correct Frequency					Tower/F.S.S. and Aerodrome Beacon		
G.	***Route Planning***					Aprons (5), Runways (3), Taxiways (5)		
	Able to Describe Available Routes Between Various Points on the Airport (without map)					Major Tenant Facilities, Terminal, Administration Building		
	Plans Intended Route Before Proceeding - Without help					Glidepath and Localizer Areas - Explains operational limitations of / Understands not to enter without clearance		
	Demonstrates Correct After Hours Radio Procedures					Restricted Navigational and Other Facilities - Identifies (6)		
						Service Roads - Identifies (16) primary service roads		

Test Instructions: To confirm knowledge all route requests and readbacks are required in full, regardless of previous experience. The driver is always responsible for the safety of the vehicle. Some maneuvering surfaces may not be available due to seasonal or operational limitations. Communication confusion or safety concerns / violations will immediately stop test. No questions will be answered during the te

Examiner's Notes:		**Passed or Retest Required/Failed** *Circle*	P	F
		Date of Test:		
		Signature:		
		Evaluation Form Reviewed Jan 2/24		

Annex E – List of Approved vehicles to operate on airside maneuvering surfaces

(Runways, Taxiways, Service Roads Requiring FSS Clearance)

North Bay Jack Garland Airport Approved Vehicles

Airport Vehicle Call Sign	Make	Model	Colour	Reason for Access to Taxiways or Runways
Staff # 42	Chev	Pick-up	Red	Field Inspections, maintenance and emergency
Staff # 45	Ford	F150 Pick-up	Red	Field Inspections, maintenance and emergency
Staff # 47	Ford	Pick-up	Red	Field Inspections, maintenance and emergency
Staff # 48	Ford	F150 Pick-up	Magna Red (Brown)	Field Inspections, maintenance and emergency
Staff # 40	GMC	Pick-up	Black	Field Inspections, maintenance and emergency
Truck # 80	Ford	Multi use truck	Red	Field Maintenance
Truck # 84	International	Plow Truck	Orange	Field Maintenance
Truck # 90	Kenworth	Plow Truck	Orange	Field Maintenance
Truck # 92	International	Plow Truck	Orange	Field Maintenance
Sander #85	White	Sander	Orange	Field Maintenance
Sander # 97	International	Sander	Orange	Field Maintenance
Blower # 124	JA Larue	Snow Blower	Orange	Field Maintenance
Tractor # 150	John Deere	Tractor	Orange	Field Maintenance

Tractor # 151	AGCO	Tractor	Orange	Field Maintenance
Tractor # 152	Holder	Tractor	Orange	Field Maintenance
Grader # 153	Caterpillar	Grader	Yellow	Field Maintenance
Loader # 220	John Deere	Loader	Yellow	Field Maintenance
Loader # 223	CASE	Loader	Yellow	Field Maintenance
Loader # 227	John Deere	Loader	Yellow	Field Maintenance
Backhoe # 222	John Deere	Backhoe	Orange	Field Maintenance

Northern Heights Aviation Approved Vehicles

Airport Vehicle Call Sign	Make	Model	Colour	Reason for Access to Taxiways or Runways
Northern Heights 315	Chev	1/4 Colorado Truck	Black	Movement and Recovery of Aircraft
Northern Heights 316	Northwestern Motors Aircraft	Tug	White	Movement and Recovery of Aircraft

NAV Canada Approved Vehicles

Airport Vehicle Call Sign	Make	Model	Colour	Reason for Access to Taxiways or Runways
Tech 65	GMC	Sierra Pickup	Yellow	NAV Canada Technical Operations
Tech 66	GMC	Sierra Pickup	Yellow	NAV Canada Technical Operations
Tech 68	GMC	Sierra Pickup	Yellow	NAV Canada Technical Operations
Tech 69	GMC	Sierra Pickup	Yellow	NAV Canada Technical Operations

North Bay Fire & Emergency Services Approved Vehicles

Airport Vehicle Call Sign	Make	Unit # I	Colour	Reason for Access to Taxiways or Runways
Pump 1	Spartan	# 61	Red	Fire Department - Emergency
Pump 2	Spartan	# 62	Red	Fire Department - Emergency
Pump 3	Spartan	# 30	Red	Fire Department - Emergency
Car 3	Mercedes-Benz Van	# 50	Red	Fire Department - Emergency
Red 10	Rosenbauer	# 99	Red	Fire Department - Emergency
Red 11	Oshkosh	# 98	Red	Fire Department - Emergency
Tanker 1	GM Tanker	#37	Red	Fire Department - Emergency

Vehicles Restricted to Taxiways Only and Crossing 18-36

Helicopters Canada Approved Vehicles
Restricted access to above noted crossings

Airport Vehicle Call Sign	Make	Model	Colour	Reason for Access to Taxiways or Runways
Helicopters Canada 'Helican' 310	Dodge	1/2 Truck	Green and Black	Movement of Aircraft Between Aprons
Helicopters Canada 'Helican' 311	GMC	Truck 2500	Black	Movement of Aircraft Between Aprons
Helicopters Canada 'Helican' 312	Dodge	Truck	Black	Movement of Aircraft Between Aprons

Northern Heights
Restricted access to above noted crossings

Vehicle Call Sign	Make	Model	Colour	Reason for Access to Taxiways or Runways
Northern Heights Fueller 305	Ford	700	Yellow & White	To Refuel Aircraft on Aprons Other Than Apron 2

Voyageur Approved Vehicles – Revised November 20, 2024

Restricted access to above noted crossings

Vehicle Call Sign	Make	Model	Colour	Reason for Access to Taxiways or Runways
Voyageur Tug 241	S & S	Tug	Red	Aircraft Maintenance
Voyageur Tug 242	Eagle	Tug	Red	Aircraft Maintenance
Voyageur Loader 245	Case	Loader	Yellow	Apron I Maintenance
Voyageur Loader 246	Komatsu	Loader	Yellow	Snow Removal
Voyageur Tractor 251	Kubota	Tractor B2150	Orange	Aircraft Maintenance
Voyageur Tractor 252	Kubota	Tractor B2410	Orange	Aircraft Maintenance
Voyageur Tractor 253	John Deere	844	Yellow	Snow Removal
Voyageur Service 255	International	Truck	White	Aircraft Maintenance
Voyageur Service 256	Dodge RAM	Pick-up Truck	Grey	Aircraft Maintenance
Voyageur 257	International Dura Star	Truck	White	Aircraft Maintenance
Voyageur Tractor 258	Kubota	UTV Tractor	Orange	Aircraft Maintenance
Voyageur Tractor 259	Kubota	Tractor L6060	Orange	Aircraft Towing
Voyageur Forklift 260	Komatsu	Forklift	Yellow	Aircraft Maintenance
Voyageur Forklift 262	Hyster H100XL	Forklift	Yellow	Aircraft Maintenance
Voyageur 263	Ford	F250 Truck	White	Snow Removal/Sanding
Voyageur Tractor 264	John Deere	Tractor 644G	Yellow	Snow Removal
Voyageur Tractor 265	Kubota	Tractor BX2360	Orange	World Fuels, Baggage Carts, GPU
Fueller 300	Freightliner	FL 80	Red & White	Fuel Delivery
Fueller 301	Freightliner	FL 80	Red & White	Fuel Delivery
Deicer 334	GSS	Deicer	White	Aircraft Deicing Operations on Apron II Only *See Note Below

NOTE: Please note that the Voyageur Deicer 334 is stored on Apron 1; however, all deicing operations for all aircraft operators must take place on Apron II as per the North Bay Jack Garland Glycol Management Plan. **Deicing anywhere else is strictly prohibited.**