2026

Airside Traffic Directives (ATD) & Airside Vehicle Operator's Permit (AVOP) Manual

YYC Calgary Airport

Airside Traffic Directives (ATDs) & AVOP Manual Temporary Revision

TR-2026-01

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Subject:	NPS-V South – Location and Procedures Update + Entering J/E Underpass Procedures Update

Documented Changes

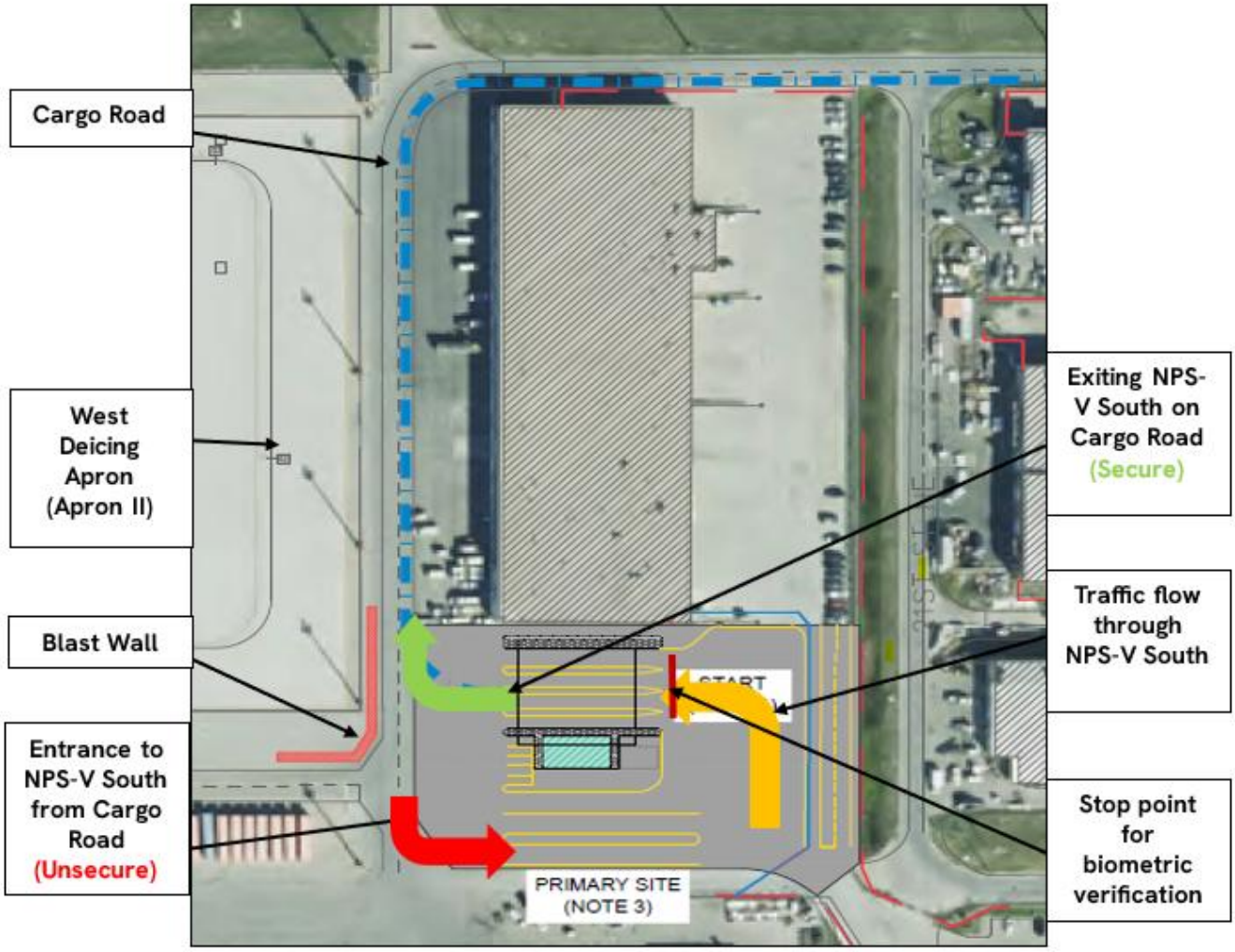
Impacted Section(s):	5.2.1.2 NPS-V South

To access Apron I from Gate 306A:

a. Stop prior to Gate 306A Guardhouse to complete biometric checks with the Security Officer.
b. Once clear, the Security Officer will open Gate 306A. Once the vehicle, and any escorts are through, all vehicle operators MUST STOP just inside Gate 306A and wait for the gate arm to close fully.
c. From Gate 306A, turn West (left), and continue on the Cargo Road towards the West Deicing Apron (Apron II) area (the Cargo Road speed limit is maximum 30 km/h).

Once airside, or if accessing the NPS-V South facility from an airside area:

a. Access and continue along the Cargo Road to the NPS-V South facility for screening.
b. Turn East (left) to enter queuing lanes.
c. Lane indicator signs will display which screening lane is available for screening.



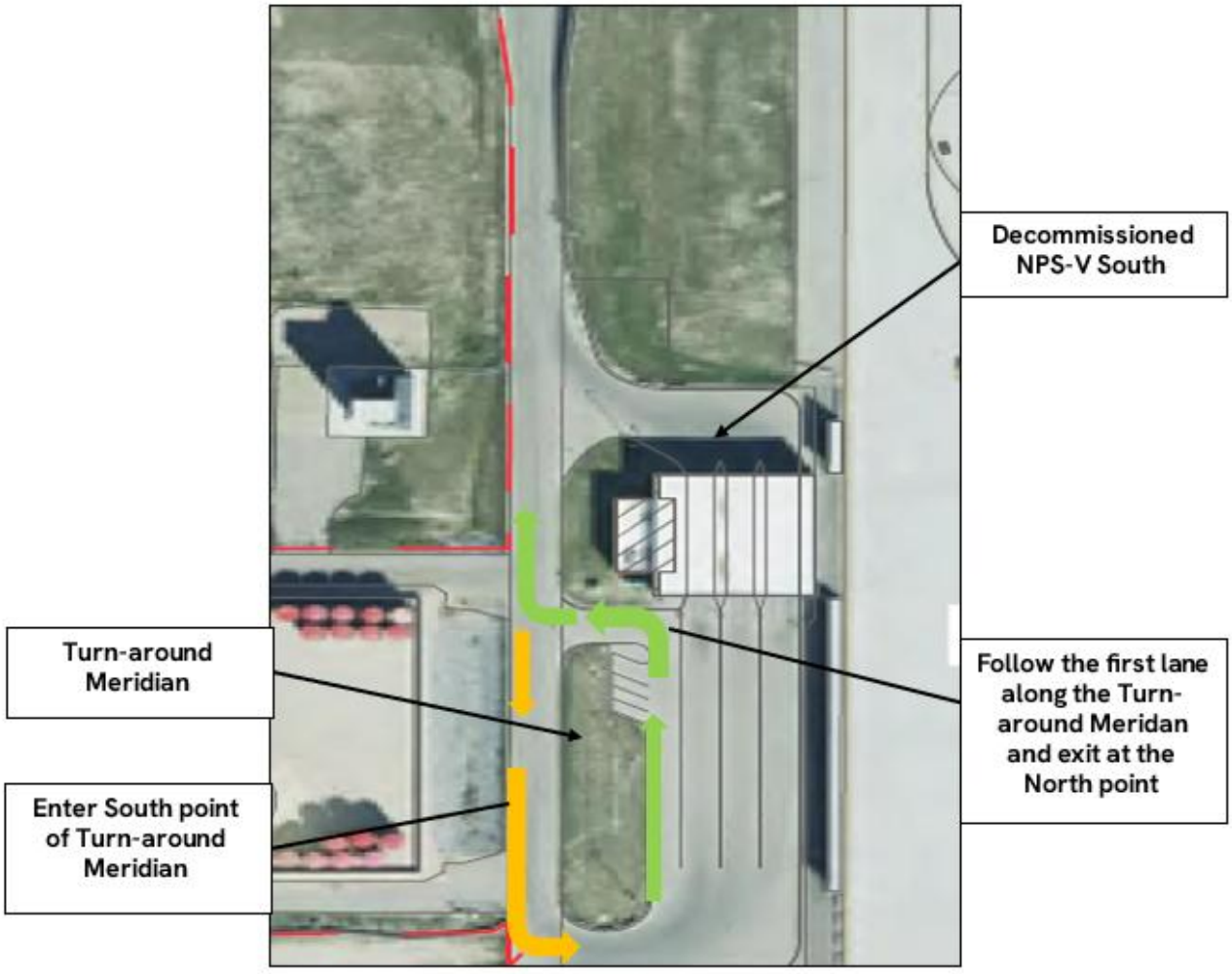
d. Pull forward to the available screening lane.
e. At the stop point, wait to have your biometric checks completed by the designated security agent.
f. Once cleared, drive forward slowly and wait for the gate arm to open fully. The NPS-V speed limit is maximum 5 km/h.
g. Stop at the stop line or as indicated by Security personnel. Red and green traffic lights will indicate what security checks are required for the vehicle (the Traffic Management System randomly selects vehicles and compartments for screening).
h. A red light indicates the driver and the vehicle have been selected for screening. All temporary RAIC holders MUST enter the NPS-V facility for security screening, whether or not the vehicle is selected for screening.
i. Follow the instructions of security personnel to provide access to the selected compartments of the vehicle, then enter the NPS-V building for screening.

j. After all screening is complete, do not enter the vehicle until cleared to do so by security personnel.
k. The security personnel will release the gate arm once screening is complete. Wait for the gate arm to open fully.
l. After completing the screening process, the driver MUST prox their RAIC at the prox reader before leaving the NPS-V facility. Failure to prox the RAIC will deny the driver access to the J/E Underpass and Critical Area, and the driver and any escorts will be required to repeat the entire NPS-V screening process.
m. Proceed from NPS-V South, merge back onto the Cargo Road, giving way to vehicles already established, and drive East towards the J/E Underpass (speed limit is maximum 30 km/h).
n. Once screened, vehicles are prohibited from stopping except when adhering to stop signs, stop lines, avoiding aircraft exhaust, or to give right-of-way to aircraft or emergency vehicles.
o. STOP & prox the card reader to open the gate arm at the entrance to the Underpass. The prox reader is located on the North side of the J/E Underpass and on the driver's side. Failure to scan the prox reader in a timely manner will result in the driver's validation timing out and result in denied access to the Critical Area. Vehicles entering the Critical Area have right-of-way over vehicles that are proceeding Westbound on the Cargo Road in the J/E Underpass tunnel area.
p. Drivers must ensure the gate arm closes fully behind them after entering J/E Underpass.

Note: No changes to NPS-V South and J/E Underpass escorting procedures.

If Access to J/E Underpass is Denied:

a. If access is denied, drivers must continue East on the Cargo Road and make a left hand turn at the South point entrance of the Turn-around Meridian, follow the first lane along the Turn-around Meridian, and exit on the North side, giving way to any vehicles already established on the Cargo Road and make their way back to NPS-V South for screening.
b. Drivers must stop at the stop sign located just before the J/E Underpass and strictly follow the "No Right Turn" sign.
c. Drivers must give right of way to **all** screened vehicles entering the J/E Underpass. Once all the screened vehicles have passed through the J/E Underpass security gate arms, drivers can continue West along the Cargo Road and return to NPS-V South to repeat the security screening process.



Note: Gate House 306A and NPS-V South operate independently of each other. Vehicle operators and their passengers are NOT required to go through NPS-V if they only require access to the buildings and the West and East Deicing Apron areas.

Unscreened Drivers from East Airfield Requiring Access to the Cargo Road:

a. Drivers must stop at the stop sign located just before the J/E Underpass and strictly follow the "No Right Turn" sign.
b. Drivers must give right of way to **all** screened vehicles entering the J/E Underpass. Once all the screened vehicles have passed through the J/E Underpass security gate arms, drivers can continue West along the Cargo Road.

Action Required

All YYC Employees, Tenants, and Contractors conducting work airside are required to be familiar with all Temporary Revisions to the 2026 ATD and AVOP Manual and to comply with all updated standards and procedures applicable to their scope of work. Temporary Revisions will supersede documented standards in the ATD and AVOP Manual.

Company leaders and accountable managers are responsible for ensuring their airside personnel are informed of and trained on any changes that affect their operations.

Contents

Temporary Revision TR-2026-01 ii
Copyright xx
Approval xxi
1 Contact Information, Acronyms, & Glossary 2
1.1 Contact Information 2
1.2 Acronyms 3
1.3 Definitions 5
2 Introduction 16
2.1 Requirements to Operate a Vehicle Airside 16
2.1.1 AVOP Licensing Requirements 16
2.1.2 Employer Requirements and Responsibilities for AVOPs 17
2.1.3 Governing Documents 19
2.1.4 AVOP – Company Application Form 19
2.2 Vehicles & GSE: Licensing, Safety Requirements, & Markings 19
2.2.1 Licensing Requirements 19
2.2.2 Vehicle & GSE Safety Requirements 20
2.2.3 Vehicle Markings 20
2.2.4 Beacons & Lights 21
2.2.5 Non-motorized Ground Service Equipment (GSE) Requirements 22
2.3 Unacceptable Vehicles and Equipment 22
2.3.1 Bag Halls & Buildings 22
2.4 Aircraft Safety & Equipment Display Markings 23
2.5 Alcohol & Drug Policy 23
2.5.1 Alcohol & Drugs 24
2.6 Insurance Requirements 24
2.7 Airport Security 25
2.7.1 Airside requirements for Persons Working Airside 25

2.7.2 Critical, Manoeuvring, and Movement Area 25
2.7.3 Critical Area Security Requirements 26
2.8 Airside Safety – Foreign Object Debris (FOD) & Securing Loads 26
2.8.1 Foreign Object Debris 26
2.8.2 Securing Loads 27
2.9 Social Media 27
3 General Requirements 29
3.1 Application for an Airside Vehicle Operator's Permit (AVOP) 30
3.1.1 Record Keeping Requirements 31
3.2 Testing, Night Endorsement, Renewal, Retesting, & Replacement 31
3.2.1 AVOP Written Assessments 31
3.2.2 AVOP Practical Assessments 32
3.2.3 AVOP Night Endorsement / Competency Check Ride 32
3.2.4 Renewals 33
3.2.5 Returning After an Absence 34
3.3 Assessment Accommodations 35
3.4 Lost, Stolen, or Replacement AVOP Cards 36
3.5 Cancelled, Expired, Suspended, or Revoked AVOPs 36
3.6 Reinstatement 36
3.7 Change of Employer 37
3.8 Multiple Employers 37
3.9 Restricted Operators Certificate – Aeronautical (ROC-A) 38
3.10 Escorting a Non-AVOP Holder 38
3.10.1 Escorting vs. AVOP Training 39
3.11 Driving with a Suspended AVOP, Driving without a Valid Provincial Driver's License, & Driving without an AVOP 40
3.12 AVOP Exempt Areas 41
3.12.1 Leased Areas 41
3.12.2 Gate 306A Road 41

3.12.3 Gate 420 to Gate 321 41
3.12.4 Airside Maintenance Centre (AMC) 42
3.12.5 Gate 234 Roads 42
3.12.6 Pond M 43
3.12.7 Exemptions Map 44
4 AVOP Violations 46
4.1 Monitoring & Enforcement 46
4.1.1 Commanding Authority at Incident & Accident Scenes 46
4.2 Self-Reporting of AVOP Incidents 47
4.3 Unsafe or Dangerous Driving 47
4.3.1 Distracted Driving 47
4.4 Safety Devices 48
4.5 Violations 48
4.5 Corrective Action 52
4.5.1 Additional Corrective Action Eligibility for Cumulative Record Keeping Points 53
4.5.2 Containment Actions and Corrective Action Plans 53
4.6 Cumulative Effect 54
4.7 Appeal 54
4.8 Expiry 55
5 DA AVOP Requirements 57
5.0.1 DA Airfield Map 57
5.0.2 Apron I Map 58
5.1 DA AVOP – Permitted Surfaces 59
5.1.1 DA AVOP & the Manoeuvring Area 59
5.1.2 Gravel Roads 59
5.2 Accessing Apron I (Critical Area) 60
5.3 Smoking Airside 65
5.4 DA AVOP Holders - Responsibilities 65

5.4.1 Vehicle & GSE Responsibilities 65
5.5 Apron I – Ground Loading Gates 76
5.6 Speed Limits 77
5.7 Right-of-Way 77
5.7.1 Right-of-Way - Aircraft 78
5.7.2 Right-of-Way - Emergency Vehicles 79
5.7.3 Right-of-Way - Authority Maintenance Vehicles 79
5.7.4 Right-of-Way - Marshallers & Push Tractors 79
5.7.5 Right-of-Way - Fuel Trucks & Fuel Carts 79
5.7.6 Right-of-Way - Pedestrians 79
5.7.7 Right-of-Way - All Other Vehicles 80
5.8 Circle of Safety 80
5.9 Operational Stands 81
5.9.1 Operational Stand Safety Procedures 81
5.9.2 Bridge Movement Areas 81
5.9.3 Jet Blast, Prop Wash, Engine Ingestion 81
5.10 Aircraft Arrival and Pushback 82
5.10.1 Note to Marshallers 82
5.10.2 Advanced Visual Docking and Guidance System (A-VDGS) 83
5.10.3 Aircraft Arrival 83
5.10.4 Aircraft Departure & Pushback 83
5.10.5 Vehicles & Personnel Returning from Pushback 84
5.11 Gate Matrix 84
5.12 Tow Operations 85
5.13 Indicators – Apron to Taxiway 85
5.13.1 Apron Lighting & Markings 85
5.13.2 Taxiway Lighting & Markings 85
5.13.3 Apron – Taxiway Intersection Lighting, Markings, and Signage 86

5.14 Vehicle Collision 87
5.15 Aircraft Fuel Tankers & Vehicle Fueling 88
5.15.1 Aircraft Fuel Tankers 88
5.15.2 Vehicle Fueling & Transfer of Fuel 88
5.16 Operating Procedures – Temporarily Inaccessible Areas 89
5.16.1 Airside Emergency Response 89
5.16.2 Fire, Aircraft Incident, Restricted Areas 90
5.16.3 Construction Areas 90
5.17 Nighttime Driving 90
5.18 DA Written and Practical Testing Preparation 92
5.18.1 DA AVOP – Practice Questions 93
5.18.2 DA AVOP – Practice Questions ANSWERS 97
6 DA-WS AVOP Requirements 102
6.0.1 DA-WS Airfield Map 102
6.0.2 DA-West Aprons 103
6.0.3 DA-South Aprons 104
6.1 DA-WS AVOP – Permitted Surfaces 105
6.1.1 DA-WS AVOP & the Manoeuvring Area 105
6.1.2 Taxiway P 105
6.1.3 Taxiway N 105
6.1.4 Gravel Roads 105
6.2 Accessing West Aprons (VII & IX) 106
6.2.1 Gate 420 106
6.2.2 Exiting the Airfield 106
6.2.3 Security Gates and Gate Arms 106
6.3 Accessing South Aprons (III, IV, V, VI, VIII) 106
6.3.1 Gate 205 107
6.3.2 Exiting the Airfield 107

6.3.3 Security Gates and Gate Arms 107
6.4 AVOP Holders - Responsibilities 107
6.4.1 Vehicle & GSE Responsibilities 107
6.4.2 Traffic Safety Rules, Policies, & Procedures 108
6.5 West Aprons 113
6.5.1 Apron IX Staging Locations & Bay Numbers 115
6.6 South Aprons 116
6.7 Speed Limits 117
6.8 Right-of-Way 117
6.8.1 Right-of-Way, Aircraft 118
6.8.2 Right-of-Way, Emergency Vehicles 119
6.8.3 Right-of-Way, Authority Maintenance Vehicles 119
6.8.4 Right-of-Way, Marshallers & Push Tractors 119
6.8.5 Right-of-Way, Fuel Trucks & Fuel Carts 119
6.8.6 Right-of-Way, Pedestrians 119
6.8.7 Right-of-Way, All Other Vehicles 120
6.9 Circle of Safety 120
6.10 Operational Stands 121
6.10.1 Operational Stand Safety Procedures 121
6.10.2 Jet Blast, Prop Wash, Engine Ingestion 122
6.11 Aircraft Arrival and Pushback 123
6.11.1 Aircraft Arrival 123
6.11.2 Aircraft Departure & Pushback 124
6.12 Indicators – Apron to Taxiway 124
6.12.1 Apron Lighting & Markings 124
6.12.2 Taxiway Lighting & Markings 124
6.12.3 Apron – Taxiway Intersection Lighting, Markings, & Signage 125
6.13 Vehicle Collision 126

6.14 Aircraft Fuel Tankers & Vehicle Fueling 126
6.14.1 Aircraft Fuel Tankers 126
6.14.2 Vehicle Fueling & Transfer of Fuel 126
6.15 Operating Procedures – Temporarily Inaccessible Areas 127
6.15.1 Airside Emergency Response 127
6.15.2 Fire, Aircraft Incident, Restricted Areas 128
6.15.3 Construction Areas 128
6.16 Nighttime Driving 128
6.17 DA-WS Written and Practical Testing Preparation 130
6.17.1 DA-WS AVOP – Practice Questions 131
6.17.2 DA-WS AVOP – Practice Questions ANSWERS 135
7 D-TT AVOP Requirements 140
7.1 Operational Priorities & General Requirements 140
7.2 Responsible Person 141
7.2.1 Responsible Person - Tow 141
7.2.2 Responsible Person - Taxi 141
7.2.3 Responsible Person - Training 142
7.3 Before Conducting Taxi / Tow Operations 142
7.4 Towing and Taxiing Aircraft on Apron I 142
7.4.1 Apron I Map 144
7.4.2 Apron I (Critical Area) 145
7.4.3 Apron I – Aircraft Movements & Parking 146
7.4.4 Advanced Visual Docking and Guidance System (A-VDGS) 147
7.4.5 Gate Matrix 147
7.4.6 Max Wingspan Markings 148
7.5 Towing and Taxiing Aircraft on West & South Aprons 148
7.5.1 DA-West Aprons 149
7.5.2 DA-South Aprons 150

7.5.3 West Aprons 151
7.5.4 South Aprons 151
7.5.5 West & South Aprons – Aircraft Movements & Parking 152
7.6 Apron to Taxiway Boundary 152
7.7 Indicators – Apron to Taxiway 152
7.7.1 Apron Lighting & Markings 152
7.7.2 Taxiway Lighting, Markings, and Signage 153
7.7.3 Apron – Taxiway Intersection Lighting, Markings, & Signage 154
7.8 Indicators – Taxiway to Taxiway 155
7.8.1 Taxiway N Holding Short of Taxiway M 155
7.8.2 Taxiway M Holding Short of Taxiway YB 155
7.9 Indicators – Taxiway to Runway 155
7.9.1 Primary Five - Taxiway to Runway Indicators 155
7.9.2 Runway 17L/35R - Additional Taxiway to Runway Indicators 156
7.10 Indicators – Runway to Runway 157
7.10.1 Intersection Runway 17R/35L & Runway 11/29 157
7.11 Indicators – Runway to Taxiway 157
7.12 Runway Lighting and Markings 157
7.13 Reduced and Low Visibility Operations (RVOP / LVOP) 158
7.14 CAT I Hold Line 159
7.15 CAT II Hold Line 159
7.15.1 CAT II Hold Line Locations – Map 160
7.16 Technical Areas 161
7.16.1 Technical Area VII South 161
7.16.2 Technical Area L East 161
7.17 Compass Rose 161
7.17.1 Compass Rose Locations 161
7.17.2 Aircraft Tow to Compass Rose 161

7.18 Air Traffic Control and Radio Procedures 161
7.18.1 Aircraft Tow - Callsign 162
7.18.2 Aircraft Taxi - Callsign 162
7.18.3 Radio Standards 162
7.18.4 Radio Failure in the Manoeuvring Area 162
7.18.5 Unable to Comply with ATC Instructions 162
7.19 Foreign Object Debris in the Manoeuvring Area 162
7.20 Radio Frequencies 163
7.20.1 Apron I – Apron Advisory 163
7.20.2 Dual Ground Control Frequency 164
7.20.3 Dual Ground Control Frequency – Airfield Map 165
7.21 Radio Calls – Examples 166
7.21.1 Standards and Tips 166
7.21.2 Determining the Active Runway(s) 166
7.21.3 Aircraft Tow – Radio Call Examples 166
7.21.4 Aircraft Taxi – Radio Call Examples 170
7.22 Aircraft Maintenance Run-up Locations 171
7.22.1 Aircraft Maintenance Run-up Locations Map 172
7.22.2 West Airfield 173
7.22.3 East Airfield 174
7.23 Right-of-Way 175
7.24 Freezing the Scene 175
7.25 Nighttime Operations 176
7.26 D-TT Written and Practical Testing Preparation 177
7.26.1 D-TT AVOP – Practice Questions 178
7.26.2 D-TT AVOP – Practice Questions ANSWERS 182
8 D AVOP Requirements 187
8.0.1 West Airfield Map 187

8.0.2 East Airfield Map 188
8.1 D AVOP – Permitted Surfaces 189
8.2 D AVOP Holders - Responsibilities 189
8.2.1 Vehicle & Equipment Requirements 189
8.2.2 Foreign Object Debris (FOD) 189
8.3 Manoeuvring Area Speed Limits 190
8.3.1 Slow Moving Vehicles 190
8.4 Apron Signs, Lights, & Markings 190
8.5 Taxiway Signs, Lights, & Markings 192
8.5.1 Indicators – Taxiway to Taxiway 194
8.6 Indicators – Taxiway to Runway 195
8.6.1 Primary Five - Taxiway to Runway Indicators 195
8.6.2 Runway 17L/35R - Additional Taxiway to Runway Indicators 196
8.7 Indicators – Runway to Runway 196
8.7.1 Intersection Runway 17R/35L & Runway 11/29 196
8.8 Indicators – Runway to Taxiway 196
8.9 Runway Lighting and Markings 196
8.10 Runway Protected Area (RPA) 198
8.10.1 Minimum Safe Distances Off Runways & Taxiways 199
8.11 Crossing or Entering Runways 199
8.11.1 Emergency Response 200
8.11.2 Runway Inspections (RSC), FOD Removal, Wildlife Management, Electrical Inspections or Repairs 200
8.11.3 Authority Airfield Maintenance 200
8.11.4 Runway Incursion Procedure 201
8.12 D AVOP Restrictions 202
8.12.1 Entering Apron I Without NPS-V Screening 202
8.12.2 Unacceptable Vehicles & Equipment 202
8.12.3 Overpass Shoulders 202

8.12.4 Runway Restrictions 203
8.13 Emergency Operations 204
8.13.1 Response Gates 204
8.13.2 Airside Access Point 205
8.13.3 Apron I Access Points 206
8.14 Reduced & Low Visibility Operations (RVOP / LVOP) 207
8.14.1 Vehicle Access – RVOP Event (RVR below 2600 ft) 207
8.14.2 Vehicle Access – LVOP Event (RVR below 1200 ft) 207
8.15 CAT I Hold Line 208
8.16 CAT II Hold Line 208
8.16.1 CAT II Hold Line – Map 210
8.17 Technical Areas 211
8.17.1 Technical Area VII South 211
8.17.2 Technical Area L East 211
8.18 Aircraft Isolation Areas 211
8.18.1 Isolation Areas – Map 212
8.19 Compass Rose 213
8.19.1 Compass Rose Locations 213
8.20 Airline Tenants – Locations & Callsigns 213
8.20.1 Other Companies – Various Aircraft & Callsigns or Services 214
8.21 Air Traffic Control and Radio Procedures 215
8.21.1 Radio Standards 215
8.21.2 Radio Failure or Vehicle Breakdown in the Manoeuvring Area 217
8.21.3 Unable to Comply with ATC Instructions 217
8.22 Radio Frequencies 218
8.22.1 Apron I – Apron Advisory 218
8.22.2 Dual Ground Control Frequency 219
8.22.3 Dual Ground Control Frequency – Airfield Map 220

8.23 Cautionary Areas 221
8.24 Radio Calls – Examples 221
8.24.1 Standards and Tips 221
8.24.2 Determining the Active Runway(s) 222
8.24.3 Runway Crossings 222
8.24.4 Entering a Runway 223
8.24.5 Maintenance on ILS Equipment 223
8.24.6 Positive Controlled Routings 224
8.25 Freezing the Scene 224
8.26 Nighttime Operations 225
8.27 D-TT Written and Practical Testing Preparation 226
8.27.1 D AVOP – Practice Questions 228
8.27.2 D AVOP – Practice Questions ANSWERS 232
9 Airfield Maps 237
9.1 West Airfield 237
9.1.1 West Airfield – UNMARKED 238
9.2 East Airfield 239
9.2.1 East Airfield – UNMARKED 240
9.3 Apron I, West Aprons, & South Aprons 241
9.4 Apron I, East & West Deice Aprons 241
9.4.1 Apron I, East & West Deice Aprons – UNMARKED 242
9.5 South Aprons 243
9.5.1 South Aprons – UNMARKED 244
9.6 West Aprons 245
9.6.1 West Aprons – UNMARKED 246
9.7 South Airfield – UNMARKED 247
9.8 North Airfield – UNMARKED 248
9.9 Dual Control Frequency 249

9.10 Navigational Aid 250
9.11 Apron I Pocket Cards 251
9.12 Airfield Pocket Cards 252

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Approval

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The most current revision of this manual is on The Source and available to download from the AVOP Office website.

It is the responsibility of each company/employer and every individual using this manual to ensure that all electronic and hard copies are the most current revision.

A printed version of this manual is uncontrolled, and the information contained therein may be invalid.

Section 1
Contact Information, Acronyms, & Glossary

YYC Calgary Airport

1 Contact Information, Acronyms, & Glossary

1.1 Contact Information

AVOP Administrative Office

Phone Number	403-735-1386
Email	avop@yyc.com
AVOP Office Appointments & Test Bookings	Must be booked online: https://www.yyc.com/en-us/employees-operators/avop-office
Location	In the walkway, past the +15 and the Delta Hotel, between the Airport Terminal Building & the Airport Corporate Centre (ACC) building.

Safety Compliance Officer (SCO)

Phone Number	403-735-7424
Email	sco@yyc.com
Location	Airside, Ramp Level, under Gate 73

Other

Integrated Operations Centre (IOC)	403-735-1300

1.2 Acronyms

ACL	Anti-Collision Light (Beacon)
AMC	Airside Maintenance Centre
AME	Aircraft Maintenance Engineer
AOC	Airport Operations Control
AOS	Airfield Operations Specialist
ASDE	Airport Surface Detection Equipment
ATD	Airside Traffic Directives
A-VDGS	Advanced Visual Docking & Guidance System
ATC	Air Traffic Control
AVOP	Airside Vehicle Operator's Permit
CAA	Calgary Airport Authority (Calgary Airports)
CATSA	Canadian Air Transport Security Authority
CBSA	Canadian Border Services Agency
CPS	Calgary Police Service
CA	Critical Area
DTB	Domestic Terminal Building
EDA	East Deicing Apron
EMS	Emergency Medical Services
ERS	Emergency Response Services

FEC	Field Electrical Centre
FOD	Foreign Object Debris
GSE	Ground Service Equipment
HOS	Head of Stand
IATA	International Air Transportation Association
ILS	Instrument Landing System
IOC	Integrated Operations Centre
ITB	International Terminal Building
LVOP	Low Visibility Operations Plan
MAD	Manoeuvring Area Delimitation
MHz	Megahertz
MOA	Manager, Operations – Airports
NPS	Non-Passenger Screening
NPS-V	Non-Passenger Screening – Vehicle
RAIC	Restricted Area Identification Card
ROC-A	Restricted Operator's Certificate – Aeronautical
RPA	Runway Protected Area
RVOP	Reduced Visibility Operations Plan
RVR	Runway Visual Range
SCO	Safety Compliance Officer

SOC	Security Operations Control
TOS	Tail of Stand
VSR	Vehicle Service Road
WDA	West Deicing Apron
YYC	Calgary International Airport

1.3 Definitions

Advanced Visual Docking & Guidance System (A-VDGS)	A visual display unit on Apron I that provides real-time flight data and accurate aircraft docking guidance information to pilots and ground crew during aircraft arrival 'on-gate.' The system is intended to provide support to aircraft flight crews to dock safely, especially during lightning events.
Airport	An aerodrome for which the government has issued an airport certificate.
Airport Operations Control (AOC)	Airport Operations Control is where AOC Specialists coordinate and manage daily airport activities. Phone the Integrated Operations Centre to report any airside or operational incident, accident, event, hazard or safety concern (IOC 403-735-1300), see Integrated Operations Centre (IOC).
Airside	The area of an aerodrome (airport) to which access is controlled or restricted, including the movement area, vehicle corridors and all buildings and ground areas within the airfield perimeter.
Airside Traffic Directives (ATD)	Site specific (Calgary International Airport) policies, rules and procedures used to govern airside vehicles, pedestrian, and aircraft movements, including taxiing or towing procedures for use by non-pilots.
Airside Vehicle Operator's Permit (AVOP)	A designation issued by the Authority AVOP Office certifying that the person named therein is authorized to operate vehicles airside.

Air Traffic Control (ATC)	The position in the Control Tower, operated by NAV Canada, that provides the following services: a. Clearances and instructions for the movement of vehicles and aircraft in the Manoeuvring area at YYC. b. Information to all traffic within the airport perimeter as it is known and pertinent. Communication on applicable aviation radio frequencies at YYC (Apron Advisory, East Ground, West Ground, etc.)
Anti-Collision Light (ACL)	The Anti-Collision Light is a flashing red light, normally on the top or bottom of an aircraft fuselage. On smaller aircraft, the ACL may be on the top of the horizontal stabilizer (tail). The ACL is turned on just before the engines are started and is 'ON' continuously until the engines are shut down.
Apron	The part of an aerodrome, other than the Manoeuvring Area, which accommodates the loading and unloading of passengers and cargo, the refueling, servicing, maintenance and parking of aircraft, and the movement of aircraft, vehicles and pedestrians.
Apron Advisory	The position in the Control Tower that provides information to persons operating aircraft on Apron I.
Automated Terminal Information Service (ATIS)	Provides airport specific information, including local weather, to arriving and departing aircraft by means of a recorded continuous and repetitive broadcast.
AVOP Coordinator	The Manager, Airside Safety, who administers the YYC AVOP program and oversees the Airside Traffic Directives.
Blind Spots	Areas where radio communication cannot be transmitted or received
Breezeway	Designated airside roadway or passage on the Head of Stand VSR on Apron I. Used by authorized vehicles and personnel to move between concourses, gates, or operational zones. Stop signs, height restrictions, and a 10 km/h speed limit are enforced to ensure safe and efficient movement. Breezeways can be

	temporarily closed or modified for construction, maintenance, or operational needs.
Calgary Airport Authority (Calgary Airports)	Also known as CAA or The Authority and is responsible for the operation, management and development of YYC Calgary International Airport (YYC).
Category II (CAT II) Operations	Procedures that apply to aircraft and vehicles operating in the Manoeuvring Area when weather conditions deteriorate to very low visibility, specifically when the cloud ceiling is between 200 feet and 100 feet on Runway 17R/35L. During CAT II Operations, all vehicle movements are conducted under positive control to ensure protection of the Instrument Landing System (ILS) critical areas required for CAT II approaches. Vehicles and aircraft must hold short of CAT II Hold Lines when directed by Air Traffic Control (ATC), even if RVOP or LVOP procedures are not active.
Circle of Safety	The Circle of Safety is a protection zone for parked aircraft, drawn as an unmarked circle outside of the aircraft wingtips, nose and tail, intended to prevent damage from GSE being operated in close proximity to the aircraft.
Containment Actions	Actions taken in the immediate aftermath of an incident to contain a risk presented to the safe operations of the aerodrome.
Controlled Area	An area on the airport that cannot be entered unless Air Traffic Control clearance is requested and received (before entering the area).
Corrective Action Plan (CAP)	A plan created by the employer to address concerns, hazards, or risk to the safe operations of the aerodrome.
Critical Area (CA)	The part of the main terminal building that is post-security, including Apron I, and any adjacent area identified by the Aerodrome Operator.

Crosswalk (Walkway)	Any portion of a road, an Apron or any other area designated by a sign or surface marking as a pedestrian crossing.
DA AVOP	A type of Airside Vehicle Operator's Permit which authorizes a vehicle operator to drive on all Aprons and paved service roads but not on Taxiways or Runways.
DA-WS AVOP	A type of Airside Vehicle Operator's Permit which authorizes a vehicle operator to drive on West and South Aprons and paved service roads but not on Taxiways or Runways.
D AVOP	A type of Airside Vehicle Operator's Permit which authorizes a vehicle operator to drive a vehicle on any hard surface, including taxiways and runways, as well as gravel service roads at Calgary International Airport.
D-TT AVOP	An Airside Vehicle Operator's Permit that authorizes a aircraft taxi / tow operations in the Manoeuvring Area at Calgary International Airport.
Employer	Any person, business, organization or company that employs people.
Escort	A qualified AVOP holder who agrees to provide guidance for an unqualified driver on a movement surface (apron, taxiway or runway) or a vehicle service road, or any airside area that is not AVOP exempt, and who assumes all responsibility for safety, security and adherence to correct AVOP rules and procedures, for themselves and for all vehicles they are escorting.
Expedite	An instruction issued by Air Traffic Control (ATC) to proceed without delay.
Failure to Give Right-of-Way	Failure to give right of way (cut off) is defined as: any time an aircraft, tow operator, or pushback operator needs to stop, slow down, or deviate from its course to maintain a safe distance from a potential obstacle.

Foreign Object Debris (FOD)	Any material airside, such as mud, gravel, glass, nails, tacks, scraps of metal, garbage, chemical substances, paper, plastic, baggage or other materials that may cause damage to an aircraft, vehicle, building or person(s) if not cleared away.
Glide Path Antenna (Shack)	The component of an Instrument Landing System (ILS) that provides vertical guidance with respect to the ideal glide slope for an aircraft 'on approach' for landing.
Ground Loading Position (Gates)	Area where passengers and/or crew board or deplane an aircraft and must walk on the Apron (ground) between the aircraft and a terminal building.
Groundside	Refers to the non-secure side of the primary security line (PSL). The area of an airport not intended to be used for activities related to aircraft operations and to which the public normally has unrestricted access.
High Speed Taxiway	See Rapid Exit Taxiway
Holding Bay	A defined area where aircraft can be held, or bypassed, or positioned for run-ups to facilitate efficient movement of aircraft.
Hold Short	An instruction issued by Air Traffic Control (ATC) to hold behind Runway Holding Position Markings while awaiting permission to cross or proceed onto a Runway; or hold behind of an Intermediate Holding Position Marking (Taxiway Intersection Marking) (if present) when holding short of a taxiway.
Hot Zone	Hot Zone is a Circular radius anywhere between emergency response vehicles and an emergency or incident scene plus 10 m.
Instrument Landing System (ILS)	A radio navigation approach system that provides aircraft with horizontal and vertical guidance on approach and during landing. The ILS is made up of the glide path antenna and the localizer antenna.

Integrated Operations Centre (IOC)	The Integrated Operations Centre is where operational staff coordinate and manage all regular daily airport activities and all irregular operations. Phone the IOC to report any airside or operational incident, accident, event, hazard, or safety concern (IOC 403-735-1300).
Jet Bridge (Passenger Boarding Bridge)	An enclosed, movable connector that extends from an airport terminal gate to an aircraft. Its primary function is to allow passengers to board and disembark from the aircraft directly from the terminal building, without having to go outside onto the apron. Jet bridges can be adjusted in height and length to accommodate different aircraft types and door positions. They are equipped with safety features and require trained personnel for operation.
Localizer	The component of an Instrument Landing System (ILS) that provides lateral guidance for aircraft 'on approach' for landing, with respect to the Runway center line.
Low Visibility Operations Plan (LVOP)	This plan calls for specific procedures by the Airport Operator and/or Air Traffic Control when the Runway Visual Range (RVR) is below 1200 feet. For vehicle operations, low visibility conditions on any portion of the airport are deemed to be low visibility conditions throughout the entire airport and must be under positive control. Only vehicles essential to the continued operation of the airport are allowed on Manoeuvring Area of the airfield during low visibility conditions under positive control. LVOP will be terminated when the RVR is stabilized above 1200 feet.
Manager, Operations – Airports (MOA)	Previously called the Airport Duty Manager (ADM), the Manager of Airports is responsible for all daily operational decisions (Contact the IOC first. The IOC will direct your call to the most appropriate person or department).
Manoeuvring Area	The part of an aerodrome (airport) used for the take-off, landing, and taxiing of aircraft, excluding Aprons. The Manoeuvring Area includes all runways and taxiways.

Manoeuvring Area Incursion	Occurs when any part of a vehicle, person, or aircraft enters the Manoeuvring Area, including runways and taxiways—without proper authorization from Air Traffic Control (ATC), or crosses the designated boundaries (such as the Apron Limit Line or Manoeuvring Area Delimitation (MAD) Line) into the Manoeuvring Area without the required AVOP license or permission. This includes unauthorized entry by vehicles, pedestrians, or aircraft, and is considered a serious safety and security infraction.
Markings, Signs, & Lights	Paint markings, signs, and lights used throughout the airport and in all airside areas to provide instructions for correct, safe and efficient movement of all aircraft, vehicles and pedestrians.
Mobile Equipment	See Vehicle.
Movement Area	The part of an aerodrome (airport) used for the take-off, landing and taxiing of aircraft. The movement area includes the Manoeuvring Area and the Aprons.
No Delay	See Expedite.
Non-Passenger Screening – Vehicle	A facility run by CATSA to provide random screening of vehicles, occupants and their belongings before entering the Critical Area (CA) in order to maintain the security of an airport's CA. Biometric checks are conducted before admittance to the CA.
Off the Runway	Indicates that vehicles are off the Runway surface and outside the Runway Holding Position Markings. Never use "Clear of a Runway" as it could be misunderstood as removing snow on a Runway.
Operational Stand	An area of an Apron designated for the parking of aircraft for the purpose of loading and unloading passengers and providing ground services (commonly referred to as a Gate).
Operator	See Vehicle Operator

Pedestrian	Individuals who are in the airside environment without a vehicle.
Perimeter Road	A road around the threshold of a Runway primarily used to avoid or reduce vehicle traffic crossing Runways. YYC has a speed limit of 50 km/h on all perimeter roads, unless otherwise posted.
Pilot's License	A Private Pilot Aeroplane, Commercial Pilot Aeroplane, Commercial Pilot Helicopter, Airline Transport Pilot Aeroplane, Airline Transport Pilot Helicopter as defined by Transport Canada or equivalent international agency. A Pilot License must be kept valid and current for use at Calgary International Airport.
Pushback	A procedure where an aircraft is moved backward by a tug/tractor.
Rapid Exit Taxiway	A Taxiway connected to a Runway at an acute angle and designed to allow landing aircraft to turn off at higher speeds.
Reduced Visibility Operations Plan (RVOP)	This plan calls for specific procedures by the Airport Operator and/or Air Traffic Control when the Runway Visual Range (RVR) is below 2600 feet down to but not less than 1200 feet RVR. For vehicle operations, reduced visibility conditions on any portion of the airport are deemed to be reduced visibility conditions throughout the entire Airport. Only operationally required vehicles are allowed on the Manoeuvring Area of the airfield during reduced visibility conditions under positive control. The Reduced Visibility Operations Plan is activated when the RVR is below 2600 feet and must be under positive control.
Restricted Operator's Certificate – Aeronautical (ROC-A)	A document issued by Innovation, Science and Economic Development Canada certifying the holder may operate an aeronautical radio fitted with radio-telephone equipment only, transmitting or receiving on fixed aviation frequencies, not open to public correspondence. The AVOP Office does not provide ROC-A testing services.
Restricted Area	The area of an aerodrome identified with signs or barriers that only authorized people can enter.

Restricted Area Identification Card (RAIC)	A security clearance identification that is required to work airside at YYC that must be displayed at all times while airside.
Runway	A defined rectangular area on a land aerodrome designated for the takeoff and landing of aircraft.
Runway Incursion	Any occurrence at the airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft. This includes entering or crossing a runway without proper authorization from ATC or failing to hold short of required markings or lines (such as CAT I and CAT II Hold Lines).
Runway Protected Area (RPA)	The protected area of a surface designated for the landing and takeoff of aircraft. This protected area runs between the extended Runway Holding Position Markings inside and on each side of the localizer antenna arrays, and on each end of the runway. ATC must ensure this area is clear before clearing an aircraft to land or take-off on that runway.
Runway Visual Range (RVR)	An RVR sensor system is used for measuring the visibility along the Runway. It is an instrumentally derived value that represents the horizontal distance a pilot will see down the Runway from the approach end of the Runway. It is based on the sighting of either high intensity Runway lights or the visual contrast of other targets; whichever yields a greater visual range.
Service Road	A paved driving area near Aprons, including cargo roads, etc., accessible only to vehicles. Service roads do not go around a threshold of a Runway. At YYC, the speed limit for service roads is 30 km/h.
Taxiway	The part of an aerodrome used for maneuvering aircraft and airport equipment between the Apron area and the Runway.
Taxiway Incursion	Any unauthorized or incorrect entry of an aircraft, vehicle, or person onto a taxiway or its protected area without proper clearance from ATC. This includes crossing designated hold lines, entering the taxiway without permission, or failing to comply with

	operational procedures that ensure safe separation from aircraft and other vehicles.
Threshold	The beginning of the portion of the Runway usable for landing aircraft.
Uncontrolled Taxiway	A Taxiway on which aircraft do not require permission from the ground controller to use.
Vehicle	Any (motor) vehicle or portable device, either self-propelled or towed, but not including aircraft.
Vehicle Operator	A person responsible for the operation and safety of a vehicle and equipment.
Vehicle Service Road (VSR)	A road on an Apron to provide guidance to traffic and vehicle operators. VSRs are indicated by parallel white lines, with a single broken white centerline. VSRs at YYC have a speed limit of 30 km/h.

Section 2
Introduction

2 Introduction

The YYC Airside Traffic Directives (ATD) and Airside Vehicle Operators Permit (AVOP) Manual is derived from the International Civil Aviation Organization (ICAO), Canadian Aviation Regulations, and Transport Canada and is designed to comply with TP 312 regarding standards and best practices.

The YYC ATD and AVOP Manual is designed to provide airside vehicle and traffic rules, policies, and procedures to prevent accidents and eliminate or reduce the risk of personal injury and/or property damage. The ATD and AVOP Manual also serve as a framework for airside operators to work safely within a specialized working environment.

All persons airside at YYC are required to know and comply with all applicable airside policies and procedures.

2.1 Requirements to Operate a Vehicle Airside

All persons listed below must hold a valid Airside Vehicle Operator's Permit (AVOP) with the Calgary International Airport (YYC):

a. Operators of a company vehicle.
b. Operators of ground service equipment.
c. Operators who tow aircraft beyond the company leased space.
d. Aircraft maintenance personnel who hold a valid AME license who taxi aircraft on the movement area.

All operators who hold an Airside Vehicle Operator's Permit (AVOP) must:

a. Ensure their AVOP is valid (not expired) and matches the employer that is assigned to the operator's Restricted Area Identification Card (RAIC).
b. Operate within the duties and responsibilities assigned to the AVOP type.
c. Comply with the Airside Traffic Directives found within the AVOP Manual.
d. Adhere to YYC safety and security policies.

Note: All persons engaged in airside operations must wear a hi-visibility vest at all times in accordance with Federal and Provincial safety legislation and YYC airside safety requirements.

2.1.1 AVOP Licensing Requirements

To support and ensure safe, secure, and efficient airside operations, all airside drivers must have a clear **need** and **right** to apply, obtain and hold an Airside Vehicle Operator's Permit (AVOP). The AVOP applicant's duties must include an imminent, ongoing, and regular need to drive airside in direct support of aircraft or aviation operations. Anyone with an infrequent or intermittent need to drive airside (less than several times a month) should not apply, hold, or retain an AVOP as infrequent usage increases the safety risk.

AVOP applicants and holders must:

a. Always hold a current and valid Provincial driver's license (equivalent to the Alberta Provincial Class 5 driver's license, as a minimum with no restrictions) when applying for, renewing, replacing, and using the Airside Vehicle Operator's Permit (AVOP).
b. Bring all required documentation and licenses (including Radio Operator's Certificate-Aeronautical (ROC-A) and AME licenses) to the AVOP office when applying, renewing or updating an AVOP (as applicable to the AVOP type).
c. Always hold and show proof of a current and valid AVOP specific for each employer and as applicable to their duties and responsibilities for that employer while driving airside.
d. Follow all YYC Airside Traffic Directives policies, rules, and procedures found in the ATD and AVOP Manual.
e. Continually review and be familiar with the most current Airside Traffic Directives and any changes, amendments, and revisions of the AVOP Manual.
f. Immediately report any impaired driving offense under the Criminal Code or any administrative license suspension under Provincial law to their supervisor and to the AVOP Office.
g. Present their AVOP and their Driver's License to the AVOP Office or AVOP Traffic Enforcement Personnel upon request.

What is a valid Driver's License?

- Must not be expired
- Must not be cracked, split, cut, or impaled

Note: Any person whose permanent residence in in the province of Alberta must obtain a valid Alberta driver's license within three months of their arrival in the province.

2.1.2 Employer Requirements and Responsibilities for AVOPs

All employers whose ground service operations include operating vehicles, ground service equipment, or taxiing or towing aircraft beyond a company lease must apply and be approved by the AVOP Coordinator to hold AVOPs at YYC. All AVOPs are employer specific and applicable to the duties and responsibilities of each AVOP type.

In order to maintain compliance and participate in the YYC AVOP Program, employers must:

1. Complete the YYC AVOP Company Application form upon request for renewal.
2. Obtain and maintain the required Certificate of Insurance (COI).
3. Ensure company Alcohol & Drug Policy and testing policy and procedures meet or exceed Calgary Airports' Alcohol & Drug Policy standards.
4. Understand all AVOP service fees outlined in the Schedule of Fees posted on the AVOP Office website: https://www.yyc.com/en-us/employees-operators/avop-office.
5. Stay current with all ATD and AVOP Manual updates, including ensuring only the most current manual, application form, training, and testing materials are available and in use.

6. Have company specific AVOP training program delivered to all new operators based on the standards and procedures outlined in the YYC ATD and AVOP Manual.
7. Ensure all training is completed in accordance with Calgary Airports' approvals, standards, and requirements.
8. Ensure AVOP training records for applicants are maintained for a minimum of five (5) years and will be provided to Calgary Airports on request within three (3) business days.
9. Ensure all in-house AVOP testing is completed in accordance with Airport Authority approvals, standards, and requirements.
10. Ensure all in-house AVOP testing records and checklists for applicants are maintain for a minimum of five (5) years and will be provided to Calgary Airports on request within three (3) business days.
11. Ensure all employees whose duties require driving vehicles, equipment, taxiing or towing aircraft airside (for ground service operations) apply for, and complete their AVOP Written Assessment within 30-days of the start of airside driving duties, and complete their AVOP Practical Assessment within 60-days of completing the Written.
12. Ensure any employee applying for or holding an AVOP has a current and valid Provincial driver's license (equivalent to the Alberta Provincial Class 5 driver's license, as a minimum with no restrictions).
13. Maintain all applicable applicant records including Provincial driver's license number, class, expiry, and any violation or suspension under the Criminal Code or under provincial law for a minimum of five (5) years.
14. Ensure all AVOP applicants whose duties include operating a VHF radio airside hold a valid Radio Operator's Certificate-Aeronautical (ROC-A) for D and D-TT AVOPs, tow vehicle operators on Apron I, and brake riders).
15. Ensure all D-TT AVOP applicants whose duties include taxiing an aircraft have a current and valid AME License.
16. Ensure all applicants who are already in possession of a valid AVOP have an equal and approved AVOP type for company operations.
17. For AVOP transfers from another company, ensure all applicants who are already in possession of a valid AVOP completes a company check ride assessment to ensure the employee demonstrates appropriate AVOP knowledge and safe airside driving standards prior to the employee's assumption of operational duties.
18. Ensure AVOP company check ride assessment records for applicants are maintained for a minimum of five (5) years and will be provided to Calgary Airports on request within three (3) business days.
19. Ensure all employees whose duties require operating vehicles or ground service equipment (GSE) airside are aware of all company specific leased parking areas.

20. Communicate with employees to ensure they are immediately aware of any violations, infractions, suspensions, retest requirements, etc.
21. Coordinate and participate in all AVOP violation meetings and retest requirements.
22. Ensure all vehicles and GSE are equipped with all required lights, signs and safety equipment in accordance with the Airside Traffic Directives.
23. Request and provide current and correct company contact information for the person(s) responsible and authorized to sign AVOP application forms. (The AVOP company signing authority must be in a management position with the authority to confirm the AVOP applicant has a need and right to hold an AVOP and take responsibility for the actions of that person as AVOP holder).

Note: Retention of Training and Testing Records
The employer(s) of an AVOP applicant must keep all applicable records pertaining to records pertaining to the training and testing of the AVOP applicant. Only the AVOP application form and signed test certificate are kept on file by the Authority AVOP Administration Office. All other documents (written tests, practical tests and Competency Check/Night Endorsement) will be verified and entered into the AVOP database, with those paper documents subsequently shredded.

2.1.3 Governing Documents

Participation in the AVOP Program is subject to the Airside Traffic Directives (ATD) and AVOP Manual, applicable Calgary Airports policies, and any governing agreements with Calgary Airports. In the event of any inconsistency, the YYC ATD and AVOP Manual, and Calgary Airports' policies shall prevail.

2.1.4 AVOP – Company Application Form

Companies (tenants, contractors, and Calgary Airports internal departments) are required to apply to participate in the YYC AVOP Program. Companies must contact the AVOP Office (avop@yyc.com) to inquire. The AVOP Office will advise of next steps.

All companies (tenants, contractors, and Calgary Airports internal departments) may be required to renew participation with the YYC AVOP Program to ensure that operational requirements demand for the use of AVOPs. The YYC AVOP Office will contact those requiring to renew with minimum thirty (30) days notice.

2.2 Vehicles & GSE: Licensing, Safety Requirements, & Markings

2.2.1 Licensing Requirements

No person may operate a vehicle, any ground service equipment (GSE), taxi (not including pilots with a current and valid pilot's license) or tow an aircraft at the Calgary International Airport

unless the operator and vehicle are in compliance with all licenses, permits and insurance required by the Province of Alberta and Calgary Airports.

No person may operate a vehicle, GSE, taxi or tow an aircraft at Calgary International Airport while under prohibition from operating a vehicle as imposed by a court or a judge. **All AVOP holders must report the suspension of their Driver's License immediately to their supervisor and to the AVOP Office.**

2.2.2 Vehicle & GSE Safety Requirements

Vehicle and ground service equipment (GSE) must be maintained to manufacturers' specifications in a safe and serviceable condition to a standard that reflects the professionalism and public image of the Calgary International Airport.

All vehicles (except for escorted vehicles) driven airside (beyond the company leased area) must be equipped with and operate the following:

a. Company markings.
b. Functioning beacon light (vehicles with cabs only).
c. Functioning four-way flashers (vehicles without cabs).
d. Seat belts for all vehicles, with or without an enclosed operator's cab
e. Vehicle height placards clearly visible to the operator for all vehicles, including vehicles with equipment or accessories (platforms, ladders, etc.) over 2.1 m.
f. Unique and legible identification numbers (>1 company airside vehicle or equipment must have identification numbers).
g. Aeronautical radio (Manoeuvring Area only).
h. Unique transponder (Manoeuvring Area only).

2.2.3 Vehicle Markings

All airside vehicles (unless under escort) must:

a. Have company markings (i.e. company name) visibly displayed on the vehicle. Magnetic signs are acceptable.
b. Companies with more than two of the same sized vehicles operating on Apron I must also visibly display unique vehicle identification numbers.

All vehicles entering the Manoeuvring Area, unless under escort, must have the company name and a unique and legible vehicle identifier number visibly displayed. Company name and identification must be of sufficient size and contrast to be visible and readable from a minimum distance of 15 m. Large vehicles (i.e.: lift trucks, catering trucks, etc.) must have numbers a minimum of 30 cm high on both sides of the vehicle.

2.2.4 Beacons & Lights

All self-powered (gas or battery-powered) vehicles with a cab must be equipped with fully functioning headlights, taillights, and parking lights. Vehicles without a cab must be equipped with fully functioning parking and taillights that can flash on and off in unison.

Note: All vehicles and drivers operating ground side (off airport) must comply with all municipal and provincial requirements, including a valid provincial license plate, registration, insurance and license plate lamp.

In reference to TP 312 5th Edition, mobile vehicles on the Manoeuvring Area are lighted to display flashing yellow lights except for vehicles associated with an emergency situation, which display flashing red light, or flashing red and flashing yellow lights. The characteristics are as follows:

a. An effective intensity of the flash ranging between 40 and 400 candelas.
b. 360° azimuth (horizontal) coverage.
c. Peak intensity from 0° to 10° above the horizontal and reduced intensity to 1/10 of peak intensity from 10° to 15° above the horizontal.
d. A flash rate of 75 (±15) flashes per minute.
e. The colour of a mobile object light is within the appropriate boundaries identified in TP 312 5th Edition Appendix 5A.

Note: It is desirable to use lights of higher intensity for mobile objects routinely operating on the Manoeuvring Area for easy acquisition from the control tower, yet not in excess of 400 candelas for reason of glare.

For the strobe type light, the flash display includes a multiple flash burst within each cycle. The multiple flashes are sequential and separated by an interval of 250 ms.

Note: All staff working from a vehicle with a fully enclosed driver's compartment must wear high-visibility clothing with reflective bands anytime they step outside of their vehicle when working or present airside.

Beacons are intended to function as a warning that the vehicle is in use and moving. The beacon must be ON and functioning when the vehicle is in use anywhere airside. The beacon must be OFF when vehicles are parked within the perimeter of an operational stand for the purpose of servicing an aircraft. (Improper use of beacons can be distracting for taxiing aircraft.)

Note: Operators of vehicles equipped with turn signals must use them whenever they change direction, including at all VSR intersections.

Beacons and headlights should be OFF when the vehicle is parked at an airside building or when the vehicle is parked 60 m or more away from a Taxiway Center Line or Apron on the outer edge of the airfield, or 150 m or more away from a Runway. Vehicles equipped with headlights must have the headlights ON whenever it is driven airside. Headlights and non-flashing taillights must be

operated during hours of darkness and reduced visibility. All vehicle lights must be turned off when the vehicle is parked in a designated parking area.

2.2.5 Non-motorized Ground Service Equipment (GSE) Requirements

All non-motorized Ground Service Equipment (GSE) (e.g. baggage carts, dollies, etc.) are required to have reflectors of sufficient size, spaced evenly on the sides and the back of the equipment. The company can choose the reflector's color, size (minimum 5 cm), shape (round, rectangular or square), and maximum spacing. The material used must be reflective enough to be seen from a distance and to detect the vehicle as an obstruction.

The presence of unlit mobile equipment on airport Aprons can be a significant hazard to taxiing aircraft. Each company must ensure that vehicle lighting and reflective markings are installed, maintained and replaced in a timely manner.

Over-height placards are required for all GSE and equipment over 2.1 m. Placards must be of sufficient size, number and location to be clearly visible to the operator.

2.3 Unacceptable Vehicles and Equipment

Unacceptable vehicles airside includes:

a. Bicycles
b. Segways
c. Motorcycles
d. Skateboards
e. In-line Skates
f. Scooters
g. Any other similar means of transportation

** An exemption is granted to allow Calgary Police Service (CPS) or Emergency Medical Services (EMS) personnel to use bicycles or Segways, but only in certain areas and only for use during an Emergency Response.

Prohibited equipment airside includes:

a. Chains
b. Cables
c. Studded tires

2.3.1 Bag Halls & Buildings

All self-propelled mobile equipment, including all vehicles entering or used within all bag halls (ITB & DTB, inclusive) are restricted to non-hydrocarbon (electric) vehicles only. (This does not include the inbound baggage sheds.)

Hydrocarbon vehicles are not allowed to enter or operate inside the terminal building in any bag hall. Designated baggage vehicle staging areas near the baggage hall access points are provided

and must be used to transfer baggage between non-hydrocarbon (electric) and hydrocarbon (gas or diesel) vehicles.

2.4 Aircraft Safety & Equipment Display Markings

All aircraft being taxied or towed must be equipped with and operated with the following:

a. Navigation lights
b. Anti-Collision light(s)
c. Aeronautical radio
d. Transponder set to Squawk code as assigned by ATC to the aircraft or the tow vehicle (or set to 1000 MHz if no specific code is assigned)
e. Unique aircraft civil registration number

All aircraft markings must be functional and properly displayed.

Note: Navigational lights must be turned on while an aircraft is being taxied or towed. Aircraft operators have the alternate option of illuminating the aircraft with lights mounted on the towing vehicle which are directed at the aircraft.

Aircraft must not be parked or left on an active Manoeuvring Area at night unless the aircraft displays operating wingtip, tail and anti-collision lights or is illuminated by lanterns suspended from the wingtips, tail and nose of the aircraft.

2.5 Alcohol & Drug Policy

All persons airside, including those under escort, must have and comply with an Alcohol and Drug policy that meets or exceeds Calgary Airports' Alcohol and Drug Policy (available on The Source).

In accordance with the Authority Alcohol & Drug Policy, all persons working at Calgary International Airport must report Fit for Duty and remain Fit for Duty at all times while engaged in Airport Business or working on Airport Premises, operating vehicles and equipment, and when on paid standby. The Authority Alcohol & Drug Policy includes the following standards.

All persons working at YYC are prohibited from:

- Use, possession, distribution, offering or sale of illegal drugs, recreational cannabis, beverage alcohol, illegal drugs or other mood-altering substances or related drug paraphernalia.
- Reporting to work or being at work while not Fit for Duty because of the use of illegal drugs, recreational cannabis, beverage alcohol, or other mood-altering Substances.
- Consumption of any product containing recreational cannabis or Alcohol during the workday or shift, including during meals or other breaks.

Note: The Airside Traffic Directives recognizes a Blood Alcohol Content (BAC) of greater than 0.02 as under the influence of alcohol. There is zero tolerance for those driving airside who are under the influence.

A positive Drug test result through the company testing program is considered NOT Fit for Duty.

The use of legally prescribed medication while working is permitted, provided it has been prescribed or authorized for use for that person, and it is being used as prescribed or authorized, and it does not cause the employee to be not Fit for Duty.

2.5.1 Alcohol & Drugs

All persons airside, including those under escort, may be subject to Alcohol & Drug testing requirements in the following circumstances.

Post Incident:
In alignment with the Authority Alcohol & Drug policy, each company, tenant or contractor is responsible for ensuring all persons airside, including those under escort, involved in an airside traffic related incident, is automatically sent for an Alcohol & Drug test, when the incident results in, or has the potential to result in:

- A runway incursion
- A fatality
- An injury to individual(s) that requires medical attention or positive transport to hospital.

Reasonable Cause:
Where there are reasonable grounds to believe that the actions, appearance or conduct of an individual while on duty are indicative of the use of alcohol, drugs, a full investigation will take place.

Note: Arrangements for testing are the responsibility of the employer. Testing should be done immediately unless this is impossible because medical attention is required.

2.6 Insurance Requirements

The company covenants and agrees that at all times during which the company or any person for whom the company is responsible at law (including, but not limited to, the company's agents, servants, officers, directors, employees, contractors, guests, and visitors) has access to or is airside, it shall purchase, provide and maintain, or cause to be provided and maintained, at its sole expense, the Insurance as set out in this attachment.

Requirements:
Failing to obtain or maintain the required insurance coverage will result in the immediate suspension of AVOP privileges for all AVOP holders working for the company.

Details:
A company operating at the Calgary International Airport must carry:

1. Automobile Liability Insurance for licensed vehicles for an amount of not less than five million dollars ($5,000,000) per occurrence,

AND

2. Aviation Liability Insurance for bodily injury and property damage or loss in an amount not less than ten million dollars ($10,000,000) per occurrence; provided that if your company is required to have an Airport Operating License (an AOL) or has entered into a separate contract with the Airport Authority, the amount of required Aviation Liability Insurance shall be as determined under your company's AOL or as pursuant to such separate contract, as applicable. In any event, the Aviation Liability Insurance must include coverage for liability arising from airside operation of motor vehicles and mobile equipment.

All company insurance documents must also include:

1. The Calgary Airport Authority listed as Additional Insured,
2. No exclusions or reduction in coverage for any risks associated with the activities for the company or the Insured on an active airport,
3. A cross-liability clause and a severability of interest clause, and
4. Occurrence Basis Coverage.

2.7 Airport Security

2.7.1 Airside requirements for Persons Working Airside

All persons airside must:

a. Always wear their Restricted Area Identification Card (RAIC) on outer clothing and ensure the RAIC is always visible when in any restricted areas.
b. Challenge any person not wearing a visible RAIC.
c. Report any person without a valid RAIC and/or without an escort to the IOC (403-735-1300).
d. Ensure all security gates and gate arms are kept closed and locked to prevent unauthorized personnel or vehicles from accessing the airfield. This includes stopping, watching, and waiting for automated gates to fully close behind you and contacting the IOC if the security gate or arm fails to close.
e. Follow all YYC security protocols and cooperate with security personnel.
f. Know and understand the boundaries and markings for the Apron(s), movement area, and Manoeuvring Area.
g. Know and understand where the Critical Area (CA) boundary is located, the areas included within the Critical Area, and comply with all rules, policies and procedures for the Critical Area.

2.7.2 Critical, Manoeuvring, and Movement Area

Apron:

The part of an aerodrome (airport), other than the Manoeuvring Area, which accommodates the loading and unloading of passengers and cargo, the refueling, servicing, maintenance, and parking of aircraft, and the movement of aircraft, vehicles, and pedestrians.

Critical Area:
The part of the main terminal building that is post security, including Apron I, and any adjacent area identified by the Aerodrome Operator.

DA, D, D-TT AVOP holders permitted.

Manoeuvring Area:
The part of an aerodrome (airport) used for the take-off, landing, and taxiing of aircraft, excluding Aprons. The Manoeuvring Area includes all runways and taxiways.
D, D-TT AVOP holders permitted.

Movement Area:
The part of an aerodrome (airport) used for the take-off, landing, and taxiing of aircraft. The movement area includes the Manoeuvring Areas and all Aprons.

2.7.3 Critical Area Security Requirements

Anyone working or operating in the Critical Area (CA) must present at a Non-Passenger Screening (NPS) point or a Non-Passenger Screening - Vehicle (NPS-V) facility before entering the Critical Area while performing normal duties. All temporary RAIC holders must present for screening unless stated otherwise in an exemption.

All vehicle operators (AVOP holders) must self-report to the IOC when entering the Critical Area and upon leaving the Critical Area if they:

a. Enter the Critical Area without clearing NPS-V, (i.e.: to pick up FOD, to assist with an aircraft or medical emergency).
b. Unintentionally enter the Critical Area or enter the Critical Area without authorization (i.e.: aircraft avoidance, loss of situational awareness).

2.8 Airside Safety – Foreign Object Debris (FOD) & Securing Loads

In conjunction with airside vehicle operations, all persons working and driving airside are responsible for ensuring all FOD (garbage) is controlled and disposed of immediately and correctly.

2.8.1 Foreign Object Debris

Foreign object debris (FOD) can cause significant damage or injury. No person may cause, create, or leave any item, material, equipment, garbage, or debris where it can be ingested into an aircraft engine or could be lifted and thrown against buildings, people, vehicles or aircraft by jet blast, prop wash, wind, or wind gusts.

AVOP holders and all airside workers must:

a. Ensure FOD, or anything that can become FOD (item, material, equipment, garbage, or debris) is NOT left airside.
b. Pick up and dispose of FOD in proper FOD, garbage, or WHMIS appropriate containers.
c. Remove and correctly dispose of any FOD if can do so safely, without compromising or risking their own safety or the safety of any other person and without interfering with aircraft or vehicle traffic.
d. Notify the Integrated Operations Centre (IOC) of any FOD on an airside surface where assistance is required.
e. FOD in the Manoeuvring Area requires a D AVOP to access. Where appropriate, D AVOP holders may retrieve the FOD but must do so only within the limitations of their duties and responsibilities. Where applicable, D AVOP holders must contact Air Traffic Control (ATC) to request permission or advise their intentions or call the IOC to request assistance.
f. Any FOD, obstruction or potentially hazardous condition on any aircraft movement area that cannot be accessed or removed while operating within the restrictions of your AVOP must be reported to your immediate supervisor. The FOD (nature and location) must also be reported to the Calgary Airport Integrated Operations Centre (IOC).
g. Ensure movement area surfaces are kept clear of debris (FOD) by driving only on hard (paved) surfaces, unless unavoidable. Inspect the vehicle's tires for FOD before operating the vehicle and any time after leaving the hard surface.

2.8.2 Securing Loads

All AVOP holders and airside workers are responsible for the loads they are carrying or towing. Loads must be fastened or covered to prevent the load from coming loose and posing a danger to aircraft, buildings, vehicles, and pedestrians. This standard includes ULD storage. All ULDs are prohibited from being stored directly on the ground.

2.9 Social Media

Airport personnel may not use their airside privileges to post on social media. Airport personnel may not use their airside privileges to watch, photograph, record incidents or accidents unless it is part of their duties. The same is true for privileged access to individuals such as celebrities. This conduct is not within an operator's "need" to be airside.

Section 3
Airside Traffic Directives – General Requirements

3 General Requirements

Any airside worker whose duties include operating motorized vehicles airside (driving, taxiing, towing, etc.) is required to obtain an Airside Vehicle Operator's Permit (AVOP). The applicant must complete the applicable AVOP Written Assessment within the first thirty (30) days of the start of airside driving duties and complete the AVOP Practical Assessment within sixty (60) days of completing the Written.

Any person who operates a vehicle airside beyond or outside of the company's leased area must:

a. Hold both a valid YYC RAIC and a valid YYC AVOP, specific to their employer and their airside duties.
b. Be qualified, trained, and authorized to operate the equipment they are using airside.

During the operators' training period to obtain a YYC AVOP, when working airside, the operator must:

a. Be accompanied in the vehicle by a person who holds a valid YYC-specific AVOP,

   OR

b. Be authorized by the AVOP Coordinator to do so without the requirement to hold an AVOP.

Any person who taxis / tows aircraft beyond or outside of the company's leased area must:

a. Hold both a valid YYC RAIC and a valid YYC AVOP, specific to their employer and their airside duties.
b. Be qualified, trained, and authorized to operate the equipment they are using airside,

   OR

c. Hold a valid and current pilot's license or be accompanied by a person who holds a valid and current pilot's license to taxi an aircraft for maintenance purposes only.

Note: When a maintenance taxi is required, an operator with a valid pilot's license is permitted to taxi the aircraft outside of the company's leased space. To taxi at nighttime hours, the operator must possess a valid night rating on their pilot's license. Any person operating an aircraft under a pilot's license is not operating under a YYC AVOP. The employer, aircraft owner or operator is fully responsible to ensure the pilot is qualified and insured to operate the aircraft and must ensure the pilot's license is current and valid (including medical requirements).

During the operator's training period to obtain a YYC AVOP, when taxing / towing aircraft, the operator must:

a. Be accompanied by a person who holds a valid D-TT AVOP which allows for the performance of aircraft taxi / tow operations,

OR

b. Be authorized by the AVOP Coordinator to do so without the requirement to hold an AVOP.

3.1 Application for an Airside Vehicle Operator's Permit (AVOP)

Note: AVOPs are employer specific. AVOPs are only valid for the employer (or employers) registered on the AVOP card.

Calgary Airports will issue an AVOP if the applicant:

a. Holds a valid Provincial driver's license (equivalent to the Alberta Provincial Class 5 driver's license, as a minimum with no restrictions).
b. Holds a valid RAIC for the AVOP specified employer.
c. Submits a completed and signed AVOP Application form:
    - Using the latest version of the AVOP Application Form signed by both the applicant and authorized AVOP Signing Authority. The form confirms the applicant's need, training, and insurance coverage for airside driving.
    - Page 1 (at the minimum) of the AVOP Application Form must be filled out by the AVOP Signing Authority **before** the applicant completes the AVOP Written Assessment (with the AVOP Office OR company tester).
    - Page 2 of the AVOP Application Form must be filled out by the AVOP Signing Authority **before** the applicant completes the AVOP Practical Assessment (with the AVOP Office OR company tester).
    - Page 1 and 2 of the AVOP Application Form must be filled out by the AVOP Signing Authority **before** the applicant makes an appointment with the AVOP Office to add a second employer or complete the change or employer process.
    - Page 1 and 2 of the AVOP Application Form must be filled out by the AVOP Signing Authority **before** the applicant makes an appointment with the AVOP Office to renew their AVOP.
d. Submits the application to the AVOP Office within thirty (30) days of completing the practical test.
e. Holds a valid Restricted Operator's Certificate – Aeronautical for certain AVOP types (including Apron I towing) before applying for the online/written test.
f. Holds a valid Aircraft Maintenance Engineer (AME) license and ROC-A for D-TT AVOPs before applying for the written assessment.
g. Holds a valid ROC-A for D AVOPs before applying for the written assessment.

h. Is not restricted from holding an AVOP at YYC and meets any previous restriction conditions.

At the AVOP Office, Safety Compliance Officer's, or AVOP Coordinator's discretion, the Authority may request confirmation of English Language Proficiency and place restrictions on AVOPs for safety or security reasons.

The AVOP Office, Safety Compliance Officer, and AVOP Coordinator can place restrictions on any AVOP, as applicable, for safety and security reasons.

3.1.1 Record Keeping Requirements

Information collected, used or disclosed in connection with the AVOP Program, including personal information relating to AVOP applicants and holders, is collected for the purposes of airport safety, security, regulatory compliance and administration of the AVOP Program. Such information may be disclosed internally within Calgary Airports or to authorized enforcement personnel where reasonably required for these purposes and will be handled in accordance with applicable privacy legislation and Calgary Airports privacy policies.

3.2 Testing, Night Endorsement, Renewal, Retesting, & Replacement

AVOP testing is authorized by the AVOP Coordinator and conducted by AVOP Specialists and Safety Compliance Officers.

Testing may also be done by an employer specific AVOP tester for online / written assessments, practical assessments, and Night Endorsement / Competency Check assessments. Companies can contact the AVOP Office (avop@yyc.com) to inquire about an in-house company tester. Please note that the AVOP Office does not approve or oversee company trainers, only company AVOP testers.

If an applicant is completing an assessment with the YYC AVOP Office:

- Written Assessments, Practical Assessments, Night Endorsement / Competency Check Assessments, Return-to-Work Check Rides, and Familiarization (FAM) Drives must be booked using the AVOP Office Online Booking System: https://www.yyc.com/en-us/employees-operators/avop-office

Note: Phone call or email appointment requests will not be accepted or responded to.

3.2.1 AVOP Written Assessments

Passing Mark: 90%.

Attempts: Maximum of 3 tries

Retake Waiting Period: Minimum 16-hours between attempts (longer if determined by the tester based on test score)

Request for Fourth Attempt: The AVOP Office will issue a Notice of AVOP Ineligibility to company leadership when an applicant has failed three attempts. Company leadership must follow the instructions listed within the Notice of AVOP Ineligibility if requesting a fourth attempt.

Company leadership with in-house testers must notify the AVOP Office (avop@yyc.com) when an applicant has failed all three attempts. The AVOP Office will then issue a Notice of AVOP Ineligibility to company leadership. Company leadership must follow the instructions listed within the Notice of AVOP Ineligibility if requesting a fourth attempt.

Cheating Policy: Suspected or confirmed cheating results in immediate termination of the test. The applicant must schedule an interview with the AVOP Coordinator, or their designate, and Employer Representative to request a retake.

3.2.2 AVOP Practical Assessments

Attempts: Maximum of 3 tries

First Attempt: Minimum of 24-hours between a successful written assessment and first practical assessment attempt.

Testing Limitations: The initial practical assessment for DA and DA-WS can be taken at day or night; D and D-TT practical assessments must only be completed during daytime hours

Retake Waiting Period: Minimum 48-hours between attempts (longer if determined by the tester based on performance)

Card Pickup: AVOP card must be picked up from the AVOP Office within thirty (30) days of completing the Practical Assessment.

Request for Fourth Attempt: The AVOP Office will issue a Notice of AVOP Ineligibility to company leadership when an applicant has failed three attempts. Company leadership must follow the instructions listed within the Notice of AVOP Ineligibility if requesting a fourth attempt.

Company leadership with in-house testers must notify the AVOP Office (avop@yyc.com) when an applicant has failed all three attempts. The AVOP Office will then issue a Notice of AVOP Ineligibility to company leadership. Company leadership must follow the instructions listed within the Notice of AVOP Ineligibility if requesting a fourth attempt.

Employer Change: If an applicant switches companies before completing both the written and practical assessments, they must restart the entire application testing process with their new employer.

3.2.3 AVOP Night Endorsement / Competency Check Ride

Attempts: Maximum of 3 tries

Validity Period: AVOP holders can operate day or night for up to 180-days after issuance but must complete a mandatory Night Endorsement / Competency Check Ride within this timeframe.

Timing: The check ride can be taken no sooner than thirty (30) days after the practical assessment. The 180-day window accommodates reduced nighttime hours from April to August.

Failure to Complete: Failure to pass the Night Endorsement / Competency Check Ride within 180-days results in automatic AVOP cancellation, requiring a new application and full retesting (written, practical, and night endorsement / competency check ride).

Card Pickup: AVOP card must be picked up from the AVOP Office within thirty (30) days of completing the Night Endorsement / Competency Check Ride.

Testing Structure: Combined day / night tests is not permitted. The applicant must complete three separate assessments (written, practical, and night endorsement / competency check ride).

Request for Fourth Attempt: The AVOP Office will issue a Notice of AVOP Ineligibility to company leadership when an applicant has failed three attempts. Company leadership must follow the instructions listed within the Notice of AVOP Ineligibility if requesting a fourth attempt.

Company leadership with in-house testers must notify the AVOP Office (avop@yyc.com) when an applicant has failed all three attempts. The AVOP Office will then issue a Notice of AVOP Ineligibility to company leadership. Company leadership must follow the instructions listed within the Notice of AVOP Ineligibility if requesting a fourth attempt.

3.2.4 Renewals

Validity: All AVOPs are valid for three years.

Note: Transition to Three Year Cycle – Effective October 1, 2024, all AVOPs follow a three-year issue and renewal cycle. Existing AVOPs will transition to this cycle upon renewal, reissue, or reinstatement (including after a violation check ride).

DA, DA-WS Renewal Requirements:

a. Successfully completed written assessment
b. Completed Application Form
c. Valid RAIC and driver's license
d. Successful completion of required assessments.

Note: If a driver holds multiple AVOPs, a separate application form will be required for each AVOP and each employer.

D-TT, D Renewal Requirements:

a. Successfully completed Written Assessment
b. Successfully completed Practical Assessment

c. Completed Application Form
d. Valid RAIC and driver's license
e. Valid ROC-A and AME license (if applicable)
f. Successful completion of required assessments.

Note: all assessments required for AVOP renewal MUST be completed BEFORE the AVOP expires. If the driver fails to complete any required assessment before expiry, the driver will be required to restart and complete all levels of testing over again.

Attempts:

- **DA, DA-WS:** permitted 1 attempt at written assessment. If failed, AVOP will be revoked and driver must start over completing all three levels of testing (Written, Practical, and Night Endorsement / Competency Check Ride).
- **D-TT, D:** permitted 1 attempt at written assessment, 1 practical assessment. If failed, AVOP will be revoked and driver must start over completing all three levels of testing (Written, Practical, and Night Endorsement / Competency Check Ride).

Collecting New AVOP Card:

Renewal applications (including signed online test certificates) must be submitted to the AVOP Office within thirty (30) days of the test date or before the current AVOP expires. The applicant must:

1. Have a valid Provincial Driver's License (equivalent to the Alberta Provincial Class 5 license, as a minimum, with no restrictions).
2. Have a valid Restricted Area Identification Card.
3. Hold a valid Restricted Operator Certificate – Aeronautical (ROC-A) and/or valid AME License, if applicable (for D and D-TT AVOPs).
4. Have a valid *need* and *right* to hold an AVOP and drive airside.
5. Have completed company specific recurrent AVOP training.
    - Company will retain all driver training records and checklists.
    - Company will be prepared to provide training records to the Airport Authority upon request.
6. Understand and demonstrate competency of YYC Airside Traffic Directives and AVOP Manual as appropriate to the AVOP type.

Note: For D and D-TT AVOP Renewals - if an applicant fails the Renewal Practical Assessment on the first attempt, the company may be required to provide the recurrent AVOP training records and checklists to the YYC AVOP Office before a second attempt can be booked.

3.2.5 Returning After an Absence

Same Employer, Absence of 4 – 12 Months:

The AVOP card must be returned to the AVOP Office at the start of the driver's leave. Upon returning to driving duties, the driver must pass a practical Return-to-Work Check Ride with a designated AVOP tester before resuming airside driving. The driver has one attempt to pass the Return-to-Work Check Ride. If first attempt is failed, the individual's AVOP will be cancelled and will require a new application and full retesting (written, practical, and night endorsement / competency check ride) to reobtain a YYC AVOP.

If testing with the AVOP Office, please book your Return-to-Work Check Ride here: https://www.yyc.com/en-us/employees-operators/avop-office

Absence Over 12 Months:
AVOP is cancelled. A new application and successful completion of written, practical, and night endorsement / competency check ride is required to reobtain AVOP.

New Employer (After Any Absence):
Application is treated as a new AVOP or may qualify for a Change of Employer if within 30 calendar days.

Note: The AVOP card must be returned to the AVOP Office within 30 days following the start of the leave.

3.3 Assessment Accommodations

Practical & Competency Check / Night Endorsement Vehicle:
Airside tugs or tractors are not considered appropriate testing vehicles. If a driver arrives at a Practical and/or Competency Check / Night Endorsement Assessment with a tug or tractor, the assessment will be cancelled, and the company will be charged the associated fees for the cancelled appointment.

For all DA and DA-WS Practical and Competency Check / Night Endorsement Assessments, a company vehicle must be provided.

For all D-TT Practical and Competency Check / Night Endorsement Assessments, an Airport Authority vehicle will be utilized.

For all D Practical and Competency Check / Night Endorsement Assessments, the driver has a choice to use a company vehicle or an Airport Authority vehicle.

DA & DA-WS Vehicle Usage Requests:
Companies can request the use of an Airport Authority vehicle during a DA and DA-WS Practical and Competency Check / Night Endorsement Assessments. The vehicle request must be made to the AVOP Office by phone (403-735-1386) or email (avop@yyc.com) minimum 5 days before the scheduled assessment date. Requests made with less than 5 days notice may not be accommodated, which could result in a cancelled assessment.

Written Assessment Accommodations:
Accommodations offered:

1. Questions read aloud to applicants
2. Additional 30 minutes to complete assessment

An accommodation must be requested by company leadership minimum 10 days before the scheduled assessment date. Requests made may not be able to be accommodated even within the 10-day notice period due to staffing. Company leadership will work with the YYC AVOP Office to find an appropriate time as to when the accommodation can be offered.

3.4 Lost, Stolen, or Replacement AVOP Cards

Replacement AVOP cards are available at the AVOP Office if the AVOP is current and valid. The replacement is subject to a $50.00 fee per AVOP card replaced. Drivers are required to make an appointment with the AVOP Office where they must present a valid driver's license and employer specific RAIC.

3.5 Cancelled, Expired, Suspended, or Revoked AVOPs

An AVOP is automatically suspended, cancelled, or revoked if:

a. Driver's License is invalid (expired or broken, cracked, cut, impaled), revoked, or suspended under Provincial or Federal law.
b. The AVOP has expired.
c. RAIC is revoked, suspended, or expired.
d. Employer cancels or suspends the AVOP.
e. A Safety Compliance Officer, AVOP Specialist, or AVOP Coordinator suspends the AVOP for safety and/or security reasons.
f. Employment ends with the AVOP-listed employer.

Return Requirement:
The AVOP card must be returned to the AVOP Office within thirty (30) days of cancellation, along with the last day of employment for record keeping. Employers are responsible for ensuring that the company specific AVOP card(s) are returned to the AVOP Office within the 30 days to avoid a $50.00 charge.

3.6 Reinstatement

An AVOP can be reinstated if:

a. The cancellation occurred less than thirty (30) days before the request to reinstate is made.
b. A new AVOP Application Form is submitted.
c. The AVOP card has not expired.

3.7 Change of Employer

An AVOP may be transferred if the applicant:

1. Has a valid AVOP type applicable to company needs.
2. Has a valid Provincial Driver's License (equivalent to the Alberta Provincial Class 5 license, as a minimum, with no restrictions).
3. Has a valid Restricted Area Identification Card.
4. Holds a valid Restricted Operator Certificate – Aeronautical (ROC-A) and/or valid AME License, if applicable (for D and D-TT AVOPs).
5. Has a valid *need* and *right* to hold an AVOP and drive airside.
6. Has completed a company check ride.
    - Company will retain check ride checklist.
    - Company will be prepared to present the check ride checklist to the Airport Authority upon request.
7. Understands and demonstrates competency of current YYC Airside Traffic Directives and AVOP Manual as appropriate to the AVOP type.
8. Submits a completed AVOP Application Form within thirty (30) days of the previous AVOP cancellation.

Note: If the application to transfer an AVOP is not submitted to the AVOP office within thirty (30) days of the last day of previous employment, the AVOP is automatically cancelled, and the individual must apply for a new AVOP and successfully complete all applicable tests.
If the AVOP required is a different type, a new application form and all applicable tests are required.

3.8 Multiple Employers

AVOPs are employer specific and cannot be used across different companies.

Note: The AVOP holder/applicant is not authorized to drive ALONE for the added (second, third, etc.) employer until their employer has performed a driver check ride and documentation is complete. The AVOP holder/applicant then has thirty (30) days to collect the AVOP card from the AVOP Office.

An AVOP may be valid for multiple employers if the applicant:

1. Has a multi-employer RAIC.
2. Has a valid AVOP type applicable to company needs.
3. Has a valid Provincial Driver's License (equivalent to the Alberta Provincial Class 5 license, as a minimum, with no restrictions).
4. Has a valid Restricted Area Identification Card.
5. Holds a valid Restricted Operator Certificate – Aeronautical (ROC-A) and/or valid AME License, if applicable (for D and D-TT AVOPs).

6. Has a valid *need* and *right* to hold an AVOP and drive airside.
7. Has completed a company check ride.
    - Company will retain check ride checklist.
    - Company will be prepared to present the check ride checklist to the Airport Authority upon request.
8. Understands and demonstrates competency of current YYC Airside Traffic Directives and AVOP Manual as appropriate to the AVOP type.
9. Submits a completed AVOP Application Form within thirty (30) days of the previous AVOP cancellation.
10. A separate AVOP Application and assessments are completed for each employer.

Example: If an AVOP holder has a DA-WS for 'Employer Y-Air' and a D for 'Employer Z-Air', they cannot use the D AVOP when working/driving for 'Employer Y-Air'.

Notification of an AVOP violation ticket incurred by an AVOP holder will be sent to every employer of that AVOP holder and will remain on their record as applicable to the violation.

3.9 Restricted Operators Certificate – Aeronautical (ROC-A)

Required for any person using aeronautical frequencies. A valid ROC-A is required for all D-TT and D AVOP applicants. DA AVOP holders involved in tow operations on Apron I (including brake riders) must hold a valid ROC-A.

Note: The study guide for the Restricted Operator's Certificate is a stand-alone publication and is not part of the AVOP Manual. The study material for the ROC-A is contained in the Study Guide for the Restricted Operator's Certificate – Aeronautical. The study guide can be obtained from the Innovation, Science, and Economic Development Canada website (www.ised-isde.canada.ca).

3.10 Escorting a Non-AVOP Holder

Escorting protocols are intended for short-term or temporary airside operations only. Escorting procedures are not intended for vehicle, equipment, or AVOP training, or as a substitute for obtaining an AVOP.

Only a qualified AVOP holder with a permanent (red) RAIC is authorized to escort another vehicle driven by a non-AVOP holder. As an escort, the AVOP and red RAIC holder is responsible for all actions of the non-AVOP holder. Any safety or security violation, incident, or accident by the operator of the vehicle under escort are the responsibility of the AVOP holder (escort).

The person acting as an escort assumes all liability for safety and security for the duration of the trip and for the entire time that vehicle and operator are airside. Escorts are responsible for ensuring safe aircraft and vehicle operations by allowing more than enough time

and space for all vehicles under their care and control. All other operators (pilots, equipment operators, etc.) must feel confident there is 'ample' room.

If the driver of the vehicle under escort is uncooperative for any reason, the escort has the right to refuse entry to the airfield for that driver. If the conflict arises after entry to the airfield escort the driver back to the airside gate and resolve the issue in a safe area. If assistance is required, contact the IOC and request Airport Security to assist in dealing with the uncooperative driver.

The maximum ratio is one to three (1 to 3). One escort vehicle to a maximum of three vehicles under escort. The maximum distance between the escort vehicle and the vehicle under escort (and every additional vehicle) is four (4) seconds. (This distance may be adjusted according to weather, visibility, stopping performance of vehicles or traffic).

An AVOP holder who escorts another vehicle airside must conduct a briefing with the driver of the vehicle. **Pre-escort briefing must cover:**

a. Ensuring all escorts have a valid Driver's License.
b. Route and speed limits.
c. Safe following distances.
d. Stop sign procedures (only the escort / AVOP holder stops, all vehicles under escort follow like a train).
e. NPS-V procedures, as applicable.
f. Emergency procedures and unexpected route changes.
g. Right-of-way and conflict with traffic (aircraft ALWAYS have priority).

Private vehicles and non-AVOP operators are allowed airside only if:

a. Escorted by a qualified AVOP holder with a red RAIC,

   OR

b. Approved by the AVOP Office and compliant with insurance and Drug and Alcohol policy.

When performing work in an area, the escort must maintain care and control of all individuals and vehicles under escort and must remain in a position to take quick actions that ensure and demonstrate continuous supervision and operational authority.

When escorting in the Manoeuvring Area and an escort is separated from a vehicle under escort (i.e.: the vehicle drove off on their own), the AVOP holder must contact the appropriate Ground frequency to advise the possibility of a delinquent individual on the airfield. Once the escort and all other vehicles under escort are parked in a safe location, the AVOP holder must also advise the company supervisor and the IOC.

3.10.1 Escorting vs. AVOP Training

As discussed, escorting procedures is not intended for vehicle, equipment, or AVOP training, or as a substitute for obtaining an AVOP.

Escorting is for short-term or temporary airside operations **only** and the escort must follow the procedures listed in Section 3.10.

AVOP training is only conducted when the trainee is accompanied by an AVOP holder for the express purpose of vehicle, equipment, and AVOP practical learning.

3.11 Driving with a Suspended AVOP, Driving without a Valid Provincial Driver's License, & Driving without an AVOP ★

Section 14(b) of the Airport Traffic Regulations provides that no person may operate a vehicle in a "restricted area" (all of airside) without a "valid identification" (a valid Airside Vehicle Operations Permit).

Calgary Airports requires all drivers operating motor vehicles airside to obtain and hold a valid Airside Vehicle Operators Permit (AVOP). Any persons found operating a motor vehicle airside without a valid AVOP or under escort by an AVOP holder shall immediately have the following actions taken:

- Immediate confiscation of RAIC and escort out of the Restricted Area.
- RAIC suspension for a minimum period of seven (7) days.
- Mandatory meeting with the Calgary Airports Security Team.
- Mandatory meeting with the Manager, Airside Safety or designate.

Individuals shall be further required to obtain a valid AVOP within an accelerated time period of:

- Fifteen (15) days to complete their first written exam attempt with the AVOP Office. Should more than one attempt be necessary, a written exam must be successfully completed no later than thirty (30) days from the violation.
- Once the written exam has been successfully completed, the individual will be allotted thirty (30) days to complete their first practical exam attempt with the AVOP Office. Should more than one attempt be necessary, a practical exam must be successfully completed no later than 60 days from successful written exam completion.

**** Not knowing the requirements for a valid AVOP is not a valid reason for operating a vehicle airside without an AVOP. ****

Should an individual fail to obtain a valid AVOP in the allotted timeframes or fail to pass the written exam or practical exam after three attempts, that individual at the discretion of the Manager, Airside Safety may be ineligible to obtain an AVOP for a period of one (1) year.
For individuals that have previously held an AVOP or have repeatedly been found to be in contravention of the requirements for driving airside, additional AVOP and RAIC measures may be taken, up to and including permanent ban of AVOP driving privileges, and permanent loss of the RAIC.

3.12 AVOP Exempt Areas

General rules:

a. All YYC Airside Traffic Directives apply for all persons in AVOP exempt areas.
b. All YYC security, safety, alcohol and drug, smoking, and distracted driving policies and procedures apply, even in AVOP-exempt areas.
c. Traffic rules, including Hierarchy of Right-of-Way, signs, lights, markings, and speed limits remain in effect despite exemptions.
d. The AVOP Coordinator may grant or revoke an AVOP exemption at any time.

3.12.1 Leased Areas

Leased areas are private operational spaces marked by two parallel white lines.

- An employer has an AVOP exemption for the area located within the boundaries of the employer's leased space. An AVOP exemption is granted to an employer only. If the employer and the leaseholder are two different entities, then the leaseholder must agree to provide the employer with permission for the AVOP exemption on the leased property.
- The AVOP exemption applies only to the employees and visitors under the direct supervision of the employer, and they must restrict their driving activities to within the boundaries of the employer's leased area. AVOP holders who are not employees of the leaseholder must have permission to enter and cannot enter a leased area unless operationally required.

3.12.2 Gate 306A Road

AVOP exemption applies to:

a. Cargo road from Gate 306A to West Deicing Apron, south along the cargo buildings, east and west along cargo buildings, past the multi-use cargo buildings to the infield fuel facility.
b. Service road between Gate 303 and the T-intersection south of Taxiway Juliet.

Note: All airside personnel must have a valid RAIC or be supervised by someone with a red RAIC. West and East Deicing Aprons are leased areas and access requires leaseholder approval. To request access to the West and East Deicing Aprons, contact the leaseholder in advance. If day-of operational access is required, contact Pad Control on the applicable East Deice or West Deice frequency, state your vehicle call sign and purpose, and request permission to enter the applicable apron.

3.12.3 Gate 420 to Gate 321

AVOP exemption applies to the service road from:

a. Gate 420 through NPS-V North
b. Perimeter road around Runway 17R
c. Past the buildings associated with the North Retention Pond

d. North and west past the Lav Dump / Glycol Station
e. Through to Gate 321.

3.12.4 Airside Maintenance Centre (AMC)

The Airside Maintenance Centre (AMC) is an Airport Authority leased area. Due to the large vehicles, equipment and significant pedestrian traffic at the AMC, DA drivers are not permitted in this area unless they have permission and specific business at the AMC.
The AMC is an AVOP exempt area to facilitate access to Airport Authority approved contractors and subcontractors. The exemption applies to the AMC area, located inside the security fence, west to the STOP lines that separate the AMC area from Taxiway Alpha, and south to the beginning of the perimeter road around the West side of Taxiway Lima extending to Taxiway Lima Bravo.

The speed limit within the AMC is 30 km/hour.

Access Restrictions:

- D AVOP holders may enter airside.
- All other drivers must use public roads and enter through controlled gates with permission.

3.12.5 Gate 234 Roads

The Gate 234 road AVOP Exemption applies to the service road leading from Gate 234 to:

- The Aircraft Storage Area.
- The Mock-up Site.
- Big Top / Baggage Search Shelter
- The Transmitter Site.
- Up to, but not including Apron X (Deicing Pad)

3.12.5.1 Aircraft Storage Area

Located South of Taxiway U. Aircraft must be towed into the Aircraft Storage Area. Personnel exiting the Aircraft Storage Area are not permitted to proceed out the North exit without a D AVOP type. All individuals, equipment, and aircraft must remain a minimum of 51 m back from the Taxiway Center Line at all times to ensure safe clearance for aircraft.

3.12.5.2 Mock-up Site

The Mock-up Site refers to a designated location on the YYC used for emergency response training and familiarization purposes. The Mock-up Site is located South of the Aircraft Storage Area, adjacent to the Big Top.

3.12.5.3 Big Top / Baggage Search Shelter

If a bomb threat is realized, and the need for search and disposal is necessary, the Calgary Police Service, based on their expertise and best safe practices, will determine if and where the search disposal will occur. On-site search and disposal can take place at the YYC Big Top, or Baggage Search Shelter, located South of the Aircraft Storage Area, adjacent to the Mock-up Site.

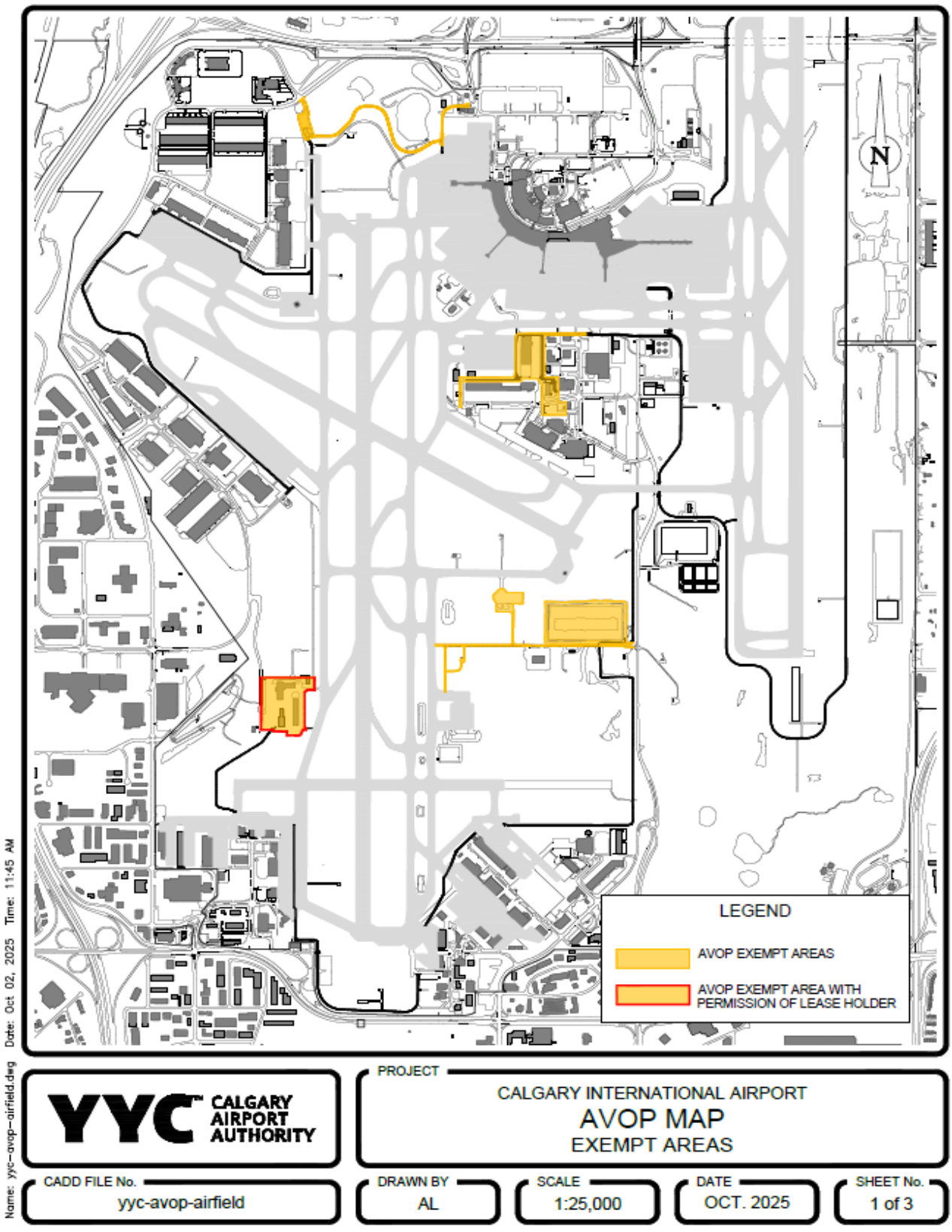
3.12.5.4 Transmitter Site

Located East of Taxiway Y and South of Taxiway U. The Transmitter Site is an operational area associated with airfield communications infrastructure housing navigational and radio transmission equipment essential for air traffic control and airport operations.
Operating vehicles and equipment near the Transmitter Site may result in the reduction of clear radio transmissions; however, the operator will always be able to clearly hear and communicate with Ground control.

3.12.6 Pond M

Pond M is AVOP exempt up to the fence on the North side of the pond. Drivers are not permitted past the North fence unless escorted by a D AVOP holder or authorized with a specific exemption granted by the AVOP Coordinator. Drivers must have an appropriate vehicle that is able to traverse steep, unpaved inclines.

3.12.7 Exemptions Map



Section 4
AVOP Violations

4 AVOP Violations

Safety is the top priority when working airside, particularly when operating vehicles, GSE, or aircraft. Operational demands, including time pressures, never justify violating the Airside Traffic Directives. Any action that compromises airfield safety or security may result in a warning or violation ticket.

Violations are recorded under a point-based tracking system, which assesses risk based on the severity of the infraction. Serious violations, especially deliberate ones, carry higher point values and longer tracking periods due to the greater potential to cause incidents or accidents.

This system helps monitor incidents, accidents, and near misses, enabling follow-ups through education, testing, or corrective actions to enhance safety, awareness, and compliance.

4.1 Monitoring & Enforcement

Enforcement of the Airside Traffic Directives is the responsibility of Calgary Airports or their designate. Airside Traffic Enforcement Personnel includes Calgary Police Service (CPS), the Airfield Operations Specialists (AOS), Safety Compliance Officers (SCO) and any other person(s) designated by Calgary Airports to enforce the Airside Traffic Directives.
Airside personnel must comply at all times with instructions from Airside Traffic enforcement personnel.

The Authority uses a system of warnings; violation tickets and a record-keeping point system for non-compliance with the Airside Traffic Directives. A copy of the violation ticket is given to the employee, and a copy of the violation/infraction letter is sent to the employee c/o their employer(s).

Note: Airport Authority AVOP testers are authorized to undertake airside spot checks and competency tests, both randomly and for cause.

4.1.1 Commanding Authority at Incident & Accident Scenes

All airport personnel involved in, or witness to an accident or incident must remain at the scene of accident or incident. Airport personnel shall refrain from moving vehicles or equipment or altering the scene until authorized to do so by the commanding authority at the accident or incident scene.
The commanding authority may be:

- Emergency Services (ARFF, CFD)
- Calgary Police Service (CPS)
- Manager, Operations – Airports (MOA)
- Airfield Operations Specialist (AOS) / On-Scene Controller
- Safety Compliance Officer (SCO)

All airport personnel involved in an accident or incident shall comply with the direction of the commanding authority. For incidents involving serious personal injury or death, Calgary Police officers are the commanding authority. In all other incidents, the commanding authority listed in Section 4.1.1 are the commanding authority at any accident or incident scene.

4.2 Self-Reporting of AVOP Incidents

In the interests of promoting safe airside operations, Calgary Airports encourages all airside personnel and vehicle operators to self-report any incidents, violations or conflicts they may be involved in. The Authority has a Non-Punitive Safety Reporting Policy for its staff that guarantees that no disciplinary action will be taken for the act of reporting an incident, accident, or hazard, and policy is extended to airside operations the AVOP Program.

For airside personnel and vehicle operators who self-report an incident, elimination of violation points may be considered by the Safety Compliance Officer when handling the incident. The incident will still be fully investigated and should corrective action such as additional training and testing be indicated, those actions will be taken. A record of the violation will remain on the driver's AVOP record for the prescribed time, however the points for that individual violation may not be added to the individual's total points.

This policy does not include incidents involving willful negligence, substance abuse, or criminal intent. Warnings and violation tickets will be sent to the Authority AVOP Coordinator for review. If required, an interview with the AVOP Coordinator (or designated person) will take place and appropriate corrective action will be taken. AVOP holders who receive a warning or violation ticket are given opportunities to improve their airside driving knowledge and skills through discussion and/or further training or testing. Those AVOP holders that show a repeated or deliberate disregard for airfield safety demonstrated by a pattern of behavior of disobeying the Airside Traffic Directives and becoming an unacceptable safety or security risk for airfield users may have their airside driving privileges at YYC revoked.

4.3 Unsafe or Dangerous Driving

No person may operate a vehicle airside in a manner that is unsafe or is dangerous to aircraft, equipment, buildings, vehicles, operators, airport workers, or pedestrians. Any person operating a vehicle airside in a manner that is considered unsafe or dangerous may be issued a violation (or multiple violations) as applicable to the event.

4.3.1 Distracted Driving

YYC's distracted driving policy mirrors the Province of Alberta's guidance. **A violation may be issued if a driver is observed doing any of the following:**

a. Using hand-held cell phones.
b. Texting or emailing.

c. Using electronic devices such as laptop computers, video games, cameras, video entertainment displays and programmable portable devices, with or without earphones or a headset.
d. Entering information on electronic devices.
e. Reading printed materials in the vehicle.
f. Writing, printing, or sketching.
g. Personal grooming.

** AVOP holders may use cell phones ONLY when the vehicle is parked in a safe location. Earbuds are considered part of an electronic device.

** Earbuds are NOT considered PPE or hearing protection.

An AVOP holder may be issued a distracted driving violation, even if their driving performance does not appear to be affected. An AVOP holder who commits a moving violation while distracted may receive two tickets – one for distracted driving and one for the moving violation.

4.4 Safety Devices

A safety device is a tool, mechanism, or equipment designed to prevent accidents, injuries, or damage by controlling, monitoring, or mitigating potential hazards. Examples include seatbelts, overhead door optical sensors, smoke detectors, circuit breakers, emergency stop buttons, and personal protective equipment (PPE). They help to ensure the safety of individuals and property by minimizing risks.

No person shall tamper with or disable a safety device. Persons found to have been tampering with a safety device may receive a violation.

4.5 Violations

CATEGORY I - MINOR INFRACTIONS (2 Points Each)

ID	INFRACTION
1A	Depositing, creating, or failure to retrieve FOD, including tracking FOD onto movement areas (with no operational or immediate safety impact)
1B	Failure to wear a hi-visibility safety vest airside
1C	Failure to secure load(s)
1D	Failure to apply brakes for parked vehicles, chock wheels, carts, etc.
1E	Failure to display proper safety or company markings
1F	Failure to obey a STOP sign or STOP Line
1G	Failure to wear a seatbelt
1H	Failure to comply with Airside Traffic Directives (ATDs)

1I	Failure to produce a valid AVOP or a valid driver's license (must be shown to the Authority AVOP Coordinator [or designate] within 24 hours)
1J	Failure to properly display correct vehicle or aircraft markings or equipment
1K	Failure to use the VSR
1L	Failure to YIELD to traffic within VSR
1M	Operating vehicle with headlights, beacons, or other required lights not used or not working
1N	Parking in Unauthorized or No Parking locations
1O	Speeding: 1-10 km/h over the limit
1P	Towing more than the allowed number of dollies/carts at one time (e.g. more than four cargo pallet dollies/carts, more than six baggage dollies/carts on the Apron, or more than four baggage dollies/carts inside the ITB bag halls)
1Q	Traveling the wrong way on a one-way VSR
1R	Entering or exiting a VSR in an unsafe manner
1S	Walking across an Apron Taxilane
1T	Failure to immediately report a vehicle accident or safety incident
1U	Failure to stop five (5) m before an overhead (roll up) door

CATEGORY II - INTERMEDIATE INFRACTIONS (5 Points Each)

ID	INFRACTION
2A	Distracted driving: using cell phones or personal audio/video/gaming devices while driving airside
2B	Driving in an unsafe manner[1]
2C	Entering a construction area, an emergency site, or a dignitary area without a need and right, or Authority approval
2D	Failure to give right-of-way to marshallers and/or the push tractor returning to the building upon completion of a push-back or to pedestrians in designated walkways
2E	Failure to give right-of-way to snow, ice and FOD control vehicles, glycol recovery, or spray vehicles in performance of their duties, or to fuel trucks maneuvering into or backing out of an operational stand
2F	Failure to remain at the scene of a vehicle accident
2G	Improper parking of vehicle/equipment causing or resulting in a safety incident or damage
2H	Speeding: 1-10 km/h over the limit in a breezeway on Apron I or in a baggage hall on Apron I

2I	Failure to use designated push-back (or tow) procedures
2J	Speeding: 1-10 km/h over the limit within the Circle of Safety
2K	Improper passing of a vehicle on the VSR or perimeter road
2L	Failure to give right-of-way to aircraft whether under its own power, tow or during Pushback[2]
2M	Tampering with a safety device resulting in vehicle or infrastructure damage
2N	Failure to freeze the scene or altering the scene of an incident/accident[3]
2O	Unauthorized aircraft taxi or tow movement
2P	Carrying passengers in excess of the number of seats and or working seatbelts in the vehicle
2Q	Interfering with an emergency in progress[4]
2R	Depositing, creating, or failure to retrieve FOD, including tracking FOD onto movement areas (with operational or immediate safety impact)

[1] Driving without due care and attention

[2] Tow/aircraft/vehicle did not meet the technical definition of failure to give right-of-way.

[3] No additional damage or impact to safety or operations

[4] No additional safety or operational risk as a result

CATEGORY III - MAJOR INFRACTIONS (8 Points Each)

ID	INFRACTION
3A	Driving between an aircraft and a marshaller
3B	Driving between an Aircraft and an Emergency Vehicle(s) with red lights flashing (during an Emergency Response)
3C	Driving between the terminal building or airside bus and a parked aircraft at a ground loading position
3D	Driving without a valid AVOP (includes driving in unauthorized areas or areas not applicable to the AVOP type)
3E	Failure to comply with Airside Traffic Enforcement personnel
3F	Failure to give right-of-way to aircraft whether under its own power, tow or during Pushback[1]
3G	Failure to give right-of-way to emergency response or airside traffic enforcement vehicles with a red beacon flashing
3H	Failure to maintain care & control of vehicle(s) under escort
3I	Failure to monitor or use the appropriate radio frequency while operating radio equipped vehicles in the Manoeuvring Area
3J	Failure to report a suspension of a Provincial Driver's License

3K	Failure to use designated push-back (or tow) procedures resulting in jet-blast (to persons, equipment, buildings, or aircraft), damage or other safety event
3L	Obstructing emergency egress from buildings or access to emergency equipment (e.g., fuel shut-off valves, wheeled fire extinguishers, standpipes)
3M	Operating an unsafe vehicle
3N	Speeding: 11-20 km/h over the limit
3O	Speeding: 11-15 km/h over the limit in a breezeway on Apron I
3P	Taxiway incursion or Manoeuvring Area incursion
3Q	Unduly crossing runways/thresholds
3R	Unsafe operation of a vehicle (includes distracted driving)[2]
3S	Interfering with an emergency in progress[3]
3T	Interfering with an investigation in progress[4]
3U	Tampering with a safety device resulting in near miss of injury, vehicle damage, or infrastructure damage
3V	Failure to freeze the scene or altering the scene of an incident/accident[5]

[1] Tow/Aircraft/vehicle did meet or exceed the technical definition of failure to give right-of-way.

[2] Driving without due care, attention, and regard for the safety of aircraft, passengers, and others. Includes reading/texting/dialing/taking photos or video with a hand-held device while vehicle is in motion.

[3] Additional damage, operational impact, or safety risk

[4] Any act taken to willfully alter the course or outcome of an investigation, including harassment or intimidation of Airside Traffic Enforcement Personnel

[5] Causing damage or compromising safety.

CATEGORY IV - GROSS MISCONDUCT (12 Points Each)

ID	INFRACTION
4A	Crossing a lit red STOP bar
4B	Driving airside under the influence of drugs and/or alcohol[1]
4C	Driving recklessly or dangerously[2]
4D	Driving with a suspended AVOP
4E	Driving without a valid driver's license
4F	Failure to obtain correct permission(s) or obey instructions from ATC (Air Traffic Control [ATC])
4G	Runway incursion[3]

4H	Speeding: 21 km/h or more over the limit
4I	Speeding: 16 km/h or more over the limit in a breezeway on Apron I
4J	Using a D-TT AVOP for a purpose incompatible with its terms and conditions of issue
4K	Using any personal, electronic, or distractive device(s) resulting in personal injury, property damage, or a serious risk to aviation
4L	Tampering with a safety device resulting in personal injury and/or damage to vehicle and/or infrastructure

[1] Includes failure to provide confirmation of fitness-for-duty following a post-incident test or when a post-incident test is required as per the ATD & AVOP Manual

[2] Driving in a manner that demonstrates willful negligence towards personal safety or the safety of other operators/pedestrians.

[3] The incorrect presence of a vehicle or person on the protected area of a surface designated for the landing and takeoff off aircraft.

CATEGORY V - OTHER INFRACTIONS

Includes violations of the Airside Traffic Directives that are not mentioned in Categories I through IV.

Safety Compliance Officers (SCOs) are enabled by the AVOP Coordinator to issue Category V Violations at their discretion.

- Category V Violations, when issued, shall align with the standard violation categories and corrective actions.
- Suspensions for Category V Violations exceeding the limits specifically outlined in the ATD & AVOP Manual must be issued or approved by the AVOP Coordinator.

4.5 Corrective Action

CATEGORY I - MINOR INFRACTIONS (2 Points Each)

a. On employee's record for 12 months from date of AVOP violation ticket notification.
b. Possible interview with the AVOP Coordinator or designate upon request by the employee.

CATEGORY II - INTERMEDIATE INFRACTIONS (5 Points Each)

a. On employee's record for 18 months from date of AVOP violation ticket notification.
b. Possible interview with the AVOP Coordinator or designate upon request by the employee.
c. Possibility of one to five working day suspension of driving privileges.

CATEGORY III - MAJOR INFRACTIONS (8 Points Each)

a. On employee's record for 24 months from date of AVOP violation ticket notification.
b. Mandatory interview with the AVOP Coordinator or designate.

c. Possible practical retest administered by the AVOP Coordinator (or designate) within the assigned time frame.
d. Possibility of immediate AVOP suspension by the AVOP Coordinator or designate.
e. Possibility of working suspension at discretion of the AVOP Coordinator or designate.

CATEGORY IV - GROSS MISCONDUCT (12 Points Each)

a. On employee's record for 36 months from date of AVOP violation ticket notification.
b. Mandatory interview with the AVOP Coordinator or designate.
c. Possible practical retest administered by the AVOP Coordinator (or designate) within the assigned time frame.
d. Possibility of immediate AVOP suspension by the AVOP Coordinator or designate.
e. Possibility of working suspension at discretion of the AVOP Coordinator or designate.

CATEGORY V - OTHER INFRACTIONS

a. Dependent on the gravity of the infraction and will be determined by the AVOP Coordinator or designate.
b. Mandatory interview with the AVOP Coordinator or designate.

Note: Steps required for a driver to reobtain their AVOP is subject to the discretion of the AVOP Coordinator or designate.

4.5.1 Additional Corrective Action Eligibility for Cumulative Record Keeping Points

ACTIVE RECORD KEEPING POINTS IN EXCESS OF TWENTY (20)

AVOP holders who accumulate more than twenty (20) active record keeping points in addition to a possible Violation Check Ride may also be eligible for the following:

a. AVOP driving privileges suspended for a period of thirty (30) days.
b. AVOP driving privileges suspended for a period of three (3) months.

ACTIVE RECORD KEEPING POINTS IN EXCESS OF THIRTY (30)

AVOP holders who accumulate more than thirty (30) active record keeping points in addition to having their AVOP driving privileges revoked with mandatory AVOP retraining and testing may also face at the discretion of the Manager, Airside Safety or designate one of the following:

a. AVOP driving privileges suspended for a period of six (6) months.
b. AVOP driving privileges suspended for a period of one (1) year.
c. AVOP driving privileges permanently suspended.

4.5.2 Containment Actions and Corrective Action Plans

Safety Compliance Officers are authorized to issue immediate containment actions as required to contain a risk threatening the safety of personnel or operations in the aerodrome. These containment actions may include but are not limited to:

a. Immediate AVOP suspension, pending investigation.
b. A request for a vehicle to be immediately removed from service.
c. A request for a vehicle or ground service equipment to be taken for repair or inspection.

In incidents involving serious risk to the safe operations of the aerodrome, Calgary Airports or it designates may require additional actions and plans created to address and mitigate the risk found during the course of an investigation, commonly referred to as a Corrective Action Plan or C.A.P. Safety Compliance Officers at the completion of any investigation have the authority to issue findings from an incident to an employer and request for a Corrective Action Plan to be provided to the Safety Compliance Officer team. It is the sole responsibility of the employer to develop, create, and deliver a Corrective Action Plan to the Safety Compliance Officer team.

A Corrective Action Plan is the responsibility of the employer to provide within thirty (30) days. Extensions for delivery of a Corrective Action Plan may be given at the discretion of the Manager, Airside Safety. Any request for extensions must be made via email to a Safety Compliance Officer or the Manager, Airside Safety prior to the original due date. Companies that fail to provide corrective action plans within the thirty (30) days may be issued a violation infraction to the company for "Failure to comply with Airside Traffic Enforcement personnel."

4.6 Cumulative Effect

If the total number of record keeping points equals or exceeds the number of points for a more severe category of infraction, then the provisions of the higher category of infraction will apply.

4.7 Appeal

All Airside Safety Violations are issued based on evidence and conclusion that an act negatively impacted safety airside at the Calgary International Airport. Should a recipient and their organization feel an error was made or there is new or emerging information not provided or available at the time of the event or subsequent investigation, an appeal may be submitted. Appeal process is as follows:

a. Employees who receive a Notice of Airside Safety Violation and wish to appeal the violation are permitted to do so within fourteen (14) days of the Date of Issue.
b. Appeals must be made by a company management representative with supervisory or performance oversight of the individual making the appeal. Appeals made directly by the individual who received the infraction(s) will not be heard unless they are specifically authorized to make a direct appeal by the Authority AVOP Coordinator.
c. Appeals must include rationale for why the violation(s) or corrective action(s) issued should be amended or overturned.
d. Company representatives submitting the appeal are requested to provide a detailed list of actions that the company has taken, or commit to taking, with the individual and/or associated team. The Airside Safety Team takes company corrective actions and

commitment towards preventing re-occurrence into account when determining the appropriate outcome of an Airside Safety Violation. The actions provided must be detailed and include dates of completion or dates the actions will be completed by.

e. The outcome of the appeal will be one of the following:
    - A reduction of corrective actions, confirmation of the corrective actions already issued, or issuance of additional corrective actions.
    - Any changes to corrective actions will have a subsequent impact to the number of record keeping points on the individual's AVOP record.

f. All appeals are reviewed by the designated AVOP Coordinator for Calgary Airports within fourteen (14) days of submission. An outcome of the appeal will be provided to the company management representative submitting the appeal. Incomplete appeals or appeals lacking detailed information will be rejected and the issued violation(s) and corrective actions will remain in place.

4.8 Expiry

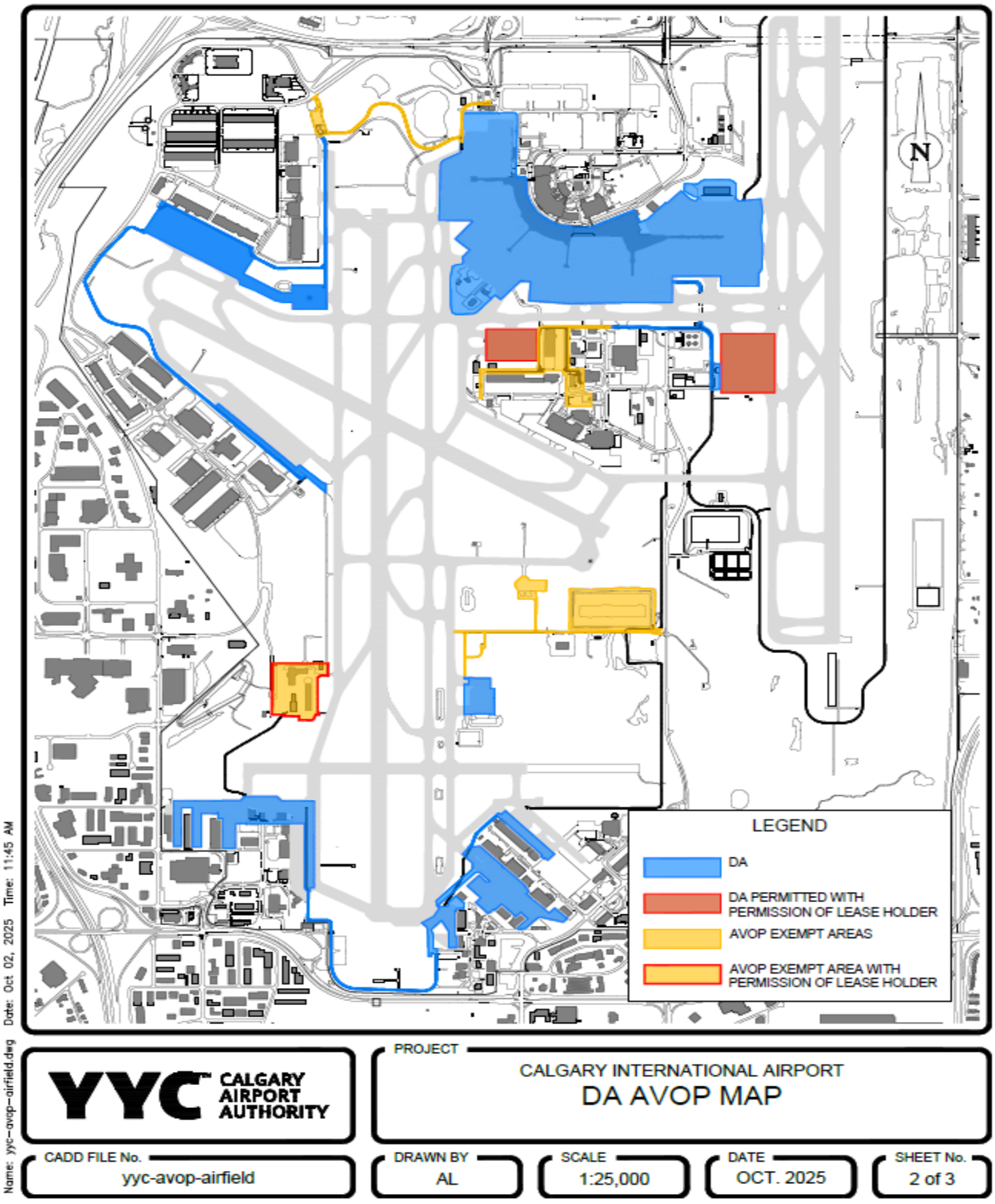
Infraction Expungement:

- Category I infractions will be automatically removed from the operator's AVOP record after 12 months.
- Category II infractions will be automatically removed from the operator's AVOP record after 18 months.
- Category III infractions will be automatically removed from the operator's AVOP record after 24 months.
- Category IV infractions will be automatically removed from the operator's AVOP record after 36 months.

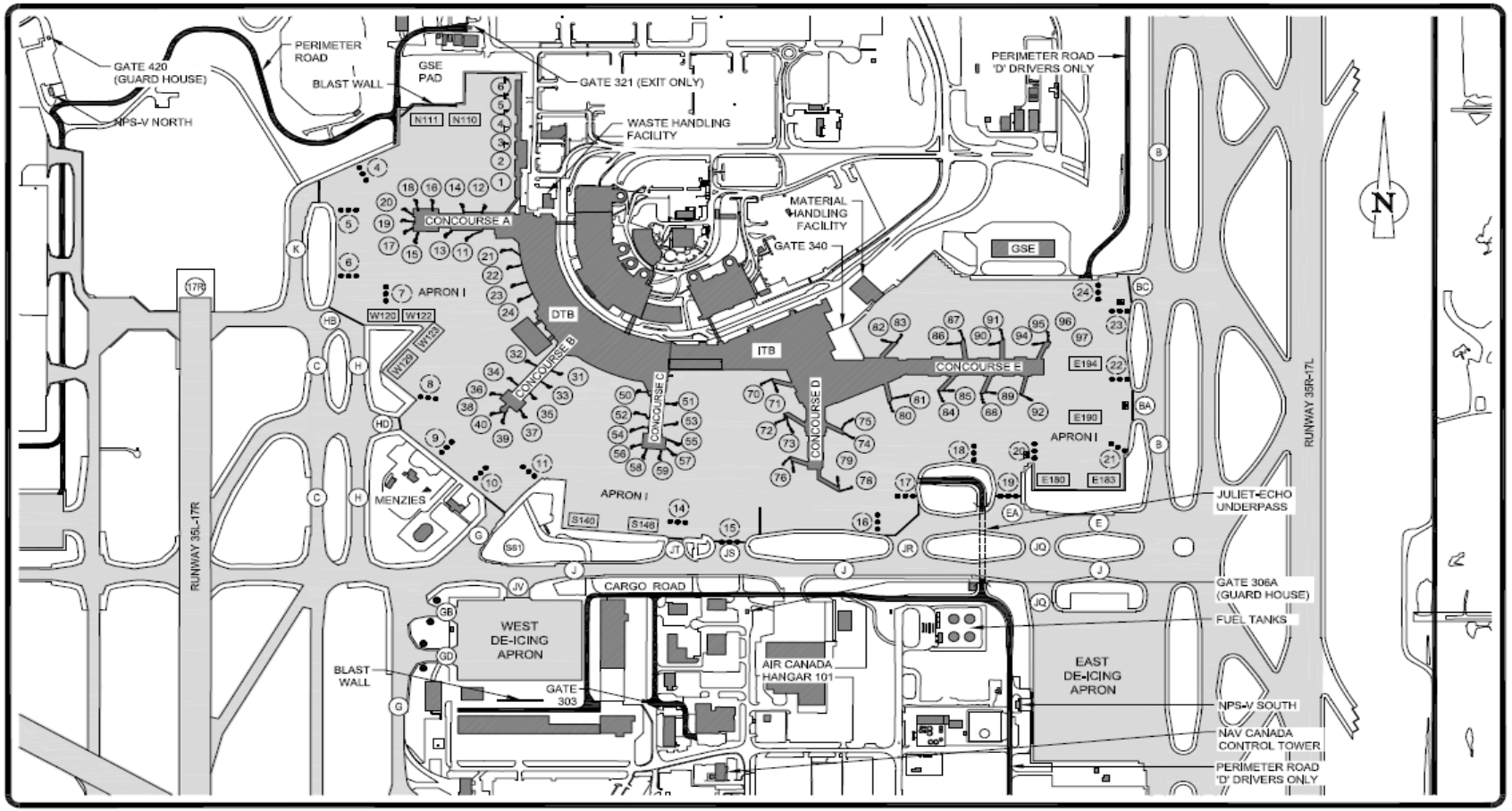
Section 5
DA AVOP Requirements

5 DA AVOP Requirements

5.0.1 DA Airfield Map



5.0.2 Apron I Map



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Calgary Airport

PROJECT

CALGARY INTERNATIONAL AIRPORT

AVOP

APRON I, EAST DE-ICING APRON, WEST DE-ICING APRON

CADD FILE No.	DRAWN BY	SCALE	DATE	SHEET No.
yyc-avop-airside-apron1&2	SAK	N.T.S.	OCT. 2025	6 of 13

5.1 DA AVOP – Permitted Surfaces

A DA is the only DA AVOP that allows driving on Apron I.

DA AVOP allows driving on Aprons I (Critical Area), III, IV, V, VI, VII, VIII, IX and the perimeter roads around the Threshold of Runway 17R and Runway 11 in a vehicle that is not equipped with an aeronautical radio. A DA (all aprons) may provide access to Apron X via Gate 235 and may also provide access to the West Deice Apron (Apron II) for seasonal operations with prior permission from the leaseholder or the AVOP Coordinator. The East and West Deicing Aprons are AeroMag leased areas. Any vehicle (other than Aero Mag vehicles) must contact Aero Mag in advance and obtain permission to enter the Deicing Apron(s). To request access to the West and East Deicing Aprons, contact the leaseholder in advance. If day-of operational access is required, contact Pad Control on the applicable East Deice or West Deice frequency, state your vehicle call sign and purpose, and request permission to enter the applicable apron.

DA AVOP holders MUST use the Juliet/Echo Underpass as their ONLY route between Apron I and the facilities south of Taxiway Juliet.

Note: DA-type AVOP holders may NOT cross Taxiway J, nor tow aircraft anywhere in the Manoeuvring Area unless escorted by a D-type AVOP holder.

All Aprons at YYC are uncontrolled, however any vehicle equipped with an aeronautical radio must always monitor the appropriate Air Traffic Control (ATC) or Apron Advisory frequency (121.3 MHz) when on the Apron I.

5.1.1 DA AVOP & the Manoeuvring Area

Under no circumstances may a DA AVOP holder drive on a designated Taxiway or Runway, unless escorted by a D AVOP holder, or unless authorized with a specific exemption granted by the AVOP Coordinator.

A **Taxiway Incursion** or **Manoeuvring Area Incursion** occurs when any part of a vehicle crosses the Apron Limit Line or Manoeuvring Area Delimitation (MAD) Line into the Manoeuvring Area, or crosses onto a Taxiway without the proper AVOP license, or when any part of a vehicle or aircraft crosses an Apron Limit Line or MAD Line without authorization from ATC, as applicable to the operation and AVOP type. All Taxiway, Runway, and Manoeuvring Area incursions must be reported to the IOC immediately.

5.1.2 Gravel Roads

DA AVOP holders are not permitted on gravel roads unless authorized with a specific exemption granted by the AVOP Coordinator or if the DA AVOP holders is operating in an AVOP exempt area.

The perimeter road on the east airfield (around Runway 17L/35R) and the gravel road on the west airfield that parallels Taxiway Alpha, between Apron VII and the AMC are restricted to D AVOP only.

5.2 Accessing Apron I (Critical Area)

The Critical Area includes the post-security section of the main terminal building, all of Apron I, and any adjacent areas identified by the Aerodrome Operator. Anyone entering this area as part of their duties must go through Non-Passenger Screening (NPS) inside the terminal or through one of the two vehicle screening points, Non-Passenger Screening – Vehicle (NPS-V) North or South.

5.2.1.1 NPS-V North

To access the airfield from Aero Drive:

a. Stop prior to the Gate 420 Guardhouse to complete biometric checks with the Security Officer.
b. Once clear, the Security Officer will open Gate 420. Once the vehicle, and any escorts are through, all vehicle operators MUST STOP just inside Gate 420 and wait for the gate arm to close fully.
c. All vehicle operators and their passengers and escorts proceeding towards Apron I MUST go through NPS-V North.
d. All vehicle operators and their passengers and escorts proceeding towards the West Airfield (Aprons VII & IX) do not need to go through NPS-V North.

To access the Critical Area (Apron I) or travel towards Apron I, enter through Gate 420 using correct security access procedures:

a. All vehicle operators and their passengers intending to enter the Critical Area (or travelling towards Apron I) must present to the NPS-V North facility.
b. STOP before the NPS-V gate arms and wait to have your biometric checks completed by the designated security agent.
c. Once cleared, drive forward slowly, and wait for the gate arm to open fully.
d. Proceed through the fully open gate arm (The NPS-V speed limit is maximum 5 km/h).
e. STOP at the STOP line as indicated by Security personnel, and as indicated by the red and green traffic lights.
f. Wait to see what security checks are required for your vehicle. (The Traffic Management System randomly selects vehicles and compartments for screening.).
g. Follow the instructions of security personnel to provide access to the selected compartments of your vehicle, then enter the NPS-V building for screening.
h. After all screening is complete, do not enter your vehicle until cleared to do so by security personnel.
i. The security personnel will release the gate arm once your screening is complete.
j. Wait for the gate arm to open fully before proceeding.

k. Exit the facility and continue left on the perimeter road to Apron I. Vehicles exiting NPS-V North must give right of way to vehicles traveling on the perimeter road.

5.2.1.2 NPS-V South

Refer to TR-2026-01.

~~**To access Apron I from Gate 306A, from the buildings west of Gate 306A on the Cargo Road, or from the West Deicing Apron area:**~~

~~d. Stop prior to Gate 306A Guardhouse to complete biometric checks with the Security Officer.~~

~~e. Once clear, the Security Officer will open Gate 306A. Once the vehicle, and any escorts are through, all vehicle operators MUST STOP just inside Gate 306A and wait for the gate arm to close fully.~~

~~e. From Gate 306A, turn East (right), and continue east on the Cargo Road towards the Juliet / Echo (J/E) Underpass intersection. (The Cargo Road speed limit is maximum 30 km/h).~~

~~q. Continue past the J/E Underpass intersection to the NPS-V South facility for screening.~~

~~e. STOP before the NPS-V gate arms and wait to have your biometric checks completed by the designated security agent.~~

~~f. Once cleared, drive forward slowly, and wait for the gate arm to open fully.~~

~~g. Proceed through the fully open gate arm (The NPS-V speed limit is maximum 5 km/h).~~

~~h. STOP at the STOP line as indicated by Security personnel, and as indicated by the red and green traffic lights.~~

~~i. Wait to see what security checks are required for your vehicle. (The Traffic Management System randomly selects vehicles and compartments for screening).~~

~~j. A red light indicates you and your vehicle have been selected for screening. All temporary RAIC holders MUST enter the NPS-V facility for security screening, whether or not the vehicle is selected for screening.~~

~~k. Follow the instructions of security personnel to provide access to the selected compartments of your vehicle, then enter the NPS-V building for screening.~~

~~l. After all screening is complete, do not enter your vehicle until cleared to do so by security personnel.~~

~~m. The security personnel will release the gate arm once your screening is complete. Wait for the gate arm to open fully.~~

~~n. After completing the screening process, you MUST prox your RAIC at the prox reader before leaving the NPS-V facility. Failure to prox your RAIC will deny you access to the Underpass, and you will have to come back and repeat the entire NPS-V process.~~

~~o. Proceed from NPS-V South, drive down towards the J/E Underpass. (Speed limit is maximum 30 km/h. Vehicle operators must use caution and drive slowly during wet, slippery and winter conditions.).~~

p. ~~STOP & prox the card reader to open the gate arm at the entrance to the Underpass. Failure to do so in a timely manner will result in your validation timing out and deny you access to the Underpass. If access is denied, you will have to return to NPS-V South and repeat the entire NPS-V process.~~

q. ~~Drivers must ensure the gate arm closes fully behind them when entering J/E Underpass.~~

~~**Note: Gate House 306A and NPS-V South operate independently of each other. Vehicle operators and their passengers are NOT required to go through NPS-V if they are turning West (left) from Gate 306A to access the buildings and the West Deicing Apron areas.**~~

5.2.1.3 NPS-V Exemptions

The following exemptions are permitted under Canadian Aviation Security Regulations when entering the Critical Area. These apply only during the performance of specific duties.

Aircraft Tow Operations:
This exemption applies to D-TT AVOP operators. Taxiing and towing an aircraft into the Critical Area requires the operator to enter via taxiway and therefore bypass NPS-V screening. The taxi / tow operator and necessary passengers enter the Critical Area under an exemption. Note that any passengers participating in the taxi / tow must be essential to the operation and entering the Critical Area under this exemption without a need and right will lead your airside privileges being reviewed. Vehicles that are not essential to the taxi/tow operation must report to NPS-V for screening prior to entering the Critical Area.
Once the taxi/tow movement is complete, the operator and all passengers are permitted to continue working in the immediate area, complete additional taxi/tows on, to, and from Apron I, and report to company crew rooms. Taxi/tow operators and passengers are not permitted to enter passenger facing (departures) level of the terminal unless exiting the Critical Area and entering again through NPS-V.

Escort vehicles and their occupants are permitted to enter the Critical Area without being screened while actively engaged in escorting an aircraft tow. Once the aircraft movement is complete the escort vehicle and all occupants must exit the Critical Area immediately and are not permitted to remain within.

Emergency Vehicles:
D AVOP vehicle operators and vehicles under escort may enter the Critical Area during an emergency. Emergency response vehicles, including Police, Fire, EMS, AOS, and Security, are permitted entry when responding to a specific incident. Vehicles equipped with red beacons must have them activated while inside the Critical Area. Responders may leave their vehicles, enter the terminal, or board an aircraft as part of their duties. Once the emergency response is complete, they must exit the Critical Area and notify the IOC. This exemption also applies to emergency vehicles using the Critical Area as a shortcut during an airfield emergency.

Snow and Ice Control Operations:
D AVOP and DA AVOP vehicle operators, including escorted snow removal vehicles, may enter the Critical Area during active snow or ice control periods. Vehicles such as sweepers, blowers, graders, dump trucks, supervisor trucks, and similar equipment are permitted without NPS-V screening. Drivers entering under this exemption may also access the terminal building. Snow events requiring this exemption must be reported to the IOC once per day, not for each vehicle entry.

Oversize Vehicles:
Due to operational requirements, cement and asphalt trucks, as well as oversize vehicles, may enter through an NPS-V checkpoint or a temporary access point if conditions are met. This exemption requires prior approval from the Authority Security Department and seven days advance notice to Transport Canada and CATSA (Exemption 2018-27).

5.2.1.4 Not Approved Exemptions

The following are not approved as Critical Area vehicle exemptions:

AVOP Testing:
There are NO exemptions for AVOP testing or training. All Critical Area rules and regulations must be followed at all times.

Aircraft Tow Operations Starting within the Critical Area:
Aircraft tow vehicles entering the Critical Area to tow an aircraft (and all tow vehicles not actively towing an aircraft) must follow Critical Area rules and regulations.

Escorting Duties:
Critical Area rules and regulations must be followed. The only exemption is for Authority vehicle towing escorts stated above.

Surface Maintenance Duties:
Surface maintenance and construction are not exempt from Critical Area rules and regulations. All Critical Area rules and regulations must be followed for regular maintenance and construction work (e.g. surveying, water contaminant removal, biological contaminant removal, inspections, slab replacement, or similar).

Grass Cutting Operations:
Grass cutting operations along the boundary of the Critical Area must comply with Critical Area rules and regulations. When cutting grass within the Critical Area, drivers must have entered the Critical Area through an NPS-V point. The IOC does not have to be notified about normal grass cutting activates along the Critical Area boundary unless the Critical Area is breached.

5.2.2 Exiting Apron I (Critical Area)

To exit the airfield through Gate 421 from Apron I:

a. Leave Apron I via the perimeter road around the threshold of Runway 17R.
b. Approach the double gate arms on the south side of NPS-V North.
c. STOP at the double gate arms. Both gate arms will open upon loop detection. This is a controlled stop; the vehicle operator must give way to all vehicles when exiting.
d. Proceed through the gate, then STOP and wait for the gate arm to fully close.
e. Turn right on the service toward Gate 420/421 (Speed limit is 30 km/h).
f. STOP at Gate 421 and wait for the gate to open.
g. Proceed through Gate 421.
h. All vehicle operators MUST STOP just outside Gate 421 and wait for the gate arm to close fully.

To leave Apron I via the J/E Underpass:

a. Look in all directions to ensure no aircraft are approaching and ensure it is safe to cross from Concourse D to the Underpass.
b. Approach the gate arm at the end of the J/E Underpass slowly. Be prepared to STOP.
c. STOP and wait for the gate arm to open fully.
d. Proceed through the gate arm, one vehicle at-time. The gate arm must be fully closed between each vehicle.
e. Turn right and proceed West on the Cargo Road (speed limit is maximum 30 km/h).

5.2.3 Escorting through J/E Underpass

The escort is responsible for briefing all vehicle operators under escort of the J/E Underpass procedures BEFORE entering NPS-V South. All drivers must be aware of the requirement to STOP at the J/E Underpass prox reader and wait to be shunted through, one vehicle at a time:

a. Follow all escort procedures to get to NPS-V South.
b. Follow all NPS-V South procedures to get to the J/E Underpass.
c. STOP at the prox reader near the entrance to J/E Underpass.
d. Press the button on the intercom system to speak with the Security Operations Centre (SOC), advise them that you are escorting and tell SOC the number of vehicles you are escorting (maximum 3 vehicles per escort).
e. SOC will verify on camera.
f. The escort must prox their RAIC on the card reader, then proceed through the J/E Underpass gate arm alone (escort vehicle only).
g. The escort vehicle must stop and wait in the J/E Underpass, leaving an appropriate distance for all vehicles under escort to line up behind them (to wait until the group is ready to proceed).
h. The first vehicle following the escort must STOP at the prox reader and allow the gate arm to fully close behind the escort vehicle.
i. SOC will shunt the first vehicle under escort through the gate arm.

j. The first vehicle must stop and wait in the J/E Underpass, behind the escort vehicle.
k. The next vehicle must STOP at the prox reader and allow the gate arm to fully close behind the previous vehicle.
l. Each vehicle is shunted through the gate arm by SOC, one at a time.
m. Each driver must STOP and wait for the gate arm to close fully between each vehicle.
n. The escort cannot proceed onto Apron I until all vehicles under their escort have been successfully shunted through the J/E Underpass gate arm.

5.2.4 Security Gates and Gate Arms

When entering through any security gate or gate arm, only one vehicle may proceed at a time unless the gate is locked open. Allowing multiple vehicles through at once is considered a security breach and can cause damage if the gate closes on a vehicle. Leaving a security gate or gate arm before it fully closes is considered a **security breach**.

When exiting the Critical Area or the airfield through any security gate or gate arm, the last vehicle through the gate or past the gate arm is responsible for ensuring the gate or gate arm has fully closed and that no unauthorized entry has occurred.

5.2.5 Restrictions

Only DA AVOP holders with leaseholder approval may access the East Deicing Apron beyond NPS-V South.

Vehicles are not allowed to use the Air Canada Hangar ramp for U-turns.

5.3 Smoking Airside

Smoking, smoking devices and/or the consumption of Cannabis, Illegal Drugs, or other Mood-Altering Substance is not permitted airside, including inside or outside of vehicles.

Smoking of tobacco-based substances (cigarettes & e-cigarettes) is permitted airside, in designated smoking shelters only. Smoking shelters are located on Apron I in the following areas:

- Concourse A - northeast corner beside Breezeway A
- Between Concourse B - east end of Breezeway B
- Beside Breezeway D - across from Gates 72/73
- Beside Breezeway E - across from Gates 80/81

5.4 DA AVOP Holders - Responsibilities

5.4.1 Vehicle & GSE Responsibilities

Anyone operating a vehicle or equipment airside at YYC must conduct a **pre-trip walkaround inspection** to ensure it is in safe working condition.

Operators are responsible for **all loads carried or towed**, ensuring they are **secure, covered, and do not spill** or pose a hazard to aircraft, vehicles, or pedestrians. This standard includes ULD storage. All ULDs are prohibited from being stored directly on the ground.

All vehicle operators must:

a. Inspect their vehicle for required safety equipment and markings.
b. Ensure all safety equipment is functioning properly.
c. Immediately report any malfunctions or defects to their supervisor.
d. Secure, tag out, and remove any malfunctioning vehicle, equipment, or aircraft from service in accordance with safety regulations and company procedures.

Additional Responsibilities:

a. Vehicles and equipment not in use **must be parked in designated areas** or within company-leased spaces.
b. All **GSE, chocks, and pylons must be properly stored** to ensure accessibility, safety, and facilitate snow clearing during winter operations.

5.4.2 Traffic Safety Rules, Policies, & Procedures

Airside traffic rules, policies and procedures are designed to be similar to ground-side traffic rules.

5.4.2.1 Seat Belts

Seat belts are mandatory for all vehicles, regardless of whether they have an enclosed operator's cab. All occupants in an airside vehicle must always wear a seat belt, except when actively servicing an aircraft at an operational stand (inside the aircraft's Circle of Safety).

To improve compliance, it is recommended that open-cab vehicles be equipped with high-visibility seat belts or seat belt covers.

5.4.2.2 Standard Traffic Signs

Stop Signs:
STOP signs and STOP lines are positioned to provide safe clearance for vehicle traffic and safe clearance for aircraft (wingtip & taxi clearance).

No Entry / Enter Signs:
Enter and Do Not Enter signs are used to ensure safety by providing one-way traffic control in the bag halls. Do Not Enter signs are also used anywhere entry is restricted.

Speed Limit Signs:
All vehicle operators must obey all airside speed limits.

No Parking – Emergency Exit Signs:
No Parking signs are used to ensure various areas are kept clear at all times, including emergency exits, fire extinguisher access, emergency fuel shut offs, etc.

5.4.2.3 Vehicle Operator Guidelines – Airside Roads

Vehicle Service Roads:
Vehicle Service Roads (VSRs) are indicated by two solid white lines at least 7.5 m apart with a single broken center line. VSRs may be two-way traffic, or one-way traffic.

Vehicle Service Roads must be entered and exited in a safe manner. The operator must yield to traffic already established on the VSR.

Head of Stand (HOS) VSR:
The vehicle service road that runs parallel to the terminal building. It is recommended that drivers use the Head of Stand (HOS) VSR whenever possible to reduce traffic on the Tail of Stand (TOS) VSR and aircraft movement areas. When utilizing Head of Stand, drivers must be aware of:

a. Breezeways: allows for vehicle passage on HOS VSR between concourses.
    - Speed limit: 10km/h.
    - Drivers must slow down to 10 km/h BEFORE entering the breezeway.
    - Vehicles and attached GSE (i.e.: baggage carts, dollies, lavatory, and water carts, etc.) must be completely through the breezeway before increasing speed on the VSR.
b. Height Restriction Barriers:
    - A Breezeway height restriction: 2.2 m.
    - ITB HOS VSR height restriction: 2.9 m.

Note: The Height Restriction Barrier across from Gate 95 is 2.8 m.

Tail of Stand (TOS) VSR:
The vehicle service road that runs behind the tail of the aircraft when parked on an operational stand.

Use of Designated Roads:

a. Vehicle operators must primarily use designated Vehicle Service Roads (VSRs), cargo roads, and perimeter roads.
b. Always drive on the right lane of these roads.
c. Stay on designated road unless entering or exiting an operational stand (gate) to service an aircraft. Cutting through an operational stand as a ‘short cut’ is not permitted.

Vehicle Right-of-Way on the VSR:
At uncontrolled VSR intersections, the vehicle established in the VSR on the right-hand side has right-of way.

Approaching Overhead Doors:
Prior to proceeding through an overhead door (commonly referred to as a "roll up" door), vehicle operators shall come to a complete stop 5 m in front of the door. After stopping, vehicle operators shall proceed at 5 km/h or less (i.e., walking speed). This requirement applies both inside and outside a building.

Moving Between Adjacent Gates:
Vehicles may bypass the VSR when moving directly to the next operational stand or gate while actively servicing an aircraft (i.e.: traveling from Gate 50 to Gate 52 after working at Gate 50).

Road Markings and Visibility:
If road markings are faded, obscured, or covered (i.e.: snow), operators must approximate the designated roadway as closely as possible.

Passing Slow Moving Vehicles:
Slow moving vehicles travelling less than 15 km/h may be passed when the following conditions are adhered to:

a. When it is safe to do on the left-hand side within the VSR.
b. The speed limit is not exceeded.
c. The section in front of the vehicle being passed is clear and with adequate room.
d. No more than one vehicle is passed at a time.

Note: Passing is not permitted in a connecting corridor (i.e.: where two or more VSRs, service roads, or perimeter roads meet) or breezeway.

Prohibited Turn Arounds:
Vehicles may not use leased areas to turn around.

Juliet/Echo Underpass:

1. **Stop Light:** Traffic lights at the entrances to the Juliet/Echo (J/E) Underpass warn drivers when the underpass is unsafe to use. The red light could be lit when there is an unsafe buildup of exhaust in the underpass or if the underpass becomes impassable due to flooding. Do not enter the underpass when the light is red. The green light will be lit when the underpass is safe to use. The Authority will provide an escort if the underpass becomes unusable. Companies can reference 'The Source' – Underpass J Closure Emergency procedures.
2. **Height Restriction:** 4.7 m.
3. **U-Turn Rules:** Small vehicles may make a U-turn around the jersey barriers after passing the J/E Underpass (westbound toward Gate 306A) only when safe; however, the best

practice is to wait until reaching Gate 306A before turning around. Large vehicles must wait until the wider area near Gate 306A to make a U-turn.

4. **Fall Hazard Lights:** Double red lights to drivers and aircraft travelling over the Underpass.

Menzies Fuel Farm:
Access to the Menzies Fuel vehicle gas station is one-way. All vehicles entering the re-fueling area must enter from the south VSR and exit using the north VSR. Vehicle operators must not drive beside the grass between the entrance and exit to Menzies. There is no VSR and driving beside the grass (outside of the apron edge lines) does NOT provide or guarantee safe wingtip clearance from aircraft.

GSE Storage Area:
Accessing the GSE Storage Area requires extra caution as there is no established, or painted, VSR to and from the GSE Storage Area. When entering the GSE Storage Area from the TOS VSR on the North side of Concourse E, drivers are required to line up with the GSE Storage Area entrance at 90-degrees, look both left and right when crossing the Apron, and drive straight towards the entrance, not on an angle. When exiting the GSE Storage Area, drivers are required to drive straight across the Apron and enter the TOS VSR at a 90-degree angle.

Speed limit inside the GSE Storage Building is 5 km/h. Outside the building is 15 km/h.

Fueling of vehicles and GSE inside of the GSE Storage Building is not permitted.

Emergency & Authority Vehicle Exemptions:
There are times when Airfield Operations Specialists (AOS), Safety Compliance Officers (SCOs), and emergency services such as Aircraft Rescue and Firefighting (ARFF) and police services are required to operate outside of the Airside Traffic Directives (ATDs) in the performance of their duties. This also includes vehicles escorting emergency vehicles. When these situations occur, the Authority personnel or emergency services will activate red beacons (red and blue beacons for police services) to identify to other operators that the vehicle is operating outside of the ATDs and possibly outside of regulated traffic patterns, off Vehicle Service Roads (VSRs) or perimeter roads, and at speeds greater than standard speed limits. Other vehicle operators are required to give right-of-way to vehicles with active red beacons as per vehicle Right-of-Way standards.

5.4.2.4 Additional Markings on Apron I

No Parking – Emergency Exit:
A red square with a “no parking” symbol indicates an area where no parking is allowed.

Emergency Fuel Shut Off (EFSO):
Emergency Fuel Shut Off buttons must not be blocked. There must also be a clear line of sight to facilitate easy access and quick response. Along the Domestic Terminal Building (DTB), with the exception of Gates 21-24, the Emergency Fuel Shut Off is up against the terminal building. At

Gates 21-24 and at the International Terminal Building (ITB), the Emergency Fuel Shut Off is positioned at or under the fixed link of the bridge for safe access and to avoid having to cross the HOS VSR during an emergency.

Fuel Isolation Valve Chambers:
A red square indicates an underground fuel valve that is used when refueling aircraft. Parking is not allowed over or within 2 m of Fuel Isolation Valve Chambers.

Travel of Bridge:
A single red line outlines the boundary of the bridge movement area. Parking is not allowed within the marked area where the bridge can travel unless the aircraft is parked on gate and the vehicle is being used to actively service that aircraft.

Bridge Return Box:
A yellow rectangle outlined in red indicates the area on the Apron where a bridge's wheels are parked when the bridge is not in use. Parking is not allowed in this area.

Bridge Staging Box:
A Bridge Staging Box is a white or red U-shaped marking and is used to indicate where the bridge wheels may be pre-positioned, while still providing clearance for specific aircraft entering the operational stand. The outer red line indicates No Parking in this area.

Stop Lines:
Stop Lines are a single solid white line and are used to indicate a MANDATORY STOP to the driver. The Stop Line may or may not be accompanied by a Stop Sign. Either way, the driver must always stop at the Stop Line, even if the Stop Line is covered by snow. On Apron I, Stop Lines are located adjacent to Gate 76, Gate 78, Gate 92, Gate 95, and both exits from the GSE Storage Area.

Zipper Lines:
Zipper Lines are used at service road crossings of aircraft taxilanes to clearly delineate the vehicle crossing path and highlight the interface between vehicle routes and aircraft movement areas. Zipper lines consist of closely spaced, alternating pavement markings applied perpendicular to the direction of travel to increase driver awareness at taxilane crossings and reinforce vehicle yielding behaviour while improving situational awareness.

Pedestrian Crossings / Walkways:
Pedestrian Crossings are indicated by two parallel white lines. Pedestrian Crossings indicate where people are allowed to walk on an Apron, such as when crossing breezeways or between the aircraft stand and the terminal building at a Ground Loading Operational Stand. Pedestrians in marked crossings (or walkways) have the right-of-way over vehicles.

Note: Pedestrian walkways include the Non-Conveyables walkway beside the ITB, starting with roll-up door 554, by MU 300, MU 400 & MU 500. All walkways must be kept clear of any obstructions.

5.4.2.5 Apron I – Aircraft Movements & Parking

Apron Taxiway / Aircraft Stand Taxilane:
A single solid yellow line located on an Apron. The Apron Taxiway is a portion of an Apron designated as a taxiway to provide a through taxi route across the Apron. The Aircraft Stand Taxilane is a portion of an Apron providing access to aircraft stands. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on the pavement, and the wings do not make contact with any known obstructions. Airside personnel are not permitted to walk across an Apron Taxilane or an Aircraft Stand Taxilane unless actively supporting or returning from a pushback or tow operation (i.e.: wing walkers and marshallers supporting pushback of an aircraft).

Aircraft Stand Lead-in Lines:
A long single solid yellow line in the middle of an aircraft operational stand that guides aircraft into the parking position. The nose wheel of the aircraft is centered on these lines to ensure the wings do not hit any known obstructions. On the end nearest to the passenger loading bridge there are markings to indicate where the nose wheel of specific aircraft should STOP for the aircraft door to meet the bridge properly. On the opposite end is the number of the operational stand/gate.

The Aircraft Stand Lead-in Line can be straight or curved. On Apron I, when aircraft is arriving into Gate 21, jet blast from the arriving aircraft onto aircraft and equipment on Gates 11 and 13 must be avoided; therefore, when an aircraft is established on Gate 11, aircraft arriving into Gate 21 will shut down at the beginning of the Aircraft Stand Lead-in Line and be towed into Gate 21. Drivers must give right away to all ground support staff and aircraft during this transition.

Geographical Position Fix Marking (SPOTS):
Geographical Position Fix Markings (also called ‘Spots’) are yellow circles with a number inside and a broken yellow line nearby. These ‘Spots’ are on the Apron near the exits to Taxiways and are used by Air Traffic Control (ATC) to help direct aircraft taxiing and aircraft under tow transition between the Apron and a Taxiway. The broken yellow line at a ‘Spot’ acts as a preliminary Hold Line for aircraft exiting the Apron.

Aircraft Parking Boundary Lines:
An Aircraft Parking Boundary Line is a single yellow broken line, often parallel to the Apron Taxiway and is used to outline aircraft parking pads. Aircraft are parked behind Aircraft Parking Boundary Lines to ensure they are safely separated and clear of taxiing aircraft.

Note: All vehicle operators must yield to aircraft at all times and must observe Circle of Safety procedures when approaching to service parked aircraft.

Aircraft may only be parked in assigned operational stands, in assigned leased areas or on designated aircraft parking pads.

Apron I designated parking pads include:

North Pad 110 - 111	By the North Blast Wall
West Pad 120 - 129	Between taxiway entrances Hotel Bravo and Hotel Delta
South Pad 140 - 146	Past the end of Concourse Charlie near taxiway entrance Golf
East Pad 180 - 183	Between taxiway entrance Echo Alpha and taxiway Bravo
East Pad 190 - 194	East end of Concourse Echo

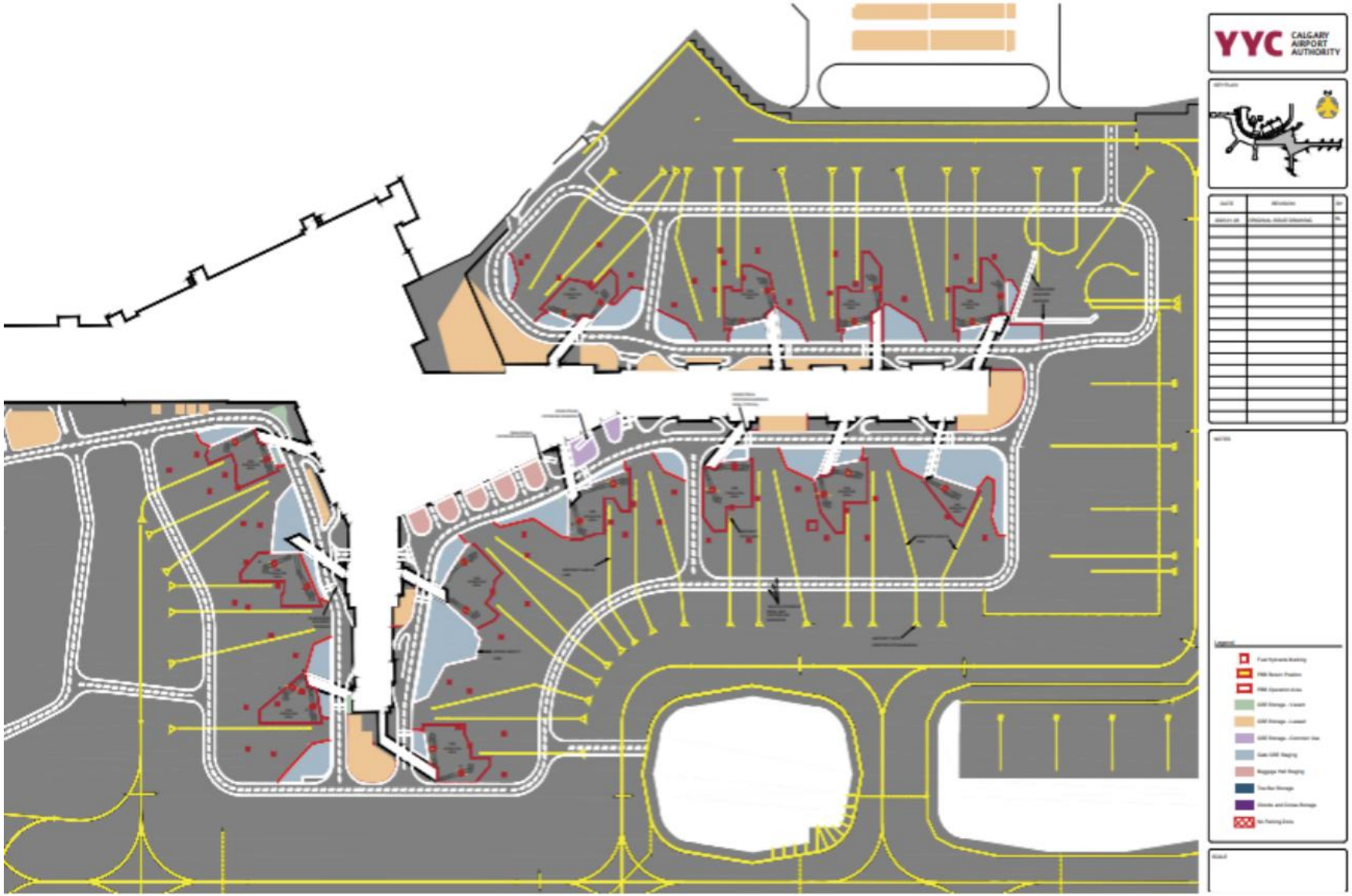
All vehicles and GSE must remain behind the Aircraft Parking Boundary Line when servicing aircraft and must not block or obstruct line-of-sight for direction, location and information signs.

Note: Aircraft Parking pads are not designated parking areas for vehicles or equipment. All vehicles and GSE must be removed unless actively in use to service an aircraft at that location. All vehicles and GSE must not block active aircraft operations. All vehicle and GSE operators must give right-of-way to aircraft at all times.

5.4.2.5.1 Domestic Terminal Building (DTB) Aircraft Movements Map

Calgary Airport

5.4.2.5.2 International Terminal Building (ITB) Aircraft Movements Map



5.4.2.6 Apron I – Approved Vehicle & GSE Staging & Parking Areas

Vehicles and GSE must be **parked** in designated areas only, including:

a. Within the boundaries of company lease areas
b. In marked parking stalls / areas

Lease Lines:
Lease Lines are two white (or yellow) parallel lines with the word "Lease" (or a company name). Lease Lines are used to outline the area of an Apron surface that has been leased to a company. An AVOP is not required for company employees or company authorized persons to operate vehicles, equipment or aircraft inside the leased area.

Drivers must confirm with company leadership which areas on Apron I they have leased.

When vehicles and GSE are parked:

a. The beacon is turned OFF.
b. Is facing away (out) from the terminal building, loading bridges, and other heavy traffic areas.

Vehicles and GSE may only be **staged** in the following areas:

a. Inside the red and white parking boundary lines adjacent to operational stands.
b. In staging areas for the specific purpose of actively servicing an aircraft.

Note: The majority of operational stand (on gate) designated "parking" areas are designated staging areas only.

Staging and Parking Area Boundary Lines:
Vehicle and GSE Staging and Parking Area Boundary Lines are parallel solid white and red lines that define the areas intended for use to stage or park ground service equipment and are intended to provide safe separation from aircraft at an operational stand. These lines take into account the wingspan of aircraft. Approved vehicle parking is on the white side of the line.

All vehicles and GSE that are unattended, staged, or parked **must have the brakes on and the wheels chocked.**

5.4.2.7 Apron I – Restrictions to Vehicle & GSE Staging & Parking Areas

Vehicles parked in any unapproved parking area **may be towed at the company's or driver's expense and an AVOP violation ticket may be issued.**

Vehicle operators must not park or leave vehicles or equipment unattended:

- In front of blast walls.
- On an aircraft taxiing area or aircraft movement area.
- Within the bridge movement area, Bridge Return Box, and Bridge Staging Box.
- Passenger cross walks / walkways.

- On aircraft lead-in lines.
- On Aircraft Parking Pads.
- On any VSR, cargo road, or perimeter road.
- On or in front of designated "No Parking" pavement marking or signs
- In another company's leased space.
- In front of / blocking an emergency exit door.
- In front of / blocking emergency fuel shut off, fire extinguisher, sandbox, etc.

Vehicles and equipment must:

- Not be parked idling close to air intakes, inside baggage halls, or inside any building / enclosed space.
- Not be parked in a way that restricts fuel truck access and exit routes.
- Remain a minimum distance of 2 m away from fuel trucks, fuel carts, and fuel pits.
- Remain a minimum distance of 1 m away from a security fence when airside.
- Remain a minimum distance of 3 m away from a security fence when groundside.

Aircraft refueling vehicles must:

- Remain 15 m away from a building (windows and doors).
- Not be left unattended parked in staging and operational stands.

5.4.2.8 Cargo & Baggage Train Limits

Cargo pallet dollies: maximum of 4 per train

Baggage carts (or baggage dollies):

- **Outdoors:** maximum of 6 per train
- **Inside an airport facility including all baggage halls, make-up units, and offload sheds:** maximum 4 per train

5.4.2.9 Chocks, Cones, & Towbars

Chocks, cones, and towbars must be removed from the bridge movement area immediately after push-back and departure. Store them neatly in designated areas (where available), or near the terminal building close to the base of the bridge pedestal (structural pivot point) when not actively in use. All GSE, including chocks, cones and tow bars must be stored so they do not block, interfere, or create an obstacle or hazard for other vehicles or equipment, including Authority vehicles in performance of their duties (snow clearing, line painting, etc.).

5.5 Apron I – Ground Loading Gates

Gates 1 – 6, 32, 36-40, 96-97

Ground loading gates, or walk-out gates, are not equipped with a passenger jet bridge; instead, passengers walk out of the terminal building and are guided to the aircraft via passenger walkways. Vehicle operators are not permitted to drive between the parked aircraft and terminal

building at ground loading gates due to safety reasons as the driver has limited visibility and may not see passengers or crew, or other equipment parked.

5.6 Speed Limits

All vehicle operators driving airside must always maintain a safe driving speed, considering factors such as weather, road conditions, visibility, traffic congestion, proximity to aircraft, vehicles, GSE, bridges, infrastructure, pedestrian areas, etc.

Area	Speed Limit
Baggage Halls and Inside GSE Storage Area	5 km/h (Walking Speed)
NPS-V Facilities	5 km/h (Walking Speed)
Aircraft Circle of Safety	5 km/h (Walking Speed)
Breezeways	10 km/h
Head of Stand (HOS) & Tail of Stand (TOS) VSR	30 km/h
All Aprons	30 km/h
GSE Storage Area	15 km/h outside, 5 km/h inside building
Cargo Road	30 km/h
Juliet/Echo Underpass	30 km/h
Perimeter Roads	50 km/h (unless otherwise posted)
Technical Area VII South	30 km/h
Technical Area L East	50 km/h (unless aircraft is parked, then 30 km/h)
Taxiway Papa (uncontrolled)	30 km/h

** Emergency vehicles or Airside Traffic Enforcement Personnel with red flashing beacons responding to an emergency or operating outside of the Airside Traffic Directives in the performance of their duties may exceed the speed limit (includes vehicles under escort)

5.7 Right-of-Way ★

Hierarchy of Right-of-Way:

1. Aircraft under their own power or under tow.
2. Emergency vehicles (with red lights flashing).
3. Airport maintenance vehicles (snow, ice, line painting, and FOD control equipment) while performing their duties.

4. Marshallers and tractors during aircraft arrival, pushback, and when returning from pushback.
5. Fuel trucks and fuel carts engaged in fueling operations, including when maneuvering into or backing out of an operational stand.
6. Pedestrians in walkways, crosswalks, bag halls, and load sheds.
7. All other vehicles.

Aircraft under their own power or under tow always have the right-of-way and must be given priority over all other traffic. All vehicle operators MUST always give right-of-way to all aircraft.

5.7.1 Right-of-Way - Aircraft

Aircraft Awareness and Clearance:

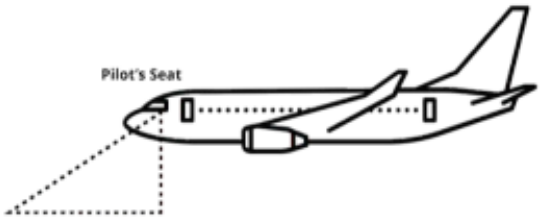
Vehicle operators must always watch for aircraft and ensure no aircraft are approaching, arriving, departing, or preparing for departure.

Drivers must STOP completely and provide ample clearance for all aircraft operations, including:

- Arrivals
- Pushbacks
- Air Starts
- Taxiing
- Towing
- Powering into or out of the gate or operational stand

Pilots cannot see anything directly below or close to the nose of the aircraft. The pilot must feel confident there is more than enough distance for safe clearance.

Aircraft Type	Distance from Pilot's Seat (m)
A330	16 m
B777	15.5 m
B787	15 m
B737 MAX	14.5 m



Restricted Areas During Aircraft Operations:

Drivers must not drive through any part of an operational stand during pushback or aircraft arrival.

Giving Right-of-Way:

If a taxiing, stopped, or parked aircraft approaches on a designated vehicle road:

a. Stop immediately at a safe distance in the VSR.
b. If necessary, exit the VSR safely and return only when it is safe.

Jet Engine Air Start at the Gate:
Aircraft engines may be started at the gate using an external air compressor (Air Start), which creates a jet blast hazard). At least one marshaller must be present to ensure safe vehicle operations. During an Air Start, all vehicle operators must stop at a safe distance and wait for the marshaller's signal before passing behind the aircraft.

5.7.2 Right-of-Way - Emergency Vehicles

All vehicle and GSE operators must give the right-of-way to emergency vehicles with red flashing beacons. Similar to interacting with emergency vehicles when driving groundside, all vehicle & GSE operators are responsible to give right-of-way by safely moving out of the way of emergency vehicles as quickly and safely as possible.

Airside Traffic Enforcement Personnel may utilize red beacons when conducting a traffic stop. If a vehicle with red beacons activated follows you when you give way to it, come to a complete stop and prepare to comply with the directions given by the enforcement personnel. Safety Compliance Officers may also utilize a siren to indicate the requirement to pull-over or give way. When operating near a vehicle engaged in a traffic stop, give right-of-way to both the vehicle and Airside Traffic Enforcement Personnel.

5.7.3 Right-of-Way - Authority Maintenance Vehicles

Vehicle and GSE operators must give right-of-way to all airport maintenance equipment when actively in performance of their duties. This includes snow & ice removal, FOD control, painting, or any other airport maintenance task or duty.

5.7.4 Right-of-Way - Marshallers & Push Tractors

Vehicle and GSE operators cannot drive between a marshaller, their equipment, and the aircraft, or proceed behind the aircraft, unless cleared by the marshaller. Vehicle operators may only proceed once the aircraft and marshaling crews are completely clear of the VSR.

5.7.5 Right-of-Way - Fuel Trucks & Fuel Carts

Vehicle and GSE operators must give right-of-way to all fuel tanker trucks or fuel carts engaged in fueling operations or maneuvering in or out of an operational stand.

5.7.6 Right-of-Way - Pedestrians

Vehicle and GSE operators must give right-of-way to pedestrians:

a. In all indoor areas:
- Bag halls
- Load sheds
- GSE storage areas

b. In all designated crosswalks

- Including crosswalks between an aircraft and the terminal building
- Ground loading gates

Pedestrians must abide by the Hierarchy of Right-of-Way at all times. Pedestrians (other than marshallers actively involved in aircraft operations) must give right-of-way to all traffic when walking outside of designated crosswalks.

5.7.7 Right-of-Way - All Other Vehicles

Vehicle and GSE operators must give the right-of-way to any other vehicle already established on the VSR. Anywhere two or more VSRs intersect with no signage must be treated as an uncontrolled intersection and the vehicle on the right has the right-of-way

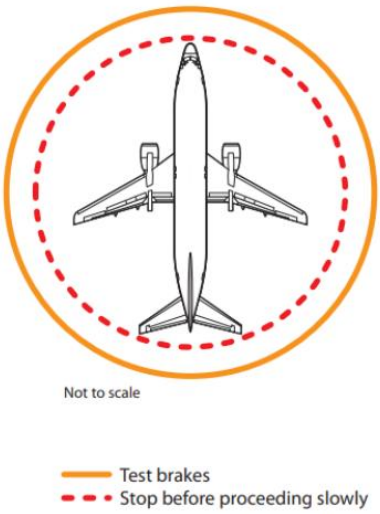
Vehicle and GSE operators must:

a. Obey all signage.
b. Stop when exiting baggage halls to ensure clearance before proceeding.
c. NOT park or leave a vehicle unattended on the VSR.

5.8 Circle of Safety ★

The unmarked protection zones of an aircraft is described as a circle outside of the wingtips, nose and tail that is intended to prevent damage from vehicles and GSE.

- Only vehicles actively involved in servicing the parked aircraft are allowed to enter the operational stand and the aircraft's circle of safety.
- The maximum speed limit within the aircraft Circle of Safety is 5 km/h. All vehicles within the circle of safety must maintain a minimum 1 m safe clearance around the aircraft.
- The outer circle of safety extends 5 m from the aircraft. Vehicle operators must stop and test the vehicle's brakes before crossing the imaginary boundary of the outer circle of safety.
- The inner circle of safety is 2 m from the aircraft and indicates where drivers must stop a second time before resuming their approach to the aircraft at a slow speed (defined as walking speed 5 km/h or less).
- A marshaller is required to guide the operator when pulling up a vehicle or piece of equipment to an aircraft.



5.9 Operational Stands

5.9.1 Operational Stand Safety Procedures

Vehicle and GSE operators must:

a. Not drive onto or across an operational stand (gate), unless their duties and tasks include working on that operational stand.
b. Not drive on, off, or through an operational stand when an aircraft is arriving, during pushback, when the aircraft's anti-collision lights are on, or when the aircraft's engines are running.
c. Never drive between the marshaller and an aircraft.
d. Never drive between a jet bridge and aircraft (whether jet bridge is connected or disconnected.
e. Never drive between an aircraft and terminal building on a ground loading gate.
f. Never drive between an aircraft and airside buses on a hard stand loading position.
g. Never drive over electrical power cables, fuel hoses, air hoses, wheel chocks, etc.
h. Have a marshaller guide the vehicle operator when reversing.

5.9.2 Bridge Movement Areas

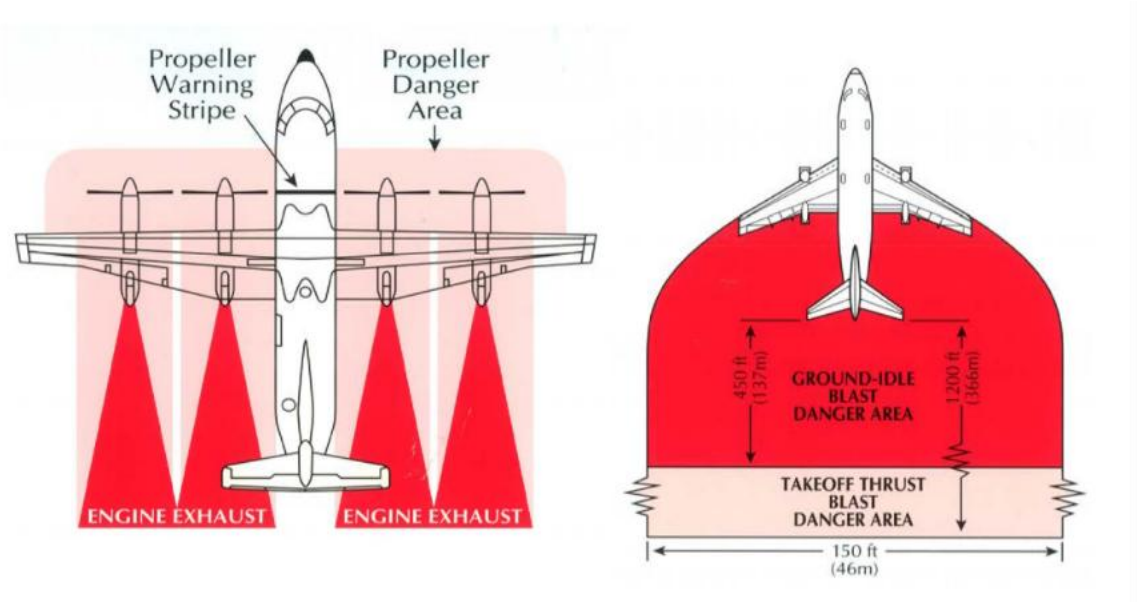
Vehicles and equipment must not be parked or staged within the bridge movement area and Bridge Return Box. The vehicle operator will assume all responsibility for damage to the vehicle and GSE if they park within the red lines of the bridge movement area or the Bridge Return Box and may be issued a violation for "improper parking of a vehicle/equipment causing or resulting in damage."

5.9.3 Jet Blast, Prop Wash, Engine Ingestion

Jet Blast, prop wash, and engine ingestion is an extreme hazard that vehicle and GSE operators must approach with caution.

Vehicle and GSE operators must:

a. Stop a safe distance away from any aircraft with engines running to ensure they remain a safe distance clear of jet blast and/or prop wash.
b. Always slow down or stop to observe aircraft status and determine if the aircraft has just arrived, is ready to depart, is completing an Air Start, or engine run-up. To avoid the possibility of engine ingestion, jet blast or prop wash hazards, the driver may choose to take an alternate route, avoiding the operational stand entirely.



5.10 Aircraft Arrival and Pushback

Vehicle operators must know and clearly identify the signs that indicate an aircraft is arriving or departing. Vehicle operators are responsible for knowing when they have more than enough time to proceed safely and knowing when and where they must stop to give right-of-way and safe clearance for the aircraft and marshallers. Vehicle operators escorting other vehicles or GSE must ensure there is more than enough time for everyone under escort to proceed safely and avoid an aircraft cut-off.

Calgary Airports works with a committee to develop pushback procedures for ground crews and aircraft pilots to ensure safe ramp operations. These procedures are provided to the Air Carrier outlining the safest way to push an aircraft from the gate on Apron I. Aircraft must not start engines until a pushback has commenced unless operational restrictions require them to do so. Crews must not commence pushback if it conflicts with another aircraft in any of the following ways:

- Aircraft being pushed to the same spot at the same time.
- Jet blast, or propwash, would create a hazard to aircraft and/or ground crews behind.
- The interference would delay completion of a pushback procedure already in progress.
- The interference would cut off aircraft ready for or already taxiing.

5.10.1 Note to Marshallers

Marshallers are responsible to “wave” drivers past stationary aircraft whenever it is safe to do so. This helps keep our Apron operations running smoothly and efficiently by keeping vehicles moving and reducing potential line-ups that may block access to other gates or operational areas.

5.10.2 Advanced Visual Docking and Guidance System (A-VDGS)

The Advanced Visual and Docking Guidance System (A-VDGS) provides aircraft with accurate guidance into the gate and real time data through the display unit. The system allows aircraft to dock safely thereby allowing passengers to deplane without the need for marshallers, thereby minimizing the risk to ground personnel during lightning events. The A-VDGS is intended primarily for use during lightning events, and may be used at any time, at the discretion of the air carrier/operator.

Note: Vehicles and GSE must not be parked or moving in the safety areas of the operational stand in the 10 minutes prior to the displayed aircraft arrival time. The A-VDGS is actively scanning for obstructions at this time.

5.10.3 Aircraft Arrival ★

Signs of Aircraft Arriving to Gate:

- Marshaller(s) are present.
- Marshallers may not be obvious or visible as select airlines rely on the A-VDGS to bring in the aircraft.
- Marshallers will not be present during a lightning event; however, the A-VDGS will be active to bring in the aircraft.
- GSE is present or arriving.
- Bridge may be staged.
- A-VDGS may be active.

When to Pass Behind an Aircraft After Arrival:

- Aircraft wheels are chocked.
- Aircraft engines have spooled down.
- Aircraft anti-collision light (ACL) is off.

Special consideration for turbo-prop aircraft: the engine(s) on turbo-prop aircraft may remain running until a ground power unit is attached on gate. Drivers are permitted to pass behind turbo-prop aircraft as long as the aircraft's nose wheel is chocked and the engine(s) are feathering (not full power), or if only one engine is running at idle.

5.10.4 Aircraft Departure & Pushback ★

9 Signs of Aircraft Pushback:

- Tow tractor is hooked up
- Aircraft wheels are not chocked
- Bridge is retracted
- Anti-collision light (ACL) is on
- Doors, hatches, and cargo doors are closed

- All service vehicles are gone
- Marshallers are present
- Pylons (cones) are removed
- Engine(s) may be running

Note: Not all departures require the 9 Signs. Drivers must be diligent to ensure they do not cut-off an aircraft pushback from gate.

5.10.5 Vehicles & Personnel Returning from Pushback

Vehicles and personnel returning from a pushback **must safely enter the closest VSR**.

- Oncoming vehicles in the VSR must yield to vehicles and personnel returning from a pushback, per the Hierarchy of Right-of-Way.
- Vehicles returning from a pushback shall not enter the VSR in reverse; they must safely enter the VSR while operating the vehicle in a forward gear.
- After safely entering the VSR, pushback vehicles become part of standard traffic flows. They may then proceed to their next destination (e.g., parking location, gate of origin, gate for next flight, etc.).
- Personnel returning from a pushback on foot must cross the closest VSR and then proceed to and along the side of the terminal building in a safe manner.
- At no such time may personnel on foot walk across an open apron area or within a VSR when returning from a pushback or walking to their next destination.

In many cases, adhering to these processes will require the pushback tractor and tow bar disconnection to be completed in the following order:

1. Pushback tractor and tow bar disconnected from the aircraft in the order specified by the air carrier or ground handler.
2. Tow bar connected to the rear hitch of the pushback tractor or another vehicle.
3. Pushback tractor driven in forward gear towards the closest VSR.

5.11 Gate Matrix

Every operational stand (gate and ground loading gate) on Apron I has a YYC Gate Matrix designated pushback procedure which includes:

a. Safe pushback path
b. Designated disconnect points

The Gate Matrix is designed to ensure that a safe clearance is maintained between aircraft and other vehicle movements on the Apron. The YYC Gate Matrix must be followed for all pushbacks and tows maneuvering on Apron I. An updated copy of the YYC Gate Matrix can be found in the YYC AVOP website: https://www.yyc.com/en-us/employees-operators/avop-office.

5.12 Tow Operations

The tow tractor operator is the AVOP holder responsible and in control of all tow operations and all tow procedures. For all departures, all tow vehicle operators must push the aircraft back from a gate or operational stand to the designated disconnect box according to the YYC Gate Matrix.

Tows from Gate:

- All movements must be completed with marshallers.
- Pushback from gate must be completed with tow bar hooked to the front of the tow tractor.
- Once the pushback is complete, the tow tractor must be repositioned so that the tow bar is at the back of the tow tractor and the tractor is facing forward, leading the aircraft for movements.

Note: ATC instructions that include "at your discretion" requires the operator to proceed only when it is safe to do so, in coordination, consideration, and respect for all other operations in the area.

5.13 Indicators – Apron to Taxiway ★

5.13.1 Apron Lighting & Markings

Apron Edge Lights:

Single blue lights are used along the edge of the Apron. Apron Edge Lights run parallel with Apron Edge Lines.

Apron Edge Lines:

Apron Edge Lines are double solid yellow lines used to indicate the edge of the weight bearing surfaces of the Apron. Paved surfaces outside of the Apron Edge Lines are not designed as weight bearing surfaces adequate for aircraft. Vehicles and equipment parked or operating outside of the Apron Edge Lines are NOT guaranteed safe clearance from aircraft.

5.13.2 Taxiway Lighting & Markings

Taxiway Center Line:

The Taxiway Center Line is a single solid yellow line on a Taxiway and is used to provide guidance for aircraft to taxi from the Runway center line to a point on the Apron where aircraft operational stand markings begin. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on the pavement, and the wings will not contact known obstructions.

Taxiway Center Line Lights:

On the East side of Apron I, the Taxiway Center Line is accompanied with inset green Taxiway Center Line Lights.

Taxiway Edge Lights:
Single blue lights are used along the edge of the Taxiway. Taxiway Edge Lights run parallel with Apron Edge Lines.

Taxi Side Stripe Markings:
Taxi Side Stripe Markings consist of double solid yellow lines. The double solid yellow lines along with a series of single blue lights on a Taxiway are used to indicate the edge of the usable portion of the Taxiway. Paved surfaces outside the lines are not designed for aircraft.

5.13.3 Apron – Taxiway Intersection Lighting, Markings, and Signage

Double Amber – Intersection Lights:
Double amber lights (Aviation Yellow) are used at the intersection of Aprons and Taxiways.

Manoeuvring Area Delimitation (MAD) Line:
The Manoeuvring Area Delimitation Line is a single solid yellow line and a single broken yellow line. The solid yellow line is positioned on Apron side. The MAD Line indicates the intersection of the Apron and Taxiway.

Apron Limit Line:
The Apron Limit Line is a single broken yellow line. It is another name for the Manoeuvring Area Delimitation Line and is treated the same.

Information Signs:
Black writing on yellow signage that provides information primarily used by aircraft operators. The information is also helpful for vehicle operators when entering the Manoeuvring Area.

Directional Signs:
Directional signs (black writing on yellow) have an arrow indicating the direction to proceed to get to the specified Apron, Taxiway or Runway.

Location Signs:
Location signs (yellow writing on black) identify (by letter) the Taxiway the aircraft (or vehicle) is on.

The Double Amber Intersection Lights, Manoeuvring Area Delimitation (MAD) Line or Apron Limit Line, Directional and Location Signs are **co-located** on Apron I meaning that all indicators are grouped together, or in-line, with one another.

** **DA AVOP Holders are not permitted beyond the Apron to Taxiway indicators – especially the Manoeuvring Area Delimitation (MAD) Line or Apron Limit Line. No part of a vehicle, piece of equipment, or aircraft under tow is permitted to cross the MAD Line without permission from Air Traffic Control (ATC).**

What if I accidentally cross over the MAD Line or Apron Limit Line and drive onto a Taxiway?

1. Do not panic.
2. Turn around and re-enter Apron I where you came from, or re-enter Apron I at the closest entrance.
3. Find a safe place to park (recommended areas are empty aircraft parking pads or gates).
4. Remain in your vehicle and call your supervisor to explain what happened and where you are parked. Your supervisor will then call the Integrated Operations Centre (IOC) and report the incident on your behalf.
5. Once the incident is reported, you must:
    a. Wait inside of your vehicle. Do not get out of your vehicle to speak with anyone or enter the terminal building.
    b. Wait until an Airfield Operations Specialist (AOS) or safety or security representative of Calgary Airports has been dispatched and meets you wherever you are parked.
    c. Once the AOS or safety or security representative of Calgary Airports locates where you are parked, they will escort you to the closest NPS-V location for re-screening.
    d. A Safety Compliance Officer (SCO) will complete an investigation and share any findings with you and your employer(s).

Why do I need to stay in my vehicle once I get back onto Apron I?

When you cross over the MAD Line or Apron Limit Line, you are leaving the Critical Area and entering the Manoeuvring Area. There is no free movement between the Manoeuvring Area and the Critical Area as person(s) and vehicle(s) entering the Critical Area must be screened by security when going through NPS-V.

DA drivers are not permitted to drive on the Manoeuvring Area without escort or permission from the AVOP Coordinator and Air Traffic Control. When a DA driver without an escort or prior permission drives onto a Taxiway, the driver is causing a **Taxiway Incursion**.

To mitigate this risk, drivers must enter back into the Critical Area as soon as possible. Since the driver has not been screened by security at an NPS-V location, the driver is also causing a **Security Breach**. Again, this must be mitigated; therefore, the actions following the security breach are very important. If a driver was to get out of their vehicle and interact with other agents and operators, those agents and operators would also become 'unsecure' resulting in those coming into contact with the driver who caused the security breach to also require re-screening.

5.14 Vehicle Collision

AVOP holders involved in an accident with another vehicle, aircraft, ground service equipment, or other object must **freeze the scene** and immediately contact their supervisor and the IOC.

Freezing the Scene:

- When safe to do so, the scene of an accident must be frozen (left in place) until the company supervisor and IOC has been informed. Calgary Airports will authorize when a scene can be unfrozen.
- At times, and depending on the location of the accident, scenes need to be temporarily unfrozen (moved) to a safe area. This may be to avoid active aircraft or other hazards such as fire. Scenes should ONLY be unfrozen when absolutely necessary for safety and when approved by the Airport Authority.

Note: Failure to immediately report a vehicle accident and freeze the scene may result in a safety violation.

5.15 Aircraft Fuel Tankers & Vehicle Fueling

Flammable liquids in tanks that are being transported must conform to the requirements outlined by Transport Canada's Transportation of Dangerous Goods Regulations.

The use of phones and radios in the immediate area of refueling operations is prohibited.

5.15.1 Aircraft Fuel Tankers

Aircraft fuel handling is normally conducted from underground hydrant fuel systems near the terminal building. When fueling is carried out by fuel tankers:

- Fuel operations must be conducted at least 15 m away from any airport building that has windows or doors in any exposed walls.
- Fuel and vehicle operators must not leave fuel tankers unattended unless parked in areas that are specifically designated for that purpose.
- Fuel tankers carrying flammable materials are forbidden to pass through any breezeway.
- Fuel tankers are forbidden to drive on the Head of Stand (HOS) VSR.

Note: Vehicles containing slip tanks are allowed to drive through breezeways and use the HOS VSR.

5.15.2 Vehicle Fueling & Transfer of Fuel

Vehicle fueling may only occur as follows:

- Outside of any building or enclosed structure.
- At least 15 m from the building.
- At least 7.5 m from any aircraft.
- With the refueling vehicle at least 4.5 m from any source of ignition.
- Vehicle engine off.

Refueling any vehicle type indoors is prohibited, unless authorized by Calgary Airports.

5.16 Operating Procedures – Temporarily Inaccessible Areas

5.16.1 Airside Emergency Response

When responding to an emergency on the airfield, emergency vehicles with flashing red lights must have an unobstructed path to reach and operate around the incident site, whether it's an aircraft, vehicle, or building. Unless specifically directed otherwise, all other airport vehicles and personnel must avoid approaching the scene or entering the "hot zone," which is the area between emergency vehicles and the affected aircraft, vehicle, or building.

In situations where emergency vehicles with flashing red lights are present at or near an operational stand, no other vehicles or personnel are permitted to approach the aircraft or incident site. The "**hot zone**" between emergency vehicles and the incident must remain clear to ensure the safety of emergency responders.

If Airside vehicles or personnel arrive on the scene before emergency vehicles, they must maintain a safe distance and stay clear of the aircraft or incident site and the surrounding area. This ensures emergency responders have unimpeded access to the incident site and helps keep everyone safe from potential hazards.

Airside vehicles and personnel must wait until all emergency vehicles have switched from red to amber lights before approaching the aircraft or incident site. Only when the amber lights are displayed is it safe to resume normal operations.

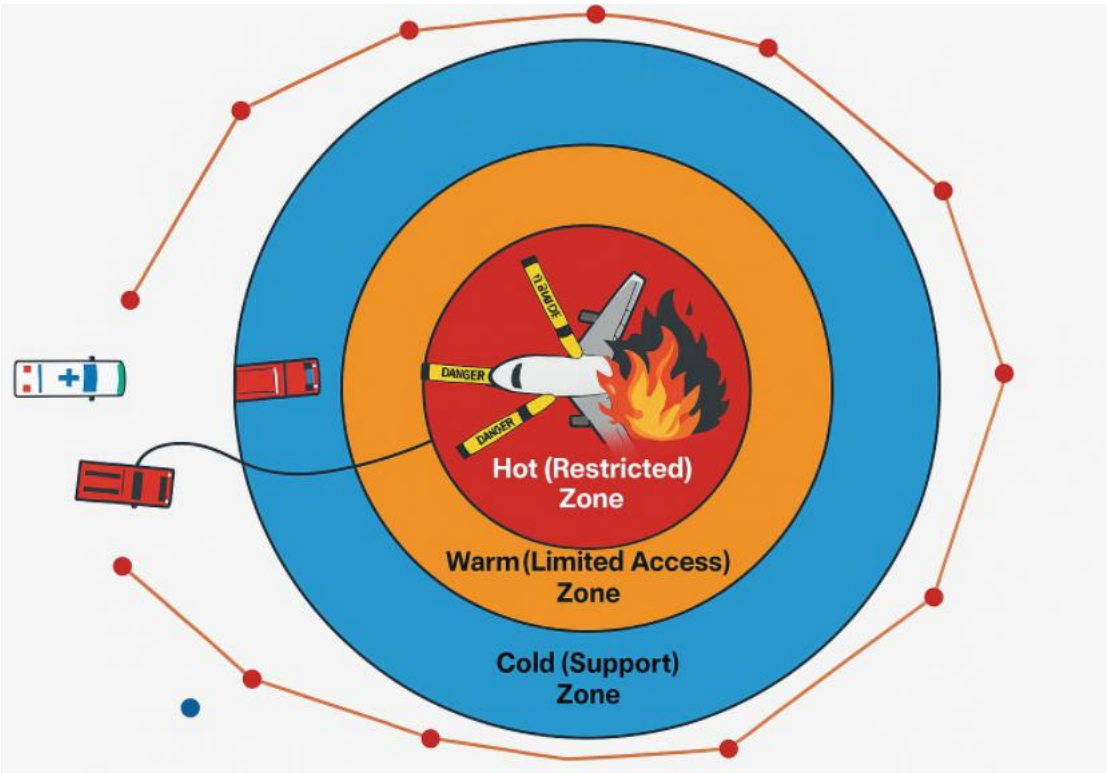
All pedestrians and vehicle operators in the area of an airside emergency response must ask themselves “do I need to be in the area?”

- If the answer is “NO” or have an alternate available, avoid the area entirely.
- If the answer is “YES” and drivers must pass by an emergency scene due to limited routing options, proceed promptly while keeping a safe distance. Avoid entering designated hot zones to ensure the safety of all personnel and uninterrupted emergency response efforts.

Note: All airport vehicles and workers must follow the direction of emergency personnel at the scene of an emergency.

To ensure the safety of emergency responders, employees, and the public, it may sometimes be necessary to block the Vehicle Service Road (VSR) to position emergency vehicles optimally. In such cases, and assuming no AVOP rules or regulations under the vehicle operator’s specific license prevent this action, vehicle operators are to maintain at least a 10 m distance behind the ARFF (Aircraft Rescue and Firefighting) trucks. If one truck is positioned farther back than the others, minimum 10 m distance is to be kept from that vehicle.

Note: Hot Zone Circular radius anywhere between fire trucks and an emergency plus 10 m.



Vehicle operators or personnel found in contravention of these directives may receive an infraction for interfering with an emergency in progress.

5.16.2 Fire, Aircraft Incident, Restricted Areas

No person or vehicles are allowed at the scene of a fire, an aircraft accident, or near an aircraft known to be carrying distinguished visitors, unless they are authorized and have a specific duty that requires their presence.

5.16.3 Construction Areas

No person or vehicles are allowed access in or access through construction areas, unless in connection with the construction or as authorized by the Integrated Operations Centre (IOC), Project Manager, or designate.

Drivers must be aware of speed limits in and/or around construction areas on Apron I as it may differ from normal operation speed limits.

5.17 Nighttime Driving

Airfield lighting is significantly brighter during hours of darkness, while aircraft become harder to see.

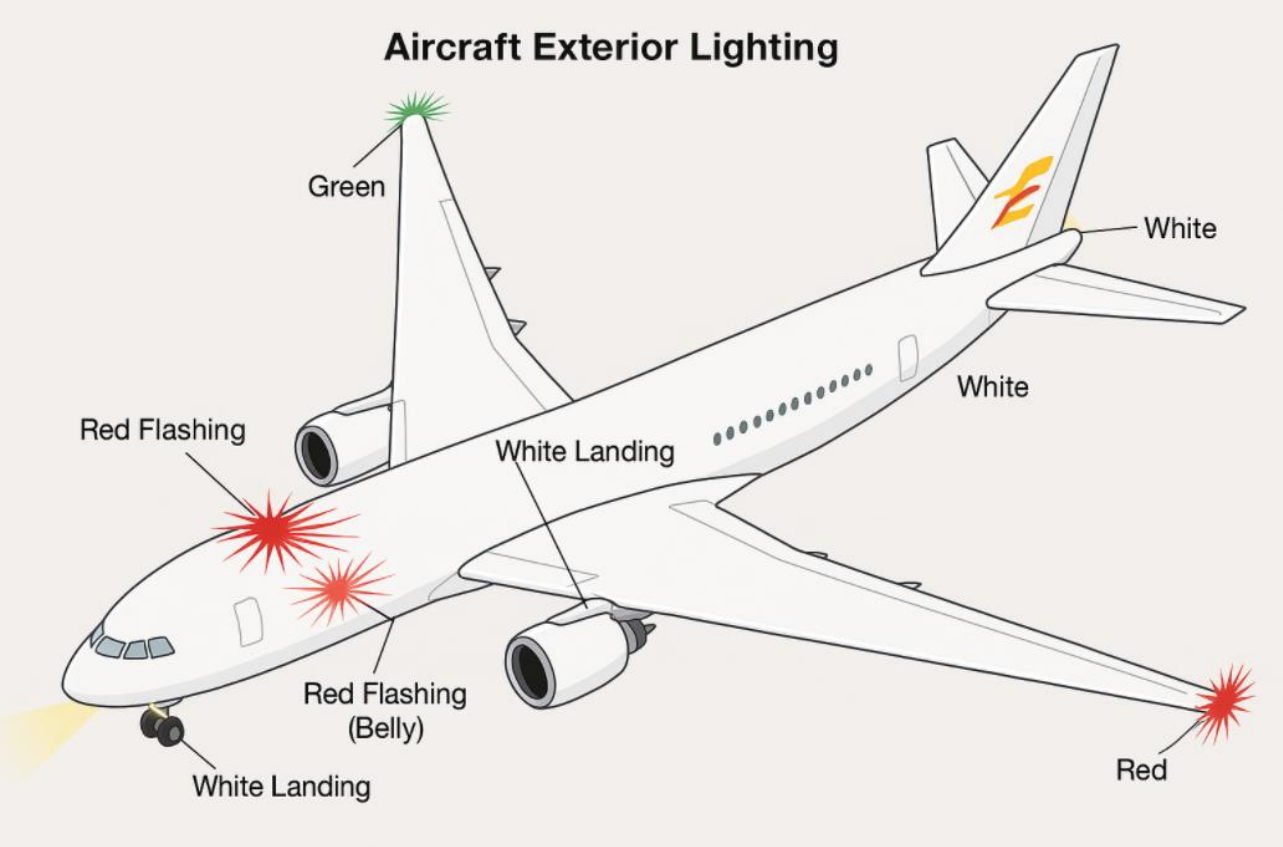
When an aircraft is travelling towards you (you are facing the aircraft nose), you should see:

- Aircraft Anti-Collision Light (red or white depending on aircraft)

- Nose Gear Light (white)
- Navigational Lights (red on your right side, green on your left side)

When an aircraft is travelling away from you (you are facing the aircraft tail), you should see:

- Aircraft Anti-Collision Light (red or white depending on aircraft)
- Flashing Taillight (white)
- Flashing Navigational Lights (flashing white on both sides)



5.18 DA Written and Practical Testing Preparation

☑ I have read and understood Section 1 – 4 of the ATD and AVOP Manual

☑ I have read and understood Section 5 of the ATD and AVOP Manual

☑ I have read and understood Section 6 of the ATD and AVOP Manual if I work and operate airside vehicles on West and/or South Aprons

☑ I have completed the practice questions in the section below

☑ I understand the following concepts:

- Hierarchy of Right of Way
- 9 Signs of Pushback
- Sigs of Aircraft Arrival
- Circle of Safety
- Apron I Gates and Landmarks
- Vehicle Service Road (VSR) Rules
- Pavement Markings (Gates and Parking Pads)
- Stop Lines – Locations and Protocols
- Apron to Taxiway Indicators
- Critical Area Breach Protocol
- NPS-V Procedures

☑ I have completed an Apron I familiarization drive(s) with my company trainer

5.18.1 DA AVOP – Practice Questions

1. What must DA AVOP holders use as their ONLY route between Apron I and facilities south of Taxiway Juliet?
   a. Taxiway J
   b. Juliet/Echo Underpass
   c. Perimeter Road
   d. Gate 306A

2. Who must DA AVOP holders contact before entering the East or West Deicing Aprons?
   a. Air Traffic Control
   b. Aero Mag (Pad Control)
   c. AVOP Coordinator
   d. Security Officer

3. What is considered a Taxiway Incursion?
   a. Driving on a perimeter road
   b. Crossing the Apron Limit Line or MAD Line into the Manoeuvring Area without authorization
   c. Parking in a leased area
   d. Exceeding speed limits

4. Are DA AVOP holders permitted on gravel roads?
   a. Yes, always
   b. Only with specific exemption or in AVOP exempt areas
   c. Only during emergencies
   d. No, never

5. What screening must be completed to access Apron I (Critical Area) with a vehicle?
   a. Passenger screening
   b. Non-Passenger Screening (NPS-V)
   c. Customs inspection
   d. No screening required

6. What is the maximum speed limit inside NPS-V facilities?
   a. 10 km/h
   b. 30 km/h
   c. 5 km/h
   d. 50 km/h

7. What must all vehicle operators do before operating airside at YYC?
   a. Take a nap
   b. Conduct a pre-trip walkaround inspection

c. Call their supervisor
d. Wash the vehicle

8. When are seat belts mandatory for airside vehicles?
   a. Only in enclosed cabs
   b. Only during emergencies
   c. Always, except when servicing an aircraft inside the Circle of Safety
   d. Never

9. What color are Apron Edge Lights?
   a. Red
   b. Blue
   c. Green
   d. Amber

10. What is the speed limit on the Head of Stand (HOS) VSR?
   a. 5 km/h
   b. 10 km/h
   c. 30 km/h
   d. 50 km/h

11. What should a driver do if road markings are faded or covered by snow?
   a. Ignore them
   b. Approximate the designated roadway as closely as possible
   c. Wait for maintenance
   d. Drive anywhere

12. What is the correct action when passing through a security gate or gate arm?
   a. Multiple vehicles may proceed at once
   b. Vehicles must wait for the security gate to close
   a. Vehicles may reverse through the gate
   b. Speed through quickly

13. What is the maximum speed limit within the aircraft Circle of Safety?
   a. 10 km/h
   b. 5 km/h
   c. 30 km/h
   d. 50 km/h

14. Which has the highest right-of-way?
   a. Emergency vehicles
   b. Fuel trucks
   c. Aircraft under their own power or under tow

d. Pedestrians

15. What must be done if a vehicle is involved in an accident airside?
    a. Leave the scene
    b. Freeze the scene and contact supervisor and IOC
    c. Move the vehicle immediately
    d. Ignore the incident

16. What is the maximum number of baggage carts allowed per train outdoors?
    a. 4
    b. 6
    c. 8
    d. 10

17. Where must vehicles and GSE be parked when not in use?
    a. Anywhere on the apron
    b. In designated areas or company-leased spaces
    c. Next to aircraft
    d. In front of emergency exits

18. What is the speed limit on perimeter roads unless otherwise posted?
    a. 10 km/h
    b. 30 km/h
    c. 50 km/h
    d. 70 km/h

19. What must be done before crossing the imaginary boundary of the outer circle of safety?
    a. Honk the horn
    b. Test the vehicle's brakes
    c. Call ATC
    d. Speed up

20. What is the penalty for parking in an unapproved area?
    a. Warning
    b. Vehicle may be towed and AVOP violation ticket issued
    c. No penalty
    d. Free parking

21. What is the minimum distance vehicles must remain from fuel trucks and fuel pits?
    a. 1 m
    b. 2 m
    c. 3 m
    d. 5 m

22. What is the maximum speed limit in baggage halls and inside GSE storage areas?
    a. 5 km/h
    b. 10 km/h
    c. 30 km/h
    d. 50 km/h

23. What should a driver do if they accidentally cross the Apron Limit Line or MAD Line onto a Taxiway?
    a. Panic and leave the vehicle
    b. Turn around back to the Apron, park safely, and report to supervisor
    c. Continue driving
    d. Ignore the incident

24. What is prohibited during refueling operations?
    a. Using phones and radios
    b. Wearing seat belts
    c. Parking in designated areas
    d. Conducting pre-trip inspections

25. When can vehicles approach the scene of an airside emergency?
    a. Anytime
    b. Only after emergency vehicles switch from red to amber lights
    c. When directed by ATC
    d. After 10 minutes

5.18.2 DA AVOP – Practice Questions ANSWERS

1. What must DA AVOP holders use as their ONLY route between Apron I and facilities south of Taxiway Juliet?

   a. Taxiway J
   b. **Juliet/Echo Underpass**
   c. Perimeter Road
   d. Gate 306A

2. Who must DA AVOP holders contact before entering the East or West Deicing Aprons?
   a. Air Traffic Control
   b. **Aero Mag (Pad Control)**
   c. AVOP Coordinator
   d. Security Officer

3. What is considered a Taxiway Incursion?
   a. Driving on a perimeter road
   b. **Crossing the Apron Limit Line or MAD Line into the Manoeuvring Area without authorization**
   c. Parking in a leased area
   d. Exceeding speed limits

4. Are DA AVOP holders permitted on gravel roads?
   a. Yes, always
   b. **Only with specific exemption or in AVOP exempt areas**
   c. Only during emergencies
   d. No, never

5. What screening must be completed to access Apron I (Critical Area) with a vehicle?
   a. Passenger screening
   b. **Non-Passenger Screening (NPS-V)**
   c. Customs inspection
   d. No screening required

6. What is the maximum speed limit inside NPS-V facilities?
   a. 10 km/h
   b. 30 km/h
   c. **5 km/h**
   d. 50 km/h

7. What must all vehicle operators do before operating airside at YYC?
   a. Take a nap

b. **Conduct a pre-trip walkaround inspection**
c. Call their supervisor
d. Wash the vehicle

8. When are seat belts mandatory for airside vehicles?
   a. Only in enclosed cabs
   b. Only during emergencies
   c. **Always, except when servicing an aircraft inside the Circle of Safety**
   d. Never

9. What color are Apron Edge Lights?
   a. Red
   b. **Blue**
   c. Green
   d. Amber

10. What is the speed limit on the Head of Stand (HOS) VSR?
   a. 5 km/h
   b. 10 km/h
   c. **30 km/h**
   d. 50 km/h

11. What should a driver do if road markings are faded or covered by snow?
   a. Ignore them
   b. **Approximate the designated roadway as closely as possible**
   c. Wait for maintenance
   d. Drive anywhere

12. What is the correct action when passing through a security gate or gate arm?
   a. Multiple vehicles may proceed at once
   b. **Vehicles must wait for the security gate to close**
   c. Vehicles may reverse through the gate
   d. Speed through quickly

13. What is the maximum speed limit within the aircraft Circle of Safety?
   a. 10 km/h
   b. **5 km/h**
   c. 30 km/h
   d. 50 km/h

14. Which has the highest right-of-way?
   a. Emergency vehicles
   b. Fuel trucks

c. **Aircraft under their own power or under tow**
d. Pedestrians

15. What must be done if a vehicle is involved in an accident airside?
a. Leave the scene
b. **Freeze the scene and contact supervisor and IOC**
c. Move the vehicle immediately
d. Ignore the incident

16. What is the maximum number of baggage carts allowed per train outdoors?
a. 4
b. **6**
c. 8
d. 10

17. Where must vehicles and GSE be parked when not in use?
a. Anywhere on the apron
b. **In designated areas or company-leased spaces**
c. Next to aircraft
d. In front of emergency exits

18. What is the speed limit on perimeter roads unless otherwise posted?
a. 10 km/h
b. 30 km/h
c. **50 km/h**
d. 70 km/h

19. What must be done before crossing the imaginary boundary of the outer circle of safety?
a. Honk the horn
b. **Test the vehicle's brakes**
c. Call ATC
d. Speed up

20. What is the penalty for parking in an unapproved area?
a. Warning
b. **Vehicle may be towed and AVOP violation ticket issued**
c. No penalty
d. Free parking

21. What is the minimum distance vehicles must remain from fuel trucks and fuel pits?
a. 1 m
b. **2 m**
c. 3 m

d. 5 m

22. What is the maximum speed limit in baggage halls and inside GSE storage areas?

a. **5 km/h**
b. 10 km/h
c. 30 km/h
d. 50 km/h

23. What should a driver do if they accidentally cross the Apron Limit Line or MAD Line onto a Taxiway?

a. Panic and leave the vehicle
b. **Turn around back to the Apron, park safely, and report to supervisor**
c. Continue driving
d. Ignore the incident

24. What is prohibited during refueling operations?

a. **Using phones and radios**
b. Wearing seat belts
c. Parking in designated areas
d. Conducting pre-trip inspections

25. When can vehicles approach the scene of an airside emergency?

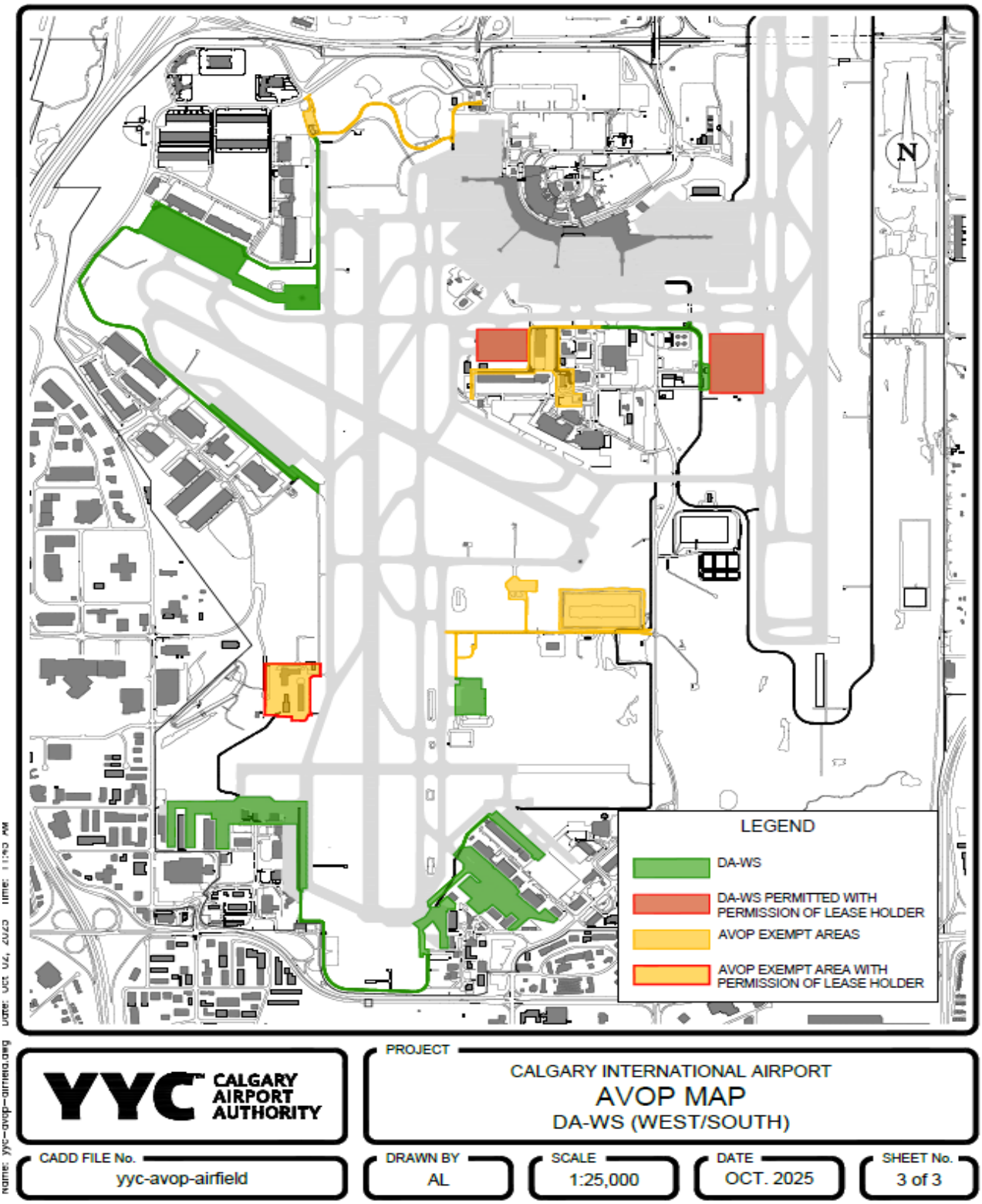
a. Anytime
b. **Only after emergency vehicles switch from red to amber lights**
c. When directed by ATC
d. After 10 minutes

SECTION 6
DA-WS (West / South)
AVOP Requirements

Calgary Airport

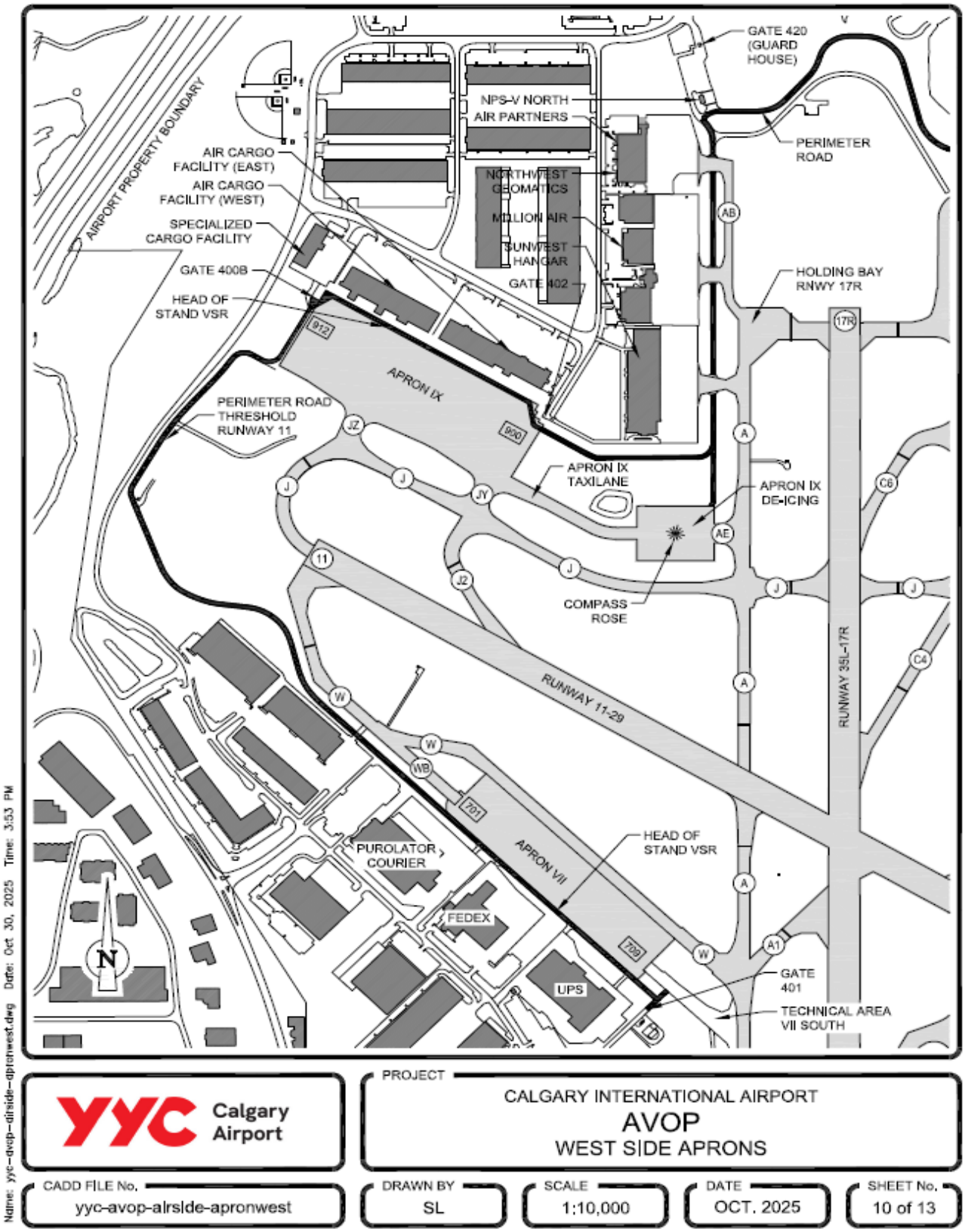
6 DA-WS AVOP Requirements

6.0.1 DA-WS Airfield Map



Calgary Airport

6.0.2 DA-West Aprons



Calgary Airport

PROJECT

CALGARY INTERNATIONAL AIRPORT

AVOP

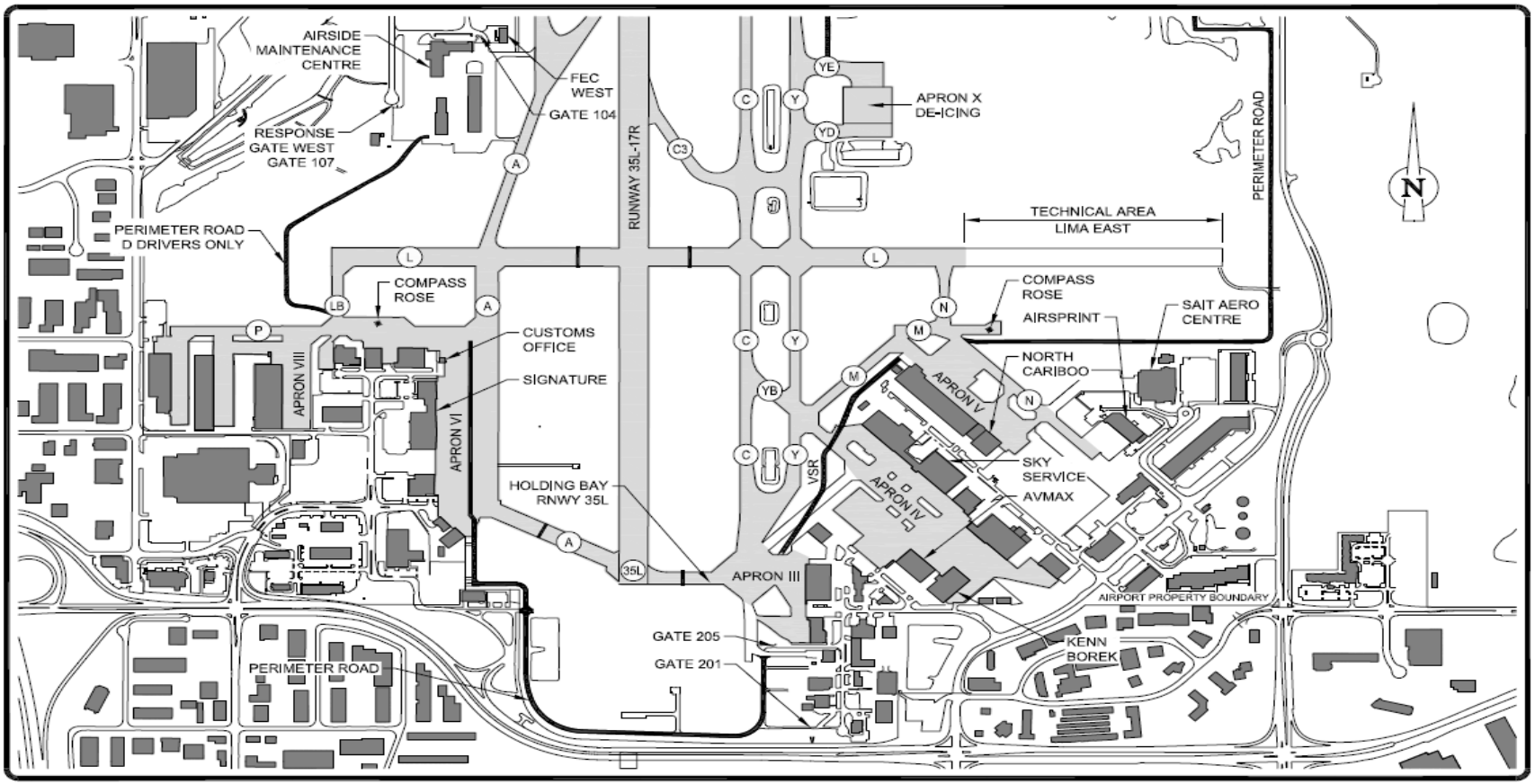
WEST SIDE APRONS

CADD FILE No.	DRAWN BY	SCALE	DATE	SHEET No.
yyc-avop-airside-apronwest	SL	1:10,000	OCT. 2025	10 of 13

Name: yyc-avop-airside-apronwest.dwg Date: Oct. 30, 2025 Time: 3:53 PM

Calgary Airport

6.0.3 DA-South Aprons



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6.1 DA-WS AVOP – Permitted Surfaces

DA and DA-WS AVOP allows driving on South Aprons III, IV, V, VI, and VIII, and on uncontrolled Taxiway P, as well as West Aprons VII and IX. Perimeter roads around the threshold Runway 11 and Threshold Runway 35L in a vehicle that is not equipped with an aeronautical radio is also permitted. A DA and DA-WS AVOP holders may provide access to Apron X via Gate 235, and access AVOP exempt surfaces discussed in Section 3. **DA-WS AVOP holders are not permitted to operate on Apron I.**

6.1.1 DA-WS AVOP & the Manoeuvring Area

Under no circumstances may a DA and DA-WS AVOP holder drive on a designated Taxiway or Runway, with the exception of Taxiway P, unless escorted by a D AVOP holder, or unless authorized with a specific exemption granted by the AVOP Coordinator.

A **Taxiway Incursion** or **Manoeuvring Area Incursion** occurs when any part of a vehicle crosses the Apron Limit Line or Manoeuvring Area Delimitation (MAD) Line into the Manoeuvring Area, or crosses onto a Taxiway without the proper AVOP license, or when any part of a vehicle or aircraft crosses an Apron Limit Line or MAD Line without authorization from ATC, as applicable to the operation and AVOP type. All Taxiway, Runway, and Manoeuvring area incursions must be reported to the IOC immediately.

6.1.2 Taxiway P

Taxiway P is uncontrolled; therefore, DA and DA-WS AVOP holders are permitted to drive in a vehicle not equipped with an aeronautical radio on Taxiway P. When driving on Taxiway P, operators must practice extra caution, giving way to all aircraft movements between hangars on Apron VIII as well as aircraft entering and exiting Taxiway P from Taxiway LB and Taxiway A.

The speed limit on Taxiway P is 30 km/h.

6.1.3 Taxiway N

Taxiway N is the only airside connection point between Apron V (North Cariboo Hangar) and Airsprint Hangar. DA and DA-WS AVOP holders are not permitted on Taxiway N unless escorted by D AVOP holders, or unless authorized with a specific exemption granted by the AVOP Coordinator.

6.1.4 Gravel Roads

DA-WS AVOP holders are not permitted on gravel roads unless authorized with a specific exemption granted by the AVOP Coordinator or if the DA AVOP holders is operating in an AVOP exempt area.

The gravel perimeter road that runs parallel with McCall Way NE (Technical Area L East to Gate 234) and the gravel roads on the west airfield that connect Taxiway LB to the AMC and the road that parallels Taxiway Alpha, between Apron VII and the AMC are restricted to D AVOP only.

6.2 Accessing West Aprons (VII & IX)

Drivers accessing the West Airfield as part of their job duties are not required to go through a vehicle screening point, or Non-Passenger Screening – Vehicle (NPS-V).

6.2.1 Gate 420

To access the airfield from Aero Drive:

a. Stop prior to the Gate 420 Guardhouse to complete biometric checks with the Security Officer.
b. Once clear, the Security Officer will open Gate 420. Once the vehicle, and any escorts are through, all vehicle operators MUST STOP just inside Gate 420 and wait for the gate arm to close fully.
c. All vehicle operators and their passengers and escorts proceeding towards the West Airfield (Aprons VII & IX) do not need to go through NPS-V North.
d. The speed limit from Gate 420 to the stop sign across from the Air Partners' Hangar is 30 km/h.

6.2.2 Exiting the Airfield

i. STOP prior to the security gate and wait for the gate to open.
j. Proceed through the security gate.
k. All vehicle operators MUST STOP just outside the security gate and wait for the gate arm to close fully.

6.2.3 Security Gates and Gate Arms

When entering through any security gate or gate arm, only one vehicle may proceed at a time unless the gate is locked open. Allowing multiple vehicles through at once is considered a security breach and can cause damage if the gate closes on a vehicle. Leaving a security gate or gate arm before it fully closes is considered a **security breach**.

When exiting the Critical Area or the airfield through any security gate or gate arm, the last vehicle through the gate or past the gate arm is responsible for ensuring the gate or gate arm has fully closed and that no unauthorized entry has occurred.

6.3 Accessing South Aprons (III, IV, V, VI, VIII)

Drivers accessing the South Airfield as part of their job duties are not required to go through a vehicle screening point, or Non-Passenger Screening – Vehicle (NPS-V).

6.3.1 Gate 205

To access the airfield from McCall Way NE:

a. Stop prior to Gate 205 and prox at the scanner.
b. Once the vehicle, and any escorts are through, all vehicle operators MUST STOP just inside Gate 205 and wait for the gate arm to close fully.

6.3.2 Exiting the Airfield

a. STOP prior to the security gate and wait for the gate to open.
b. Proceed through the security gate.
c. All vehicle operators MUST STOP just outside the security gate and wait for the gate arm to close fully.

6.3.3 Security Gates and Gate Arms

When entering through any security gate or gate arm, only one vehicle may proceed at a time unless the gate is locked open. Allowing multiple vehicles through at once is considered a security breach and can cause damage if the gate closes on a vehicle. Leaving a security gate or gate arm before it fully closes is considered a **security breach**.

When exiting the airfield through any security gate or gate arm, the last vehicle through the gate or past the gate arm is responsible for ensuring the gate or gate arm has fully closed and that no unauthorized entry has occurred.

6.4 AVOP Holders - Responsibilities

6.4.1 Vehicle & GSE Responsibilities

Anyone operating a vehicle or equipment airside at YYC must conduct a **pre-trip walkaround inspection** to ensure it is in safe working condition.
Operators are responsible for **all loads carried or towed**, ensuring they are **secure, covered, and do not spill** or pose a hazard to aircraft, vehicles, or pedestrians. This standard includes ULD storage. All ULDs are prohibited from being stored directly on the ground.

All vehicle operators must:

a. Inspect their vehicle for required safety equipment and markings.
b. Ensure all safety equipment is functioning properly.
c. Immediately report any malfunctions or defects to their supervisor.
d. Secure, tag out, and remove any malfunctioning vehicle, equipment, or aircraft from service in accordance with safety regulations and company procedures.

Additional Responsibilities:

a. Vehicles and equipment not in use **must be parked in designated areas** or within company-leased spaces.

b. All **GSE, chocks, and pylons must be properly stored** to ensure accessibility, safety, and facilitate snow clearing during winter operations.

6.4.2 Traffic Safety Rules, Policies, & Procedures

Airside traffic rules, policies and procedures are designed to be similar to ground-side traffic rules.

6.4.2.1 Seat Belts

Seat belts are mandatory for all vehicles, regardless of whether they have an enclosed operator's cab. All occupants in an airside vehicle must always wear a seat belt, except when actively servicing an aircraft at an operational stand (inside the aircraft's Circle of Safety).

To improve compliance, it is recommended that open-cab vehicles be equipped with high-visibility seat belts or seat belt covers.

6.4.2.2 Standard Traffic Signs

Stop Signs:
STOP signs and STOP lines are positioned to provide safe clearance for vehicle traffic and safe clearance for aircraft (wingtip & taxi clearance).

No Entry / Enter Signs:
Enter and Do Not Enter signs are used to ensure safety by providing one-way traffic control. Do Not Enter signs are also used anywhere entry is restricted.

Speed Limit Signs:
All vehicle operators must obey all airside speed limits.

No Parking – Emergency Exit Signs:
No Parking signs are used to ensure various areas are kept clear at all times, including emergency exits, fire extinguisher access, emergency fuel shut offs, etc.

6.4.2.3 Vehicle Operator Guidelines – Airside Roads

Vehicle Service Roads:
Vehicle Service Roads (VSRs) are indicated by two solid white lines at least 7.5 m apart with a single broken center line. VSRs may be two-way traffic, or one-way traffic.

Vehicle Service Roads must be entered and exited in a safe manner. The operator must yield to traffic already established on the VSR.

West Perimeter Road:
The West Perimeter Road starts at the stop sign across from Air Partners' Hangar up to Apron IX, and from Apron IX to Apron VII around the Threshold of Runway 11. The speed limit of the West Perimeter Road is 50 km/h.

Drivers are required to pay special attention to aircraft movements in and out of Air Partners, Million Air, and Sunwest. Stopping at the stop sign does not guarantee safe distance from larger aircraft. Drivers may have to stop prior to the stop sign to avoid the wingspan of larger aircraft.

When driving on the West Perimeter Road between Apron VII and Apron IX, vehicles are required to stop at the stop line to ensure that an aircraft is not landing or departing Runway 11/29.

Drivers must be prepared to yield to aircraft that exit the Threshold of Runway 11 onto Taxiway W as the aircraft's wingtips may pass above the perimeter road. Yield Signs indicate where the driver may be required to hold, providing sufficient space for taxiing aircraft.

South Perimeter Road:
The South Perimeter Road starts at Gate 205, runs parallel with McKnight Blvd NE around the Threshold of Runway 35L and ends at Apron VII. The speed limit of South Perimeter Road is 30 km/h. Drivers are required to have special care and control over their vehicles when proceeding around corners as the surface becomes slippery during winter months.

Use of Designated Roads:

a. Vehicle operators must primarily use designated Vehicle Service Roads (VSRs) and perimeter roads.
b. Always drive on the right lane of these roads.

Vehicle Right-of-Way on the VSR:
At uncontrolled VSR intersections, the vehicle established in the VSR on the right-hand side has right-of way.

Approaching Overhead Doors:
Prior to proceeding through an overhead door (commonly referred to as a "roll up" door), vehicle operators shall come to a complete stop 5 m in front of the door. After stopping, vehicle operators shall proceed at 5 km/h or less (i.e., walking speed). This requirement applies both inside and outside a building.

Moving Between Adjacent Operational Stands:
Vehicles may bypass the VSR when moving directly to the next operational stand while actively servicing an aircraft (i.e.: traveling from Stand 901 to 902 after working on Stand 901).

Road Markings and Visibility:
If road markings are faded, obscured, or covered (i.e.: snow), operators must approximate the designated roadway as closely as possible.

Passing Slow Moving Vehicles:
Slow moving vehicles travelling less than 15 km/h may be passed when the following conditions are adhered to:

a. When it is safe to do on the left-hand side within the VSR
b. The speed limit is not exceeded.
c. The section in front of the vehicle being passed is clear and with adequate room.
d. No more than one vehicle is passed at a time.

Prohibited Turn Arounds:
Vehicles may not use leased areas to turn around.

Emergency & Authority Vehicle Exemptions:
There are times when Airfield Operations Specialists (AOS), Safety Compliance Officers (SCOs), and emergency services such as Aircraft Rescue and Firefighting (ARFF) and police services are required to operate outside of the Airside Traffic Directives (ATDs) in the performance of their duties. This also includes vehicles escorting emergency vehicles. When these situations occur, the Authority personnel or emergency services will activate red beacons (red and blue beacons for police services) to identify to other operators that the vehicle is operating outside of the ATDs and possibly outside of regulated traffic patterns, off Vehicle Service Roads (VSRs) or perimeter roads, and at speeds greater than standard speed limits. Other vehicle operators are required to give right-of-way to vehicles with active red beacons as per vehicle Right-of-Way standards.

6.4.2.4 Additional Markings on West & South Aprons

No Parking – Emergency Exit:
A red square with a "no parking" symbol indicates an area where no parking is allowed.

Emergency Fuel Shut Off (EFSO):
Emergency Fuel Shut Off buttons must not be blocked. There must also be a clear line of sight to facilitate easy access and quick response. Fuel Isolation Valve Chambers are present on Apron IX and the Emergency Fuel Shut Off buttons are positioned at each stadium light post.

Fuel Isolation Valve Chambers:
A red square indicates an underground fuel valve that is used when refueling aircraft. Parking is not allowed over or within 2 m of Fuel Isolation Valve Chambers (Fuel Vaults).

Stop Lines:
Stop Lines are a single solid white line and are used to indicate a MANDATORY STOP to the driver. The Stop Line many or may not be accompanied by a Stop Sign. Either way, the driver must always stop at the Stop Line, even if the Stop Line is covered by snow.

On the West Airfield, there is a stop line on the West Perimeter Road connecting Apron VII and Apron IX and is a mandatory stop for vehicles.

On the South Airfield, there is a stop line on the VSR heading West towards Apron III, on the VSR heading East towards Apron IV, and on the VSR heading West towards Apron IV from Apron V.

Pedestrian Crossings / Walkways:
Pedestrian Crossings are not painted on the West and South Aprons and instead indicated by cones or pylons. Pedestrian Crossings indicate the path passengers will follow when boarding or deplaning an aircraft Pedestrians in marked crossings have the right-of-way over vehicles.

6.4.2.5 West & South Aprons – Aircraft Movements & Parking

Apron Taxiway / Aircraft Stand Taxilanes:
A single solid yellow line located on an Apron. The Apron Taxiway is a portion of an Apron designated as a taxiway providing a through taxi route across the Apron. The Aircraft Stand Taxilane is a portion of an Apron providing access to aircraft stands. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on the pavement, and the wings do not make contact with any known obstructions.

Note: There are limited Apron Taxilanes on the South Aprons. Drivers need to pay special attention to aircraft movements as there is no predictable path the aircraft is going to follow.

Aircraft Stand Lead-in Lines:
A long single solid yellow line in the middle of an aircraft operational stand that guides aircraft into the parking position. The nose wheel of the aircraft is centered on these lines to ensure the wings do not hit any known obstructions.

On Apron VII, curved Aircraft Stand Lead-in Lines are utilized to arrive smaller aircraft to avoid the need for pushback.

Aircraft Parking Boundary Lines:
An Aircraft Parking Boundary Line is a single yellow broken line, often parallel to the Apron Taxiway and is used to outline aircraft parking pads. Aircraft are parked behind Aircraft Parking Boundary Lines to ensure they are safely separated and clear of taxiing aircraft.

On the South Airfield, there is a small parking pad on the North side of Taxiway P. This space is not often used for aircraft parking due to its size; however, drivers must be aware of its location and keep in mind of the possibility of small scale aircraft being parked there.

Note: Aircraft Parking pads are not designated parking areas for vehicles or equipment. All vehicles and GSE must be removed unless actively in use to service an aircraft at that location. All vehicle and GSE operators must give right-of-way to aircraft at all times.

6.4.2.6 Approved Vehicle & GSE Staging & Parking Areas

Vehicles and GSE must be **parked** in designated areas only, including:

a. Within the boundaries of company lease areas
b. In marked parking stalls / areas

Lease Lines:
Lease Lines are two white (or yellow) parallel lines with the word "Lease" (or a company name). Lease Lines are used to outline the area of an Apron surface that has been leased to a company. An AVOP is not required for company employees or company authorized persons to operate vehicles, equipment or aircraft inside the leased area.

When vehicles and GSE are parked:

a. The beacon is turned OFF.
b. Is facing away (out) from the terminal building, near loading bridges, and other heavy traffic areas.

Vehicles and GSE may only be **staged** in the following areas:

a. Inside the red and white parking boundary lines adjacent to operational stands.
b. In staging areas for the specific purpose of actively servicing an aircraft.

Canada Border Services Agency (CBSA) has a satellite office located on Apron VI. CBSA leased space has "Customs Only" written alongside the parallel white lease lines. It is prohibited to drive through this area when an aircraft is parked in the CBSA area. Vehicles can only enter CBSA leased space when aircraft are present with specific authorization from CBSA.

Staging and Parking Area Boundary Lines:
Vehicle and GSE Staging and Parking Area Boundary Lines are parallel solid white and red lines that define the areas intended for use to stage or park ground service equipment and are intended to provide safe separation from aircraft at an operational stand. These lines take into account the wingspan of aircraft. Approved vehicle parking is on the white side of the line.

All vehicles and GSE that are unattended, staged, or parked **must have the brakes on and the wheels chocked.**

6.4.2.7 Restrictions to Vehicle & GSE Staging & Parking Areas

Vehicles parked in any unapproved parking area **may be towed at the company's or driver's expense and an AVOP violation ticket may be issued.**

Vehicle operators must not park or leave vehicles or equipment unattended:

- On an aircraft taxiing area or aircraft movement area
- On aircraft lead-in lines
- On Aircraft Parking Pads
- On any VSR, cargo road, or perimeter road
- On or in front of designated "No Parking" pavement marking or signs
- In another company's leased space

- In front of / blocking a security gate
- Less than 1 m away from the security fence when airside

Vehicles and equipment must:

- Not be parked idling close to air intakes or inside any building / enclosed space.
- Not be parked in a way that restricts fuel truck access and exit routes.
- Remain a minimum distance of 2 m away from fuel trucks, fuel carts, and fuel pits.
- Remain a minimum distance of 1 m away from a security fence when airside.
- Remain a minimum distance of 3 m away from a security fence when groundside.

Aircraft refueling vehicles must:

- Remain 15 m away from a building (windows and doors).
- Not be left unattended parked in staging and operational stands.

6.4.2.8 Cargo & Baggage Train Limits

Cargo pallet dollies: maximum of 4 per train

Baggage carts (or baggage dollies):

- **Outdoors:** maximum of 6 per train
- **Inside an airport facility including all baggage halls, make-up units, and offload sheds:** maximum 4 per train

6.4.2.9 Chocks, Cones, & Towbars

Chocks, cones, and towbars must be stored neatly in designated areas (where available) when not actively in use. All GSE, including chocks, cones and tow bars must be stored so they do not block, interfere, or create an obstacle or hazard for other vehicles or equipment, including Authority vehicles in performance of their duties (snow clearing, line painting, etc.).

6.5 West Aprons

Apron VII:

Apron VII is a common use Apron. The Vehicle Service Road, located on the Southwest side of the Apron, must be utilized for all vehicle and GSE movements.

DA and DA-WS AVOP holders who have the **need** and the **right** are permitted to operate vehicles on Taxiway W exclusively for the purpose of traveling directly to or from an aircraft requiring towing or operational servicing. Operators must follow all Right-of-Way standards.

Apron IX:

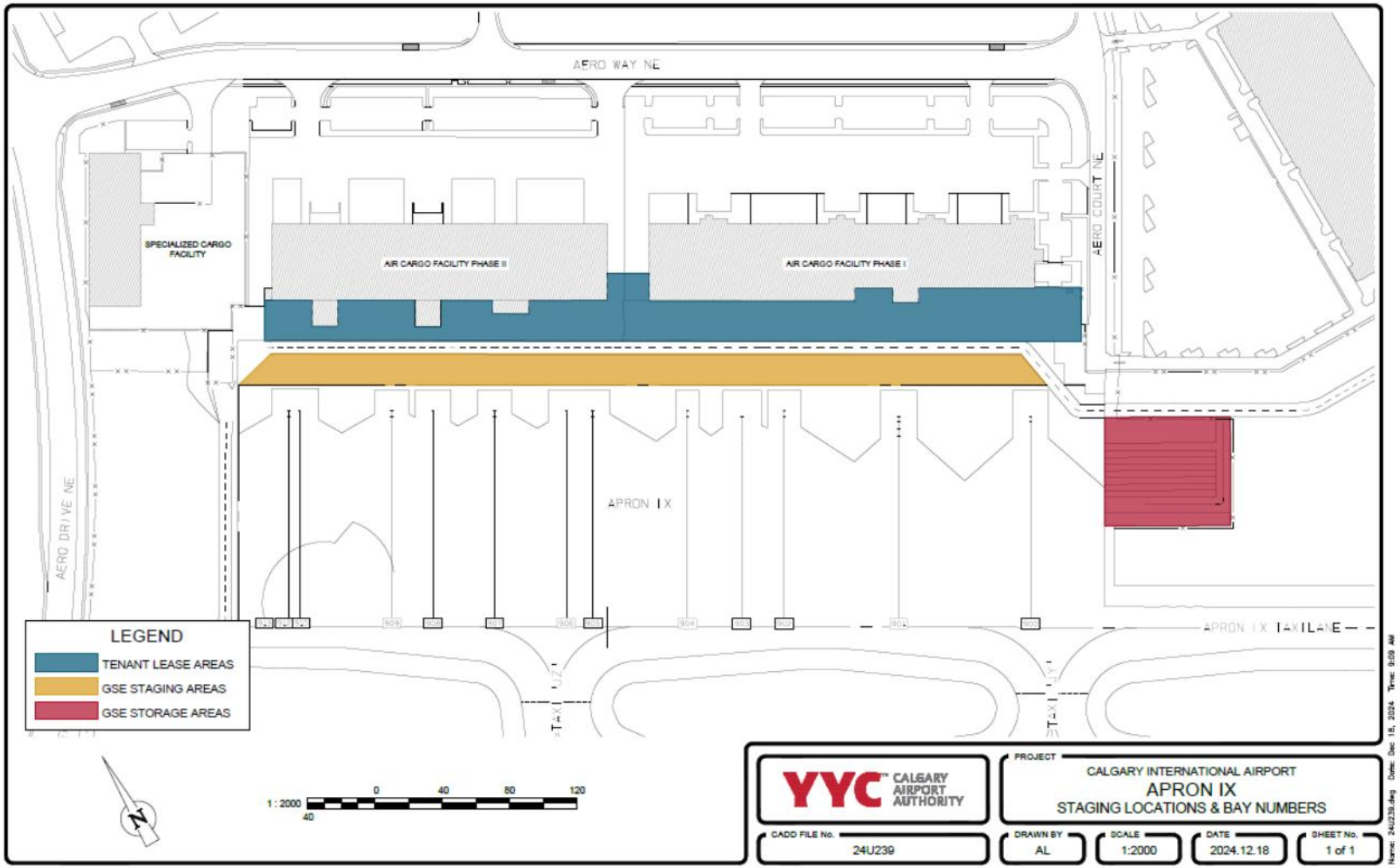
Apron IX is a common use Apron. The Vehicle Service Road, located on the North side of the Apron, must be utilized for all vehicle and GSE movements.

Drivers must practice additional caution when driving on the VSR as company leased spaces run parallel with the VSR.

Apron IX Deice:

DA and DA-WS AVOP holders who have the **need** and the **right** are permitted on Apron IX Deice. Operators must practice additional caution when driving on Apron IX Deice as the surface is used often as a high-power run-up area for aircraft. Drivers are not permitted on Apron IX Deice when an aircraft is performing a high-power run-up.

6.5.1 Apron IX Staging Locations & Bay Numbers



6.6 South Aprons

Apron III:
Apron III is a multi-lease area with no marked Vehicle Service Road (VSR) on the Apron. Vehicle operators must follow all Right-of-Way standards, providing safe clearance from all aircraft taxiing into and out of the Apron.

Helicopters may hover between Apron III and Apron IV to access the Avgas (aviation gasoline) tank located on Apron III. It is recommended that drivers lower their vehicle window to listen for the helicopter flying above the Apron and VSR.

Apron IV:
Apron IV is a multi-lease area with no marked Vehicle Service Road (VSR) on the Apron. Vehicle operators must follow all Right-of-Way standards, providing safe clearance from all aircraft taxiing into and out of the Apron. To safely avoid an aircraft, drivers are permitted to enter the lease space of other companies if required.

Apron V:
Apron V is a multi-lease area that runs parallel with the North Cariboo Hangar.
The Airsprint Hangar can be accessed via Taxiway N. DA and DA-WS AVOP holders are not permitted on Taxiway N unless escorted by D AVOP holders, or unless authorized with a specific exemption granted by the AVOP Coordinator.

Vehicle operators driving across Apron V to access the Airsprint Hangar are not permitted to drive between the parked aircraft and the North Cariboo Hangar at ground loading gates due to safety reasons as the driver has limited visibility and may not see passengers or crew, or other equipment parked.

Apron VI:
Apron VI is a multi-lease area with a marked Vehicle Service Road that connects the South Perimeter Road and Taxiway P. The VSR is located outside of the Apron Limit Line and is parallel with Taxiway A. DA and DA-WS AVOP holders are not permitted on Taxiway A unless escorted by D AVOP holders, or unless authorized with a specific exemption granted by the AVOP Coordinator. Vehicle operators must follow all Right-of-Way standards, providing safe clearance from all aircraft taxiing into and out of the Apron. To safely avoid an aircraft, drivers are permitted to enter the lease space of other companies if required.

STARS Helicopter departs from the Signature Hangar. STARS will hover taxi over the VSR when arriving and departing from the helicopter pad. Vehicle operators must follow all Right-of-Way standards, providing safe clearance from propwash. If the STARS helicopter is going to perform a maintenance run for longer than 5 minutes, a striped green and white barrel pylon will be positioned between the STARS helicopter and the VSR to indicate to vehicle traffic it is safe to proceed.

Canada Border Services Agency (CBSA) satellite office is located between Signature Hangar and Taxiway P. Vehicle operators are **prohibited** from entering CBSA leased space when an aircraft is parked within the lease area. Vehicles can only enter CBSA leased space when aircraft are present with specific authorization from CBSA.

Apron VIII:
Apron VIII is a multi-lease area that can only be accessed via Taxiway P. Taxiway P is uncontrolled; therefore, operators must practice extra caution, giving way to all aircraft movements between hangars on Apron VIII as well as aircraft entering and exiting Taxiway P from Taxiway LB and Taxiway A. To safely avoid an aircraft, drivers are permitted to enter the lease space of other companies if required.

6.7 Speed Limits

All vehicle operators driving airside must always maintain a safe driving speed, considering factors such as weather, road conditions, visibility, traffic congestion, proximity to aircraft, vehicles, GSE, bridges, infrastructure, pedestrian areas, etc.

MAXIMUM SPEED LIMITS:

Area	Speed Limit
Aircraft Circle of Safety	5 km/h (Walking Speed)
Vehicle Service Road	30 km/h
All Aprons	30 km/h
Cargo Road	30 km/h
Perimeter Roads	50 km/h (unless otherwise posted – i.e.: South Perimeter Road which is posted at 30 km/h)
Technical Area VII South	30 km/h
Technical Area L East	50 km/h (unless aircraft is parked, then 30 km/h)
Taxiway Papa (uncontrolled)	30 km/h

** Emergency vehicles or Airside Traffic Enforcement Personnel with red flashing beacons responding to an emergency or operating outside of the Airside Traffic Directives in the performance of their duties may exceed the speed limit (includes vehicles under escort)

6.8 Right-of-Way ★

Hierarchy of Right-of-Way:

1. Aircraft under their own power or under tow.

2. Emergency vehicles (with red lights flashing).
3. Airport maintenance vehicles (snow, ice, line painting, and FOD control equipment) while performing their duties.
4. Marshallers and tractors during aircraft arrival, pushback, and when returning from pushback.
5. Fuel trucks and fuel carts engaged in fueling operations, including when maneuvering into or backing out of an operational stand.
6. Pedestrians in walkways, crosswalks, bag halls, and load sheds.
7. All other vehicles.

Aircraft under their own power or under tow always have the right-of-way and must be given priority over all other traffic. All vehicle operators MUST always give right-of-way to all aircraft.

6.8.1 Right-of-Way, Aircraft

Aircraft Awareness and Clearance:

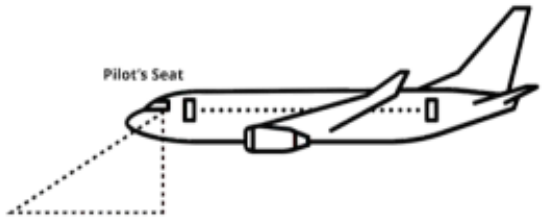
Vehicle operators must always watch for aircraft and ensure no aircraft are approaching, arriving, departing, or preparing for departure.

Drivers must STOP completely and provide ample clearance for all aircraft operations, including:

- Arrivals
- Pushbacks
- Air Starts
- Taxiing
- Towing
- Powering into or out of the gate or operational stand

Pilots cannot see anything directly below or close to the nose of the aircraft. The pilot must feel confident there is more than enough distance for safe clearance.

Aircraft Type	Distance from Pilot's Seat (m)
A330	16 m
B777	15.5 m
B787	15 m
B737 MAX	14.5 m



Restricted Areas During Aircraft Operations:

Drivers must not drive through any part of an operational stand during pushback or aircraft arrival.

Giving Right-of-Way:

If a taxiing, stopped, or parked aircraft approaches on a designated vehicle road:

a. Stop immediately at a safe distance in the VSR behind the stop sign / line.
b. If necessary, exit the VSR safely and return only when it is safe.
c. Temporarily enter a company's leased space and exit when it is safe.

Jet Engine Air Start on the Operational Stand:

Aircraft engines may be started at the gate using an external air compressor (Air Start), which creates a jet blast hazard. At least one marshaller must be present to ensure safe vehicle operations. During an Air Start, all vehicle operators must stop at a safe distance and wait for the marshaller's signal before passing behind the aircraft.

6.8.2 Right-of-Way, Emergency Vehicles

All vehicle and GSE operators must give the right-of-way to emergency vehicles with red flashing beacons. Similar to interacting with emergency vehicles when driving groundside, all vehicle & GSE operators are responsible to give right-of-way by safely moving out of the way of emergency vehicles as quickly and safely as possible.

Airside Traffic Enforcement Personnel may utilize red beacons when conducting a traffic stop. If a vehicle with red beacons activated follows you when you give way to it, come to a complete stop and prepare to comply with the directions given by the enforcement personnel. Safety Compliance Officers may also utilize a siren to indicate the requirement to pull-over or give way. When operating near a vehicle engaged in a traffic stop, give right-of-way to both the vehicle and Airside Traffic Enforcement Personnel.

6.8.3 Right-of-Way, Authority Maintenance Vehicles

Vehicle and GSE operators must give right-of-way to all airport maintenance equipment when actively in performance of their duties. This includes snow & ice removal, FOD control, painting, or any other airport maintenance task or duty.

6.8.4 Right-of-Way, Marshallers & Push Tractors

Vehicle and GSE operators cannot drive between a marshaller, their equipment, and the aircraft, or proceed behind the aircraft, unless cleared by the marshaller.

6.8.5 Right-of-Way, Fuel Trucks & Fuel Carts

Vehicle and GSE operators must give right-of-way to all fuel tanker trucks or fuel carts engaged in fueling operations or maneuvering in or out of an operational stand.

6.8.6 Right-of-Way, Pedestrians

Vehicle and GSE operators must give right-of-way to pedestrians:

a. In all designated walkways (marked by cones or pylons)

b. Marshallers during and upon completion of an aircraft pushback or aircraft arrival

Pedestrians must abide by the Hierarchy of Right-of-Way at all times. Pedestrians (other than marshallers actively involved in aircraft operations) must give right-of-way to all traffic when walking outside of designated walkways.

6.8.7 Right-of-Way, All Other Vehicles

Vehicle and GSE operators must give the right-of-way to any other vehicle already established on the VSR. Anywhere two or more VSRs intersect with no signage must be treated as an uncontrolled intersection and the vehicle on the right has the right-of-way

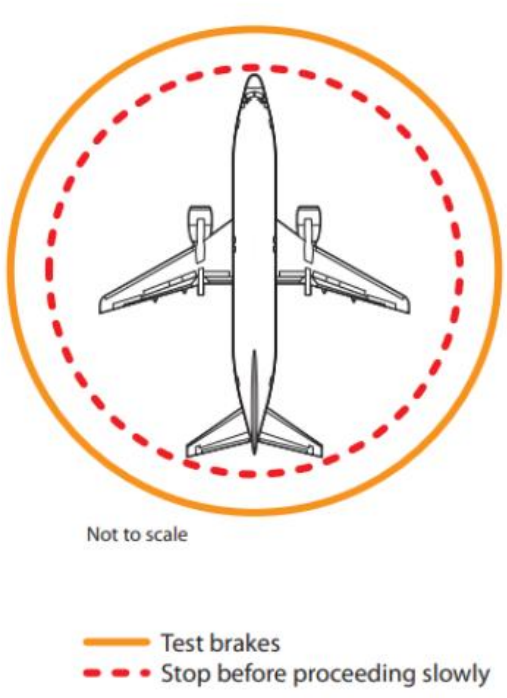
Vehicle and GSE operators must:

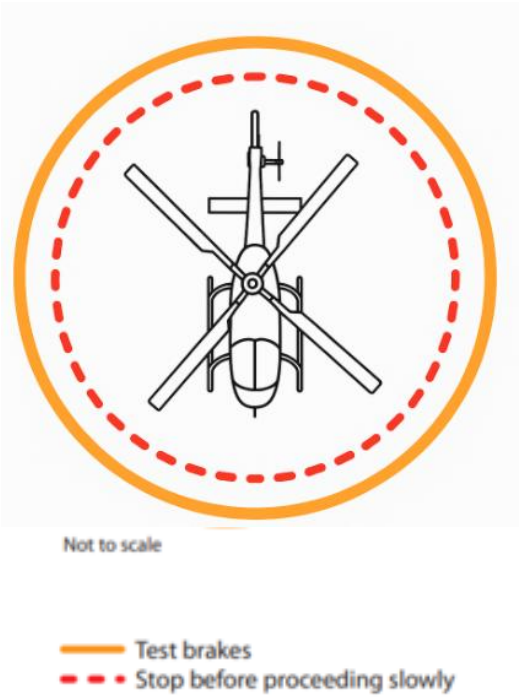
a. Obey all signage.
b. NOT park or leave a vehicle unattended on the VSR.

6.9 Circle of Safety ★

The unmarked protection zones of an aircraft is described as a circle outside of the wingtips, nose and tail that is intended to prevent damage from vehicles and GSE.

- Only vehicles actively involved in servicing the parked aircraft are allowed to enter the operational stand and the aircraft's circle of safety.
- The maximum speed limit within the aircraft Circle of Safety is 5 km/h. All vehicles within the circle of safety must maintain a minimum 1 m safe clearance around the aircraft.
- The outer circle of safety extends 5 m from the aircraft. Vehicle operators must stop and test the vehicle's brakes before crossing the imaginary boundary of the outer circle of safety.
- The inner circle of safety is 2 m from the aircraft and indicates where drivers must stop a second time before resuming their approach to the aircraft at a slow speed (defined as walking speed 5 km/h or less).
- A marshaller is required to guide the operator when pulling up a vehicle or piece of equipment to an aircraft.





Note: Any contact with an aircraft must be reported to your employer supervisor and to the aircraft operator immediately. Your supervisor is responsible for calling the IOC. The operator must be informed as soon as possible to be able to check the aircraft for visible and non-visible damage to make sure it is safe to fly.

6.10 Operational Stands

6.10.1 Operational Stand Safety Procedures

Vehicle and GSE operators must:

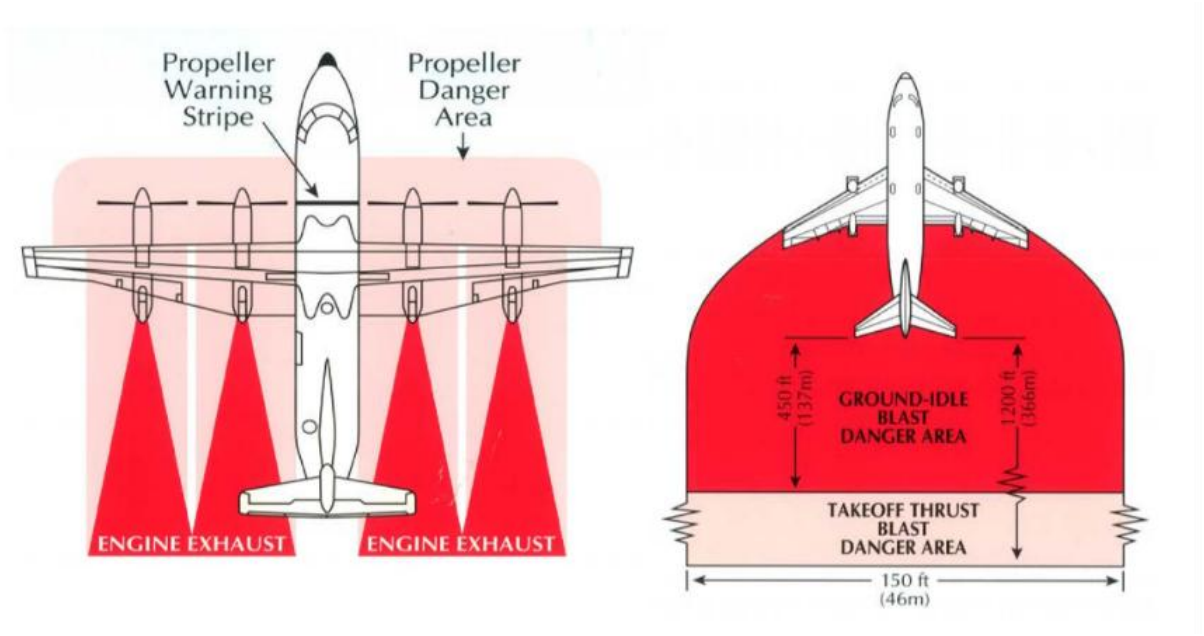
a. Not drive onto or across an operational stand, unless their duties and tasks include working on that operational stand.
b. Not drive on, off, or through an operational stand when an aircraft is arriving, during pushback, when the aircraft's anti-collision lights are on, or when the aircraft's engines are running.
c. Never drive between the marshaller and an aircraft.
d. Never drive over electrical power cables, fuel hoses, air hoses, wheel chocks, etc.
e. Have a marshaller guide the vehicle operator when reversing.

6.10.2 Jet Blast, Prop Wash, Engine Ingestion

Jet Blast, prop wash, and engine ingestion is an extreme hazard that vehicle and GSE operators must approach with caution.

Vehicle and GSE operators must:

a. Stop a safe distance away from any aircraft with engines running to ensure they remain a safe distance clear of jet blast and/or prop wash.
b. Always slow down or stop to observe aircraft status and determine if the aircraft has just arrived, is ready to depart, is completing an Air Start, or engine run-up. To avoid the possibility of engine ingestion, jet blast or prop wash hazards, the driver may choose to take an alternate route, avoiding the operational stand entirely.



6.11 Aircraft Arrival and Pushback ★

Vehicle operators must know and clearly identify the signs that indicate an aircraft is arriving or departing. Vehicle operators are responsible for knowing when they have more than enough time to proceed safely and knowing when and where they must stop to give right-of-way and safe clearance for the aircraft and marshallers. Vehicle operators escorting other vehicles or GSE must ensure there is more than enough time for everyone under escort to proceed safely and avoid an aircraft cut-off.

6.11.1 Aircraft Arrival

Signs of Aircraft Arriving to Apron / Hangar:

- Marshaller(s) are present.
- Marshallers may not be obvious or visible
- Marshallers will not be present during a lightning event
- GSE is present or arriving.

** Signs of arrival are not absolute. Aircraft may be dropping in to the Hangar and may not have notified the company of its arrival.

When to Pass Behind an Aircraft After Arrival:

- Aircraft wheels are chocked.
- Aircraft engines have spooled down.
- Aircraft anti-collision light (ACL) is off.

Special consideration for turbo-prop aircraft: the engine(s) on turbo-prop aircraft may remain running until a ground power unit is attached on gate. Drivers are permitted to pass behind turbo-prop aircraft as long as the aircraft's nose wheel is chocked and the engine(s) are feathering (not full power), or if only one engine is running at idle.

6.11.2 Aircraft Departure & Pushback

9 Signs of Aircraft Pushback:

- Tow tractor is hooked up
- Aircraft wheels are not chocked
- Air stairs or aircraft steps are removed and stowed
- Anti-collision light (ACL) is on
- Doors, hatches, and cargo doors are closed
- All service vehicles are gone
- Marshallers are present
- Pylons (cones) are removed
- Engine(s) may be running

Note: Not all departures require the 9 Signs. Drivers must be diligent to ensure they do not cut-off an aircraft pushback from gate.

6.12 Indicators – Apron to Taxiway

6.12.1 Apron Lighting & Markings

Apron Edge Lights:
Single blue lights are used along the edge of the Apron. Apron Edge Lights run parallel with Apron Edge Lines.

Apron Edge Lines:
Apron Edge Lines are double solid yellow lines used to indicate the edge of the weight bearing surface of the Apron. Paved surfaces outside of the Apron Edge Lines are not designed as weight bearing surfaces adequate for aircraft. Vehicles and equipment parked or operating outside of the Apron Edge Lines are NOT guaranteed safe clearance from aircraft.

6.12.2 Taxiway Lighting & Markings

Taxiway Center Line:
The Taxiway Center Line is a single solid yellow line on a Taxiway and is used to provide guidance for aircraft to taxi from the Runway center line to a point on the Apron where aircraft operational stand markings begin. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on the pavement, and the wings will not contact known obstructions.

Taxiway Edge Lights:
Single blue lights are used along the edge of the Taxiway. Taxiway Edge Lights run parallel with Taxi Side Stripe Markings.

Taxi Side Stripe Markings:
Taxi Side Stripe Markings consist of double solid yellow lines. The double solid yellow lines along with a series of single blue lights on a Taxiway are used to indicate the edge of the usable portion of the Taxiway. Paved surfaces outside the lines are not designed for aircraft.

6.12.3 Apron – Taxiway Intersection Lighting, Markings, & Signage

Double Amber – Intersection Lights:
Double amber lights (Aviation Yellow) are used at the intersection of Aprons and Taxiways.

Manoeuvring Area Delimitation (MAD) Line:
The Manoeuvring Area Delimitation Line is a single solid yellow line and a single broken yellow line. The solid yellow line is positioned on Apron side. The MAD Line indicates the intersection of the Apron and Taxiway.

Apron Limit Line:
The Apron Limit Line is a single broken yellow line. Is another name for the Manoeuvring Area Delimitation Line and is treated the same.

Information Signs:
Black writing on yellow signage that provides information primarily used by aircraft operators. The information is also helpful for vehicle operators when entering the Manoeuvring Area.

Directional Signs:
Directional signs (black writing on yellow) have an arrow indicating the direction to proceed to get to the specified Apron, Taxiway or Runway.

Location Signs:
Location signs (yellow writing on black) identify (by letter) the Taxiway the aircraft (or vehicle) is on.

At some intersections, the Double Amber Intersection Lights, Manoeuvring Area Delimitation (MAD) Line or Apron Limit Line, Directional and Location Signs are **co-located** meaning that all indicators are grouped together, or in-line, with one another.

At other intersections, the Double Amber Intersection Lights, Manoeuvring Area Delimitation (MAD) Line or Apron Limit Line, Directional and Location Signs are all positioned separately. In this situation, drivers must not cross the MAD Line or Apron Limit Line to avoid a **Taxiway Incursion**.

** **DA and DA-WS AVOP Holders are not permitted beyond the Apron to Taxiway indicators – especially the Manoeuvring Area Delimitation (MAD) Line or Apron Limit Line. No part of a vehicle, piece of equipment, or aircraft under tow is permitted to cross the MAD Line without permission from Air Traffic Control (ATC).**

What if I accidentally cross over the MAD Line or Apron Limit Line and drive onto a Taxiway?

1. Do not panic.
2. Turn around and re-enter the Apron entrance where you came from.
3. Find a safe place to park.
4. Report the incident to your supervisor. Your supervisor will then call the Integrated Operations Centre (IOC) and report the incident on your behalf.
5. Be prepared to meet with the Airside Safety team to discuss the taxiway incursion.

6.13 Vehicle Collision

AVOP holders involved in an accident with another vehicle, aircraft, ground service equipment, or other object must **freeze the scene** and immediately contact their supervisor and the IOC.

Freezing the Scene:

- When safe to do so, the scene of an accident must be frozen (left in place) until the company supervisor and IOC has been informed. Calgary Airports will authorize when a scene can be unfrozen.
- At times, and depending on the location of the accident, scenes need to be temporarily unfrozen (moved) to a safe area. This may be to avoid active aircraft or other hazards such as fire. Scenes should ONLY be unfrozen when absolutely necessary for safety and when approved by the Airport Authority.

Note: Failure to immediately report a vehicle accident and freeze the scene may result in a safety violation.

6.14 Aircraft Fuel Tankers & Vehicle Fueling

Flammable liquids in tanks that are being transported must conform to the requirements outlined by Transport Canada's Transportation of Dangerous Goods Regulations.

The use of phones and radios in the immediate area of refueling operations is prohibited.

6.14.1 Aircraft Fuel Tankers

Aircraft fuel handling is normally conducted from underground hydrant fuel systems near the terminal building. When fueling is carried out by fuel tankers:

- Fuel operations must be conducted at least 15 m away from any airport building that has windows or doors in any exposed walls.
- Fuel and vehicle operators must not leave fuel tankers unattended unless parked in areas that are specifically designated for that purpose.

6.14.2 Vehicle Fueling & Transfer of Fuel

Vehicle fueling may only occur as follows:

- Outside of any building or enclosed structure.

- At least 15 m from the building.
- At least 7.5 m from any aircraft.
- With the refueling vehicle at least 4.5 m from any source of ignition.
- Vehicle engine off

Refueling any vehicle type indoors is prohibited, unless authorized by Calgary Airports

6.15 Operating Procedures – Temporarily Inaccessible Areas

6.15.1 Airside Emergency Response

When responding to an emergency on the airfield, emergency vehicles with flashing red lights must have an unobstructed path to reach and operate around the incident site, whether it's an aircraft, vehicle, or building. Unless specifically directed otherwise, all other airport vehicles and personnel must avoid approaching the scene or entering the "hot zone," which is the area between emergency vehicles and the affected aircraft, vehicle, or building.

In situations where emergency vehicles with flashing red lights are present at or near an operational stand, no other vehicles or personnel are permitted to approach the aircraft or incident site. The "**hot zone**" between emergency vehicles and the incident must remain clear to ensure the safety of emergency responders.

If Airside vehicles or personnel arrive on the scene before emergency vehicles, they must maintain a safe distance and stay clear of the aircraft or incident site and the surrounding area. This ensures emergency responders have unimpeded access to the incident site and helps keep everyone safe from potential hazards.

Airside vehicles and personnel must wait until all emergency vehicles have switched from red to amber lights before approaching the aircraft or incident site. Only when the amber lights are displayed is it safe to resume normal operations.

All pedestrians and vehicle operators in the area of an airside emergency response must ask themselves “do I need to be in the area?”

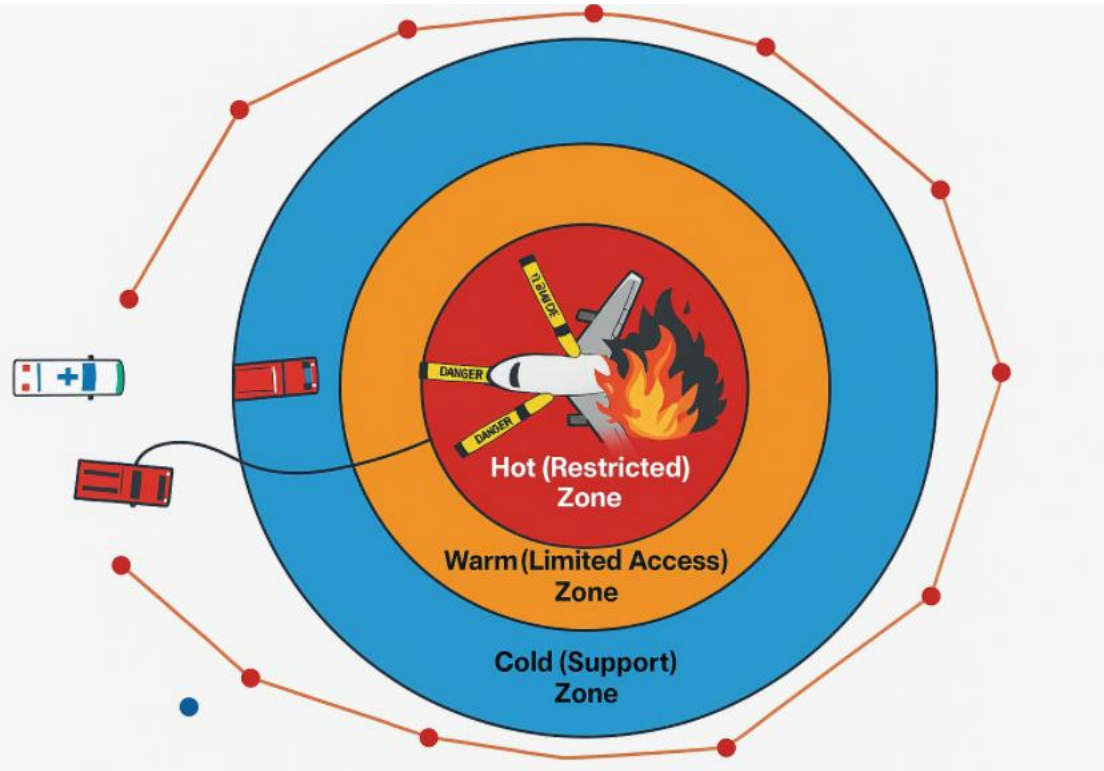
- If the answer is “NO” or have an alternate available, avoid the area entirely.
- If the answer is “YES” and drivers must pass by an emergency scene due to limited routing options, proceed promptly while keeping a safe distance. Avoid entering designated hot zones to ensure the safety of all personnel and uninterrupted emergency response efforts.

Note: All airport vehicles and workers must follow the direction of emergency personnel at the scene of an emergency.

To ensure the safety of emergency responders, employees, and the public, it may sometimes be necessary to block the Vehicle Service Road (VSR) to position emergency vehicles optimally. In such cases, and assuming no AVOP rules or regulations under the vehicle operator’s specific license prevent this action, vehicle operators are to maintain at least a 10 m distance behind the

ARFF (Aircraft Rescue and Firefighting) trucks. If one truck is positioned farther back than the others, minimum 10 m distance is to be kept from that vehicle.

Note: Hot Zone Circular radius anywhere between fire trucks and an emergency plus 10 m.



Vehicle operators or personnel found in contravention of these directives may receive an infraction for interfering with an emergency in progress.

6.15.2 Fire, Aircraft Incident, Restricted Areas

No person or vehicles are allowed at the scene of a fire, an aircraft accident, or near an aircraft known to be carrying distinguished visitors, unless they are authorized and have a specific duty that requires their presence.

6.15.3 Construction Areas

No person or vehicles are allowed access in or access through construction areas, unless in connection with the construction or as authorized by the Integrated Operations Centre (IOC), Project Manager, or designate.

Drivers must be aware of speed limits in and/or around construction areas as it may differ from normal operation speed limits.

6.16 Nighttime Driving

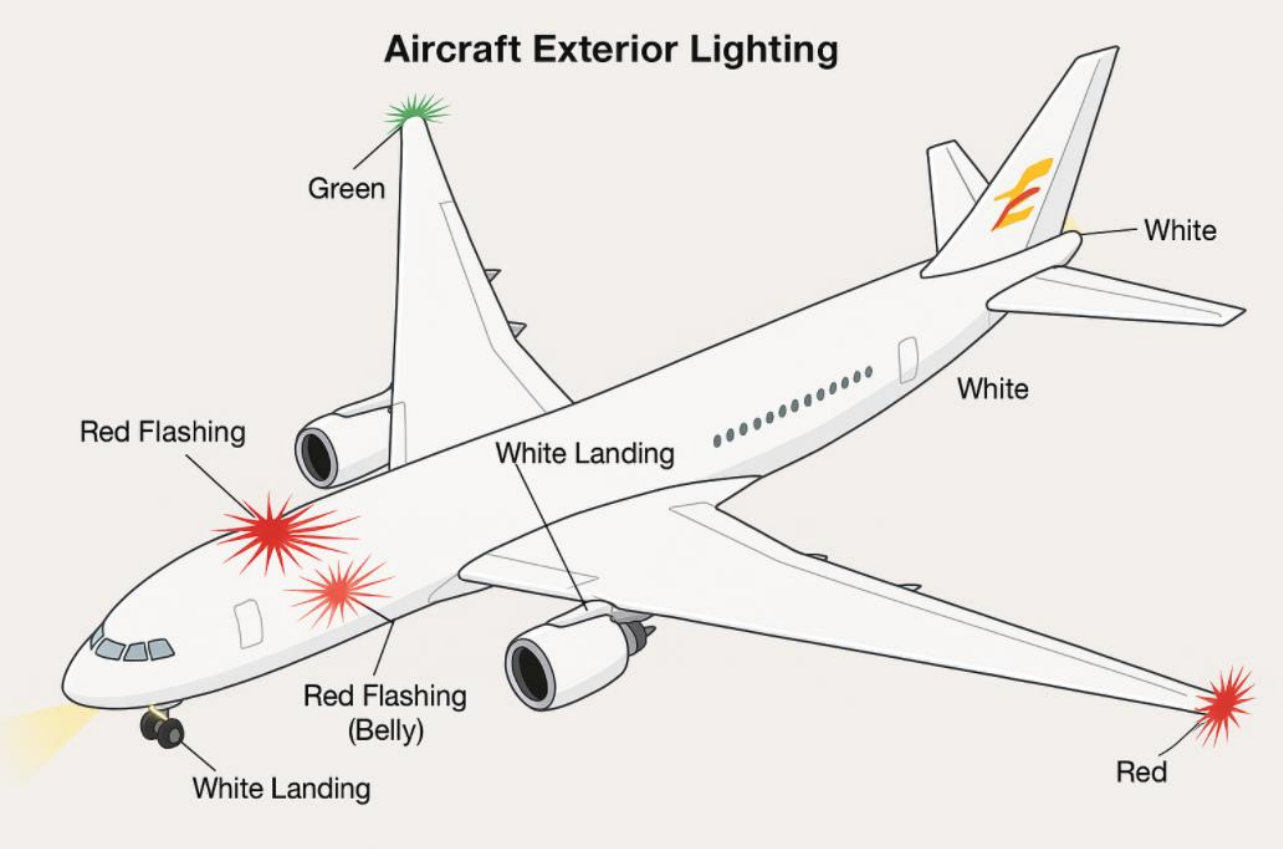
Airfield lighting is significantly brighter during hours of darkness, while aircraft become harder to see.

When an aircraft is travelling towards you (you are facing the aircraft nose), you should see:

- Aircraft Anti-Collision Light (red or white depending on aircraft)
- Nose Gear Light (white)
- Navigational Lights (red on your right side, green on your left side)

When an aircraft is travelling away from you (you are facing the aircraft tail), you should see:

- Aircraft Anti-Collision Light (red or white depending on aircraft)
- Flashing Taillight (white)
- Flashing Navigational Lights (flashing white on both sides)



6.17 DA-WS Written and Practical Testing Preparation

- [x] I have read and understood Section 1 – 4 of the ATD and AVOP Manual
- [x] I have read and understood Section 6 of the ATD and AVOP Manual
- [x] I have completed the practice questions in the section below
- [x] I understand the following concepts:
    - Hierarchy of Right of Way
    - 9 Signs of Pushback
    - Sigs of Aircraft Arrival
    - Circle of Safety
    - West / South Aprons and Landmarks
    - Vehicle Service Road (VSR) Rules
    - Pavement Markings
    - Stop Lines – Locations and Protocols
    - Apron to Taxiway Indicators
    - Taxiway Incursion Procedure
- [x] I have completed familiarization drive(s) with my company trainer

6.17.1 DA-WS AVOP – Practice Questions

1. Which Apron are DA-WS AVOP holders NOT permitted to operate on?
    a. Apron III
    b. Apron VIII
    c. Apron I
    d. Apron IX

2. What is the speed limit on Taxiway P?
    a. 15 km/h
    b. 30 km/h
    c. 50 km/h
    d. 5 km/h

3. Who must DA-WS AVOP holders be escorted by to drive on a designated Taxiway or Runway (except Taxiway P)?
    a. Security Officer
    b. D AVOP holder
    c. Maintenance Supervisor
    d. Air Traffic Controller

4. What must be done immediately after a Taxiway or Manoeuvring Area incursion?
    a. Continue driving
    b. Report to your supervisor
    c. Ignore the incident
    d. Call the police

5. What is the maximum speed limit on Vehicle Service Roads (VSRs)?
    a. 15 km/h
    b. 30 km/h
    c. 50 km/h
    d. 5 km/h

6. What is considered a security breach at a gate arm?
    a. Waiting for the gate arm to close
    b. Leaving before the gate arm closes
    c. Stopping before the gate arm
    d. Driving slowly

7. What is mandatory for all occupants in an airside vehicle?
    a. Wearing a helmet
    b. Wearing a seat belt
    c. Wearing a vest

d. Wearing gloves

8. What color are Apron Edge Lights?
   a. Red
   b. Blue
   c. Yellow
   d. Green

9. What is the hierarchy of right-of-way, who has the highest priority?
   a. Emergency vehicles
   b. Aircraft under their own power or tow
   c. Pedestrians
   d. Fuel trucks

10. What is the speed limit within the aircraft Circle of Safety?
   a. 30 km/h
   b. 50 km/h
   c. 5 km/h
   d. 15 km/h

11. What must be done before crossing the outer circle of safety?
   a. Honk the horn
   b. Test the vehicle's brakes
   c. Speed up
   d. Call ATC

12. What is the minimum safe clearance around the aircraft within the circle of safety?
   a. 5 m
   b. 1 m
   c. 10 m
   d. 2 m

13. What is the maximum number of baggage carts per train?
   a. 4
   b. 6
   c. 8
   d. 10

14. What is the speed limit on the West Perimeter Road?
   a. 30 km/h
   b. 50 km/h
   c. 15 km/h
   d. 5 km/h

15. What is prohibited during refueling operations?
    a. Using phones and radios
    b. Wearing seat belts
    c. Parking in designated areas
    d. Driving slowly

16. What must be done if road markings are faded or covered?
    a. Ignore them
    b. Approximate the designated roadway
    c. Call maintenance
    d. Stop driving

17. What is the maximum speed limit on all Aprons?
    a. 5 km/h
    b. 15 km/h
    c. 30 km/h
    d. 50 km/h

18. What is the protocol for passing slow moving vehicles (<15 km/h) on a VSR?
    a. Pass on the right
    b. Pass on the left when safe
    c. Do not pass
    d. Pass multiple vehicles at once

19. What must be done with malfunctioning vehicles or equipment?
    a. Continue using them
    b. Secure, tag out, and remove from service
    c. Ignore defects
    d. Park anywhere

20. What is the minimum distance vehicles must remain from a security fence when airside?
    a. 1 m
    b. 2 m
    c. 3 m
    d. 5 m

21. What is the maximum speed limit on Cargo Road?
    a. 5 km/h
    b. 15 km/h
    c. 30 km/h
    d. 50 km/h

22. What should vehicle operators do when approaching an aircraft with engines running?

a. Speed up
b. Stop a safe distance away
c. Drive between marshaller and aircraft
d. Ignore the aircraft

23. What is the protocol for vehicles and GSE not in use?
    a. Park anywhere
    b. Park in designated areas or company-leased spaces
    c. Leave on the VSR
    d. Leave in front of gates

24. What must be done after a vehicle collision airside?
    a. Leave the scene
    b. Freeze the scene and contact supervisor and IOC
    c. Ignore the accident
    d. Call the police

25. What is the protocol for entering CBSA leased space?
    a. Enter anytime
    b. Only with specific authorization
    c. Only during emergencies
    d. Never enter

6.17.2 DA-WS AVOP – Practice Questions ANSWERS

1. Which Apron are DA-WS AVOP holders NOT permitted to operate on?
    a. Apron III
    b. Apron VIII
    c. **Apron I**
    d. Apron IX

2. What is the speed limit on Taxiway P?
    a. 15 km/h
    b. **30 km/h**
    c. 50 km/h
    d. 5 km/h

3. Who must DA-WS AVOP holders be escorted by to drive on a designated Taxiway or Runway (except Taxiway P)?
    a. Security Officer
    b. **D AVOP holder**
    c. Maintenance Supervisor
    d. Air Traffic Controller

4. What must be done immediately after a Taxiway or Manoeuvring Area incursion?
    a. Continue driving
    b. **Report to your supervisor**
    c. Ignore the incident
    d. Call the police

5. What is the maximum speed limit on Vehicle Service Roads (VSRs)?
    a. 15 km/h
    b. **30 km/h**
    c. 50 km/h
    d. 5 km/h

6. What is considered a security breach at a gate arm?
    a. Waiting for the gate to close
    b. **Leaving before the gate closes**
    c. Stopping before the gate
    d. Driving slowly

7. What is mandatory for all occupants in an airside vehicle?
    a. Wearing a helmet
    b. **Wearing a seat belt**
    c. Wearing a vest

d. Wearing gloves

8. What color are Apron Edge Lights?
   a. Red
   b. **Blue**
   c. Yellow
   d. Green

9. What is the hierarchy of right-of-way, who has the highest priority?
   a. Emergency vehicles
   b. **Aircraft under their own power or tow**
   c. Pedestrians
   d. Fuel trucks

10. What is the speed limit within the aircraft Circle of Safety?
   a. 30 km/h
   b. 50 km/h
   c. **5 km/h**
   d. 15 km/h

11. What must be done before crossing the outer circle of safety?
   a. Honk the horn
   b. **Test the vehicle's brakes**
   c. Speed up
   d. Call ATC

12. What is the minimum safe clearance around the aircraft within the circle of safety?
   a. 5 m
   b. **1 m**
   c. 10 m
   d. 2 m

13. What is the maximum number of baggage carts per train?
   a. 4
   b. **6**
   c. 8
   d. 10

14. What is the speed limit on the West Perimeter Road?
   a. 30 km/h
   b. **50 km/h**
   c. 15 km/h
   d. 5 km/h

15. What is prohibited during refueling operations?
    a. **Using phones and radios**
    b. Wearing seat belts
    c. Parking in designated areas
    d. Driving slowly

16. What must be done if road markings are faded or covered?
    a. Ignore them
    b. **Approximate the designated roadway**
    c. Call maintenance
    d. Stop driving

17. What is the maximum speed limit on all Aprons?
    a. 5 km/h
    b. 15 km/h
    c. **30 km/h**
    d. 50 km/h

18. What is the protocol for passing slow moving vehicles (<15 km/h) on a VSR?
    a. Pass on the right
    b. **Pass on the left when safe**
    c. Do not pass
    d. Pass multiple vehicles at once

19. What must be done with malfunctioning vehicles or equipment?
    a. Continue using them
    b. **Secure, tag out, and remove from service**
    c. Ignore defects
    d. Park anywhere

20. What is the minimum distance vehicles must remain from a security fence when airside?
    a. **1 m**
    b. 2 m
    c. 3 m
    d. 5 m

21. What is the maximum speed limit on Cargo Road?
    a. 5 km/h
    b. 15 km/h
    c. **30 km/h**
    d. 50 km/h

22. What should vehicle operators do when approaching an aircraft with engines running?

a. Speed up
b. **Stop a safe distance away**
c. Drive between marshaller and aircraft
d. Ignore the aircraft

23. What is the protocol for vehicles and GSE not in use?
    a. Park anywhere
    b. **Park in designated areas or company-leased spaces**
    c. Leave on the VSR
    d. Leave in front of gates

24. What must be done after a vehicle collision airside?
    a. Leave the scene
    b. **Freeze the scene and contact supervisor and IOC**
    c. Ignore the accident
    d. Call the police

25. What is the protocol for entering CBSA leased space?
    a. Enter anytime
    b. **Only with specific authorization**
    c. Only during emergencies
    d. Never enter

Section 7
D-TT (Taxi / Tow)
AVOP Requirements

7 D-TT AVOP Requirements

Possessing a valid AVOP does not, on its own, demonstrate competency to conduct taxi or tow operations. In addition to holding an AVOP, any individual performing taxi or tow activities at Calgary International Airport must be specifically qualified by their employer to operate the particular aircraft or category of aircraft involved.

Any person who taxis / tows aircraft beyond or outside of the company's leased area must:

a. Hold both a valid YYC RAIC and a valid YYC AVOP, specific to their employer and their airside duties.
b. Be qualified, trained, and authorized to operate the equipment they are using airside.

OR

c. Hold a valid and current pilot's license or be accompanied by a person who holds a valid and current pilot's license to taxi an aircraft for maintenance purposes only.

All D-TT AVOP holders must:

a. Hold a valid Radio Operator's Certificate-Aeronautical (ROC-A).
b. Hold a valid AME License (if completing taxi operations).

7.1 Operational Priorities & General Requirements

Priority of Operations:
Live aircraft movements (arrivals and departures) always take precedence over towing operations, unless explicit permission is granted under positive control by Air Traffic Control (ATC).

Timing of Taxi and Tow:
Whenever feasible, taxi and tow activities should be scheduled during periods of low airfield activity.

Lighting Requirements:
All navigational lights, including anti-collision lights, must remain illuminated for the entire duration of any taxi / tow operation.

Equipment Requirements:
Functional aeronautical radio, transponder set to the squawk code assigned by ATC to the aircraft or tow vehicle (or set to 1000 MHz if no specific code is assigned), and a unique aircraft civil registration number. Aircraft being towed must have functional brakes.

Marshaling for Safety:
If there is any risk of contact with another object, aircraft operations must be marshaled using one of the following:

- Wing walkers

- A marshaling vehicle
- A second person in the tow vehicle

Escorting in the Manoeuvring Area:
All escorts must be properly briefed on 'follow me' procedures of maintenance support vehicle(s). Escorts are only permitted if the allowance is explicitly included in the authorized company specific tow program.

Brake Riding Authorization:
Only personnel who are properly trained and meet airline requirements are permitted to ride the brakes.

Communication Protocol:
Continuous direct communication must be maintained between the flight deck / brake rider and the tow vehicle operator throughout the tow.

Radio Certification:
Anyone who communicates, or may need to communicate, on an aeronautical radio must hold a valid ROC-A. This includes all aircraft taxi and tow operators, push-back operators, and brake riders.

Approved Program:
Taxi and tow operations in the Manoeuvring Area are only permitted if the company has an approved Operational Plan and Taxi / Tow Program. The Taxi / Tow Program is conditional and based on company D-TT training documentation. For more information, please email avop@yyc.com.

7.2 Responsible Person

Every taxi and tow operation must have one designated individual responsible for overseeing the entire process. This person is required to hold a valid AVOP appropriate for the area and type of operation, a valid ROC-A, and company-specific authorization.

7.2.1 Responsible Person - Tow

The designated person in charge, holding a valid D-TT AVOP along with company authorization, is fully and solely responsible for the tow operation. This individual may control the tow from either the flight deck or the tow vehicle and must adhere to all YYC AVOP, Air Traffic Control (ATC), and Radio Operator policies and procedures without exception.

7.2.2 Responsible Person - Taxi

The designated person in charge, holding a valid D-TT AVOP or a valid pilot's license along with company authorization, is fully and solely responsible for the taxi operation. This individual must

adhere to all YYC AVOP, Air Traffic Control (ATC), and Radio Operator policies and procedures without exception.

A pilot holding a valid and current pilot's license may serve as the designated person in control of maintenance taxi operations under the following conditions:

- The individual must possess, at a minimum, a current and valid Private Pilot's License, a valid medical certificate, a current Night Rating, and a valid ROC-A.
- Additionally, the employer, aircraft owner, or operator bears full responsibility for ensuring that the pilot is properly qualified and insured to operate the aircraft. They must also verify that the pilot's license, including all associated medical requirements, is current and valid.

7.2.3 Responsible Person - Training

When training an individual to obtain an AVOP, the person in charge must be physically present and actively oversee all aspects of the taxi or tow operation. During training, the person in charge is not required to be at the controls or to communicate on the radio; however, they must remain readily available and capable of assuming control of the operation at any time.

7.3 Before Conducting Taxi / Tow Operations

Before conducting taxi / tow operations at YYC the responsible person must conduct a **pre-trip walkaround inspection** to ensure all equipment is in safe working condition.

Before all tow operations, the responsible person must:

a. Inspect the tow vehicle for required safety equipment and markings.
b. Ensure all safety equipment is functioning properly.
c. Immediately report any malfunctions or defects to a supervisor.
d. Secure, tag out, and remove any malfunctioning vehicle, equipment, or aircraft from service in accordance with safety regulations and company procedures.

Before all taxi operations, the responsible person must:

a. Inspect the aircraft to ensure proper functionality during the taxi.
b. Immediately report any malfunctions or defects to a supervisor.
c. Secure, tag out, and remove any malfunctioning equipment or aircraft from service in accordance with safety regulations and company procedures.

7.4 Towing and Taxiing Aircraft on Apron I

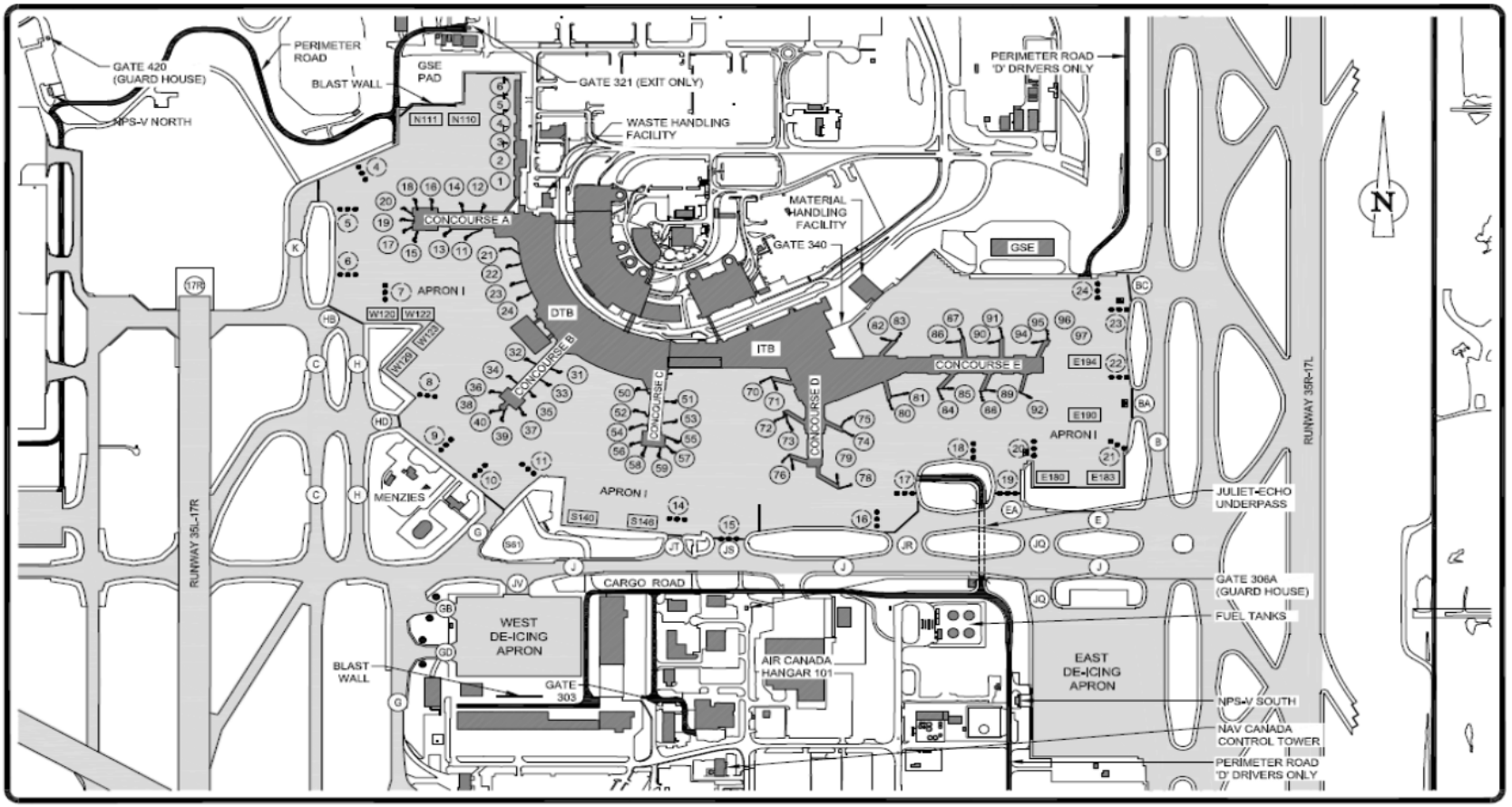
Aircraft tows on Apron I can be completed by:

a. DA AVOP holders with a valid Radio Operator's Certificate-Aeronautical (ROC-A).
b. D-TT AVOP holders (previously known as DDT and D-TOW which are no longer valid YYC AVOP types).

Taxi operations on Apron I can be completed by:

a. D-TT AVOP holders (previously named D-AME).
b. Operators with a valid pilot's license.

7.4.1 Apron I Map



Name: yyc-avop-airside-apron1&2.dwg Date: Oct 30, 2025 Time: 3:37 PM

yyc Calgary Airport	PROJECT: CALGARY INTERNATIONAL AIRPORT AVOP APRON I, EAST DE-ICING APRON, WEST DE-ICING APRON			
CADD FILE No. yyc-avop-airside-apron1&2	DRAWN BY SAK	SCALE N.T.S.	DATE OCT. 2025	SHEET No. 6 of 13

Note: Only operators with a valid D-TT AVOP or valid pilot's license are permitted to tow and taxi aircraft on the Manoeuvring Area. DA AVOP holders may only tow in the Manoeuvring Area when escorted by a D AVOP holder.

7.4.2 Apron I (Critical Area)

The Critical Area includes the post-security section of the main terminal building, all of Apron I, and any adjacent areas identified by the Aerodrome Operator.

7.4.2.1 Regulation and Requirements

Canadian Aviation Regulations require enhanced screening for all airside vehicles, their operators, and passengers entering the Critical Area. To comply, everyone must access the area through an NPS-V screening facility unless they have an approved exemption.

When completing taxi / tow operations, personnel are unable to proceed through one of the two vehicle screening points, Non-Passenger Screening – Vehicle (NPS-V) North or South; therefore, personnel required for the completion of the taxi / tow operation when entering Apron I are exempt from being screened at NPS-V.

7.4.2.2 Aircraft Taxi / Tow Operations – Entering Apron I

The following exemptions are permitted under Canadian Aviation Security Regulations when entering the Critical Area. These apply only during the performance of specific duties.

Aircraft Taxi / Tow Operations:
Taxiing and towing an aircraft into the Critical Area requires the operator to enter via taxiway and therefore bypass NPS-V screening. The taxi / tow operator and necessary passengers enter the Critical Area under an exemption. Note that any passengers participating in the taxi / tow must be essential to the operation and entering the Critical Area under this exemption without a need and right will lead all airside privileges to be reviewed. Vehicles that are not essential to the taxi / tow operation must report to NPS-V for screening prior to entering the Critical Area.

Once the taxi / tow movement is complete, the operator and all passengers are permitted to continue working in the immediate area, complete additional taxi/tows on, to, and from Apron I, and report to company crew rooms. Taxi / tow operators and passengers are not permitted to enter passenger facing (departures) level of the terminal unless exiting the Critical Area and entering again through NPS-V.

Escort vehicles and their occupants are permitted to enter the Critical Area without being screened while actively engaged in escorting an aircraft tow. Once the aircraft movement is complete the escort vehicle and all occupants must exit the Critical Area immediately and are not permitted to remain within.

Aircraft Tow Operations Starting within the Critical Area:
Aircraft tow vehicles entering the Critical Area to tow an aircraft (and all tow vehicles not actively towing an aircraft) must follow Critical Area rules and regulations.

7.4.3 Apron I – Aircraft Movements & Parking

Apron Taxiway / Aircraft Stand Taxilane:
A single solid yellow line located on an Apron. The Apron Taxiway is a portion of an Apron designated as a taxiway providing a through taxi route across the Apron. The Aircraft Stand Taxilane is a portion of an Apron providing access to aircraft stands. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on the pavement, and the wings do not make contact with any known obstructions.

Aircraft Stand Lead-in Lines:
A long single solid yellow line in the middle of an aircraft operational stand that guides aircraft into the parking position. The nose wheel of the aircraft is centered on these lines to ensure the wings do not hit any known obstructions.

The Aircraft Stand Lead-in Line can be straight or curved. On Apron I, when aircraft is arriving into Gate 21, jet blast from the arriving aircraft onto aircraft and equipment on Gates 11 and 13 must be avoided; therefore, when an aircraft is established on Gate 11, aircraft arriving into Gate 21 will shut down at the beginning of the Aircraft Stand Lead-in Line and be towed into Gate 21. Drivers must give right away to all ground support staff and aircraft during this transition.

Geographical Position Fix Marking (SPOTS):
Geographical Position Fix Markings (also called 'Spots') are yellow circles with a number inside and a broken yellow line nearby. These 'Spots' are on the Apron near the exits to Taxiways and are used by Air Traffic Control (ATC) to help direct aircraft taxiing and aircraft under tow transition between the Apron and a Taxiway. The broken yellow line at a 'Spot' acts as a preliminary Hold Line for aircraft exiting the Apron.

Aircraft Parking Boundary Lines:
An Aircraft Parking Boundary Line is a single yellow broken line, often parallel to the Apron Taxiway and is used to outline aircraft parking pads. Aircraft are parked behind Aircraft Parking Boundary Lines to ensure they are safely separated and clear of taxiing aircraft.

Aircraft may only be parked in assigned operational stands, in assigned leased areas or on designated aircraft parking pads.

Apron I designated parking pads include:

North Pad 110 - 111	By the North Blast Wall
West Pad 120 - 129	Between taxiway entrances Hotel Bravo and Hotel Delta

South Pad 140 - 146	Past the end of Concourse Charlie near taxiway entrance Golf
East Pad 180 - 183	Between taxiway entrance Echo Alpha and taxiway Bravo
East Pad 190 - 194	East end of Concourse Echo

All vehicles and GSE must remain behind the Aircraft Parking Boundary Line when servicing aircraft and must not block or obstruct line-of-sight for direction, location and information signs.

7.4.4 Advanced Visual Docking and Guidance System (A-VDGS)

The Advanced Visual and Docking Guidance System (A-VDGS) provides aircraft with accurate guidance into the gate and real time data through the display unit. The system allows aircraft to dock safely thereby allowing passengers to deplane without the need for marshallers, thereby minimizing the risk to ground personnel during lightning events. The A-VDGS is intended primarily for use during lightning events, and may be used at any time, at the discretion of the air carrier/operator.

7.4.5 Gate Matrix

Every operational stand (gate and ground loading gate) on Apron I has a YYC Gate Matrix designated pushback procedure which includes:

a. Safe pushback path
b. Designated disconnect points

The Gate Matrix is designed to ensure that a safe clearance is maintained between aircraft and other vehicle movements on the Apron. The YYC Gate Matrix must be followed for all pushbacks and tows maneuvering on Apron I. An updated copy of the YYC Gate Matrix can be found in the YYC AVOP website: https://www.yyc.com/en-us/employees-operators/avop-office.

7.4.5.1 Tow Operations from Gate

The tow tractor operator is the AVOP holder responsible and in control of all tow operations and all tow procedures. For all departures, all tow vehicle operators must push the aircraft back from a gate or operational stand to the designated disconnect box according to the YYC Gate Matrix.

Tows from Gate:

- All movements must be completed with marshallers.
- Pushback from gate must be completed with tow bar hooked to the front of the tow tractor.
- Once the pushback is complete, the tow tractor must be repositioned so that the tow bar is at the back of the tow tractor and the tractor is facing forward, leading the aircraft for movements.

Note: ATC instructions that include "at your discretion" requires the operator to proceed only when it is safe to do so, in coordination, consideration and with respect for all other operations in the area.

7.4.6 Max Wingspan Markings

A Maximum Wingspan Marking indicates the largest aircraft wingspan permitted in a specific area. The wingspan of an aircraft is always measured in a straight line from wingtip to wingtip, regardless of the wing's shape or sweep. This marking is positioned across the surface of a taxiway or apron taxiway centerline to provide clear guidance on operational limits.

The section of Apron I located between Taxiway EA and Taxiway BC has a maximum allowable wingspan of 36 m and is restricted to AGN III aircraft, such as the B737, A321, or smaller. Larger aircraft are unable to maneuver through this area and must utilize the Manoeuvring Area outside of Apron I. Larger aircraft may be parked on the East Aircraft Parking Pad (E190-194) and can access Apron I via Taxiway BA.

7.5 Towing and Taxiing Aircraft on West & South Aprons

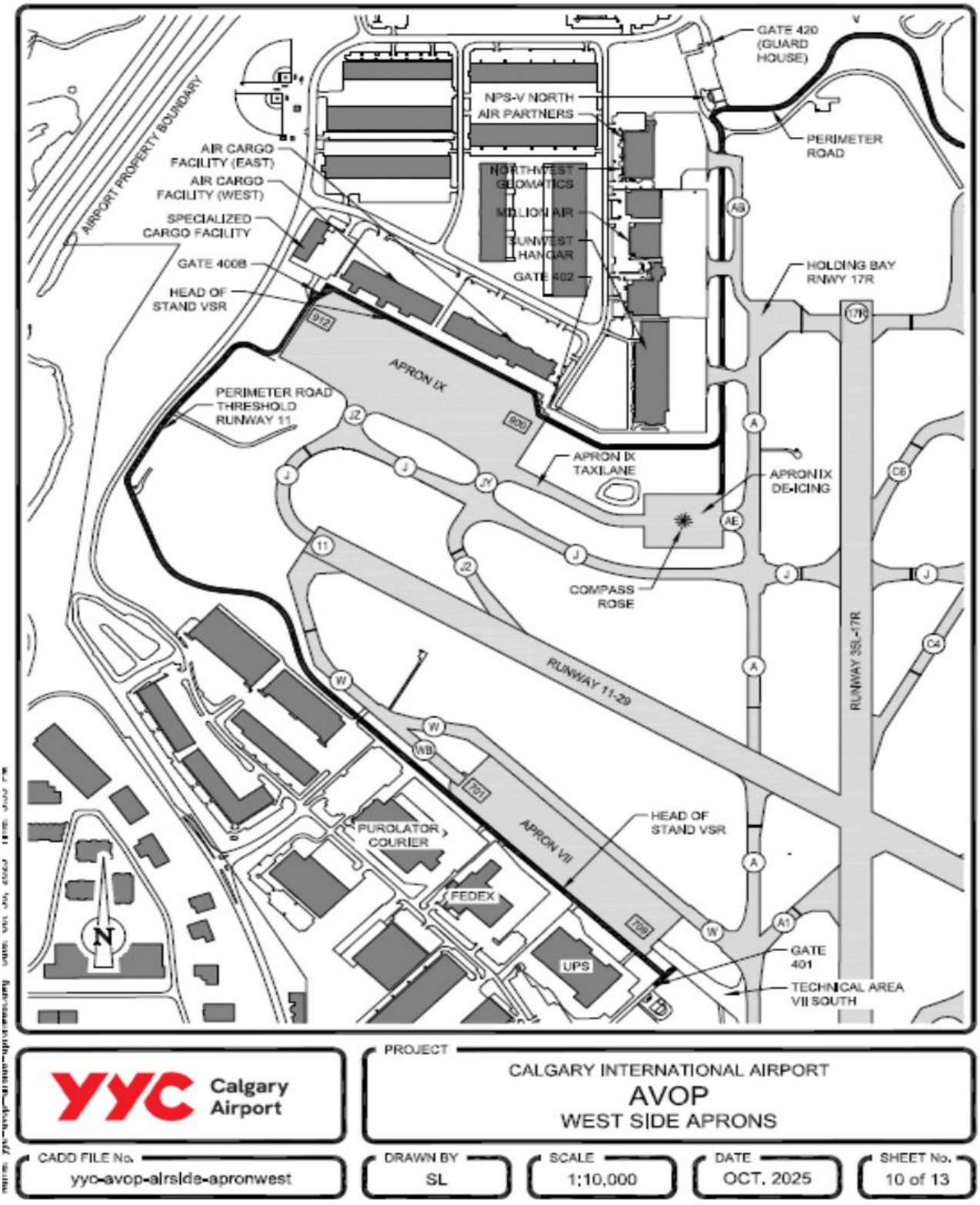
Aircraft tows on outside of company leased space on the West and South Aprons can be completed by:

a. DA AVOP holders with a valid Radio Operator's Certificate-Aeronautical (ROC-A).
b. D-TT AVOP holders (previously known as DDT and D-TOW which are no longer valid YYC AVOP types).

Taxi operations outside of company leased space on the West and South Aprons can be completed by:

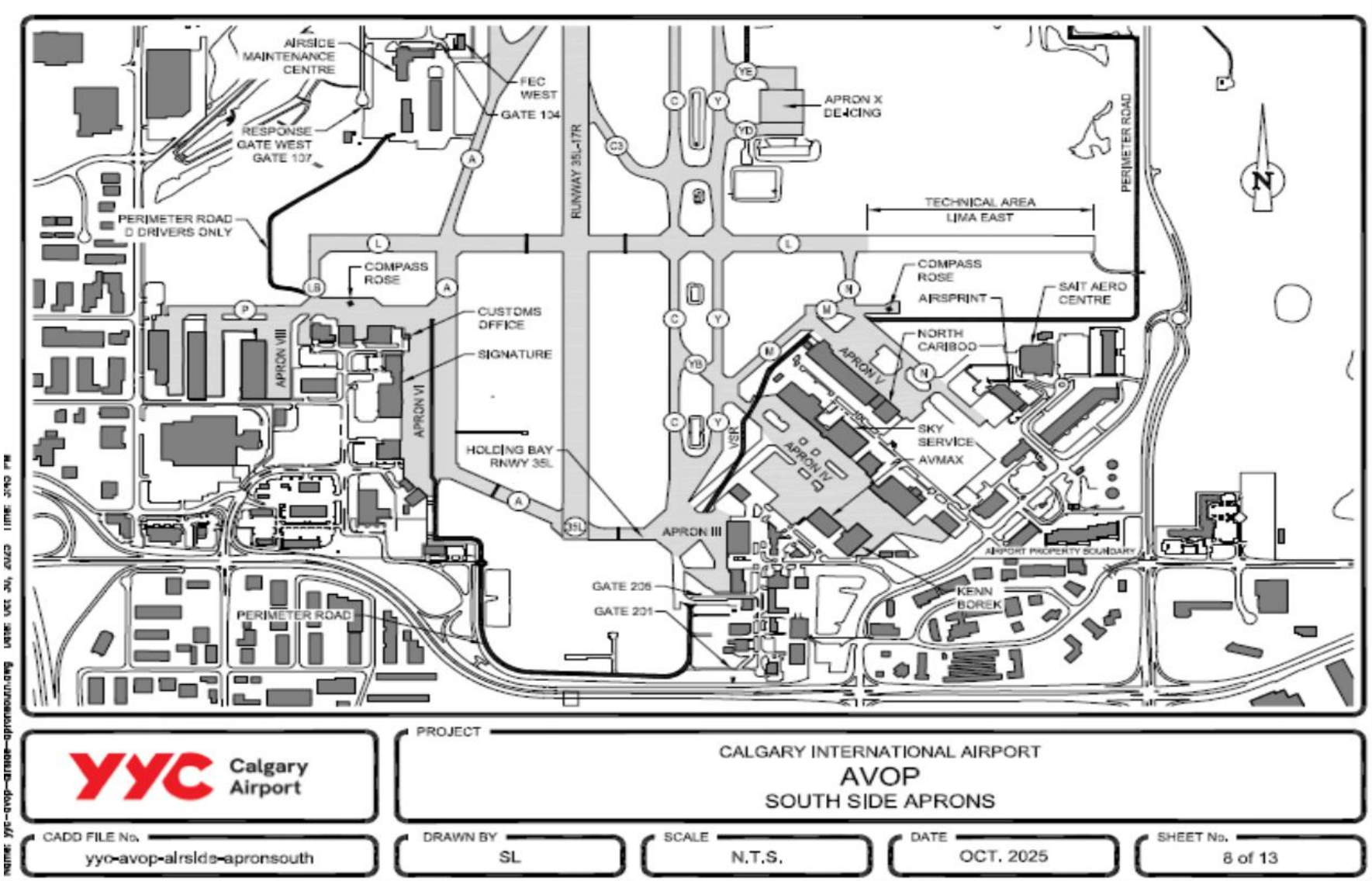
a. D-TT AVOP holders (previously named D-AME).
b. Operators with a valid pilot's license.

7.5.1 DA-West Aprons



Calgary Airport

7.5.2 DA-South Aprons



Note: Only operators with a valid D-TT AVOP or valid pilot's license are permitted to tow and taxi aircraft on the Manoeuvring Area. DA AVOP holders may only tow in the Manoeuvring Area when escorted by a D AVOP holder.

7.5.3 West Aprons

Apron VII:
Apron VII is a common use Apron.

Apron IX:
Apron IX is a common use Apron.

Apron IX Deice:
Apron IX Deice as the surface is used often as a high-power run-up area for aircraft.

7.5.4 South Aprons

Apron III:
Apron III is a multi-lease area.

Apron IV:
Apron IV is a multi-lease area.

Apron V:
Apron V is a multi-lease area that runs parallel with the North Cariboo Hangar.
The Airsprint Hangar can be accessed via Taxiway N.

Apron VI:
Apron VI is a multi-lease area with a marked Vehicle Service Road (VSR) that connects the South Perimeter Road and Taxiway P.

STARS Helicopter departs from the Signature Hangar. STARS will hover taxi over the VSR when arriving and departing from the helicopter pad.

Canada Border Services Agency (CBSA) satellite office is located between Signature Hangar and Taxiway P.

Apron VIII:
Apron VIII is a multi-lease area that can only be accessed via Taxiway P.

7.5.4.1 Taxiway P

Taxiway P is uncontrolled; therefore, permission for aircraft movements between hangars on Apron VIII is not required from ATC. D-TT AVOP holders must practice extra caution when completing aircraft movements on Taxiway P as DA and DA-WS AVOP holders are permitted to drive in a vehicle not equipped with an aeronautical radio.

7.5.5 West & South Aprons – Aircraft Movements & Parking

Apron Taxiway / Aircraft Stand Taxilane:
A single solid yellow line located on an Apron. The Apron Taxiway is a portion of an Apron designated as a taxiway providing a through taxi route across the Apron. The Aircraft Stand Taxilane is a portion of an Apron providing access to aircraft stands. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on the pavement, and the wings do not make contact with any known obstructions.

Note: There are limited Apron Taxilanes on the South Aprons.

Aircraft Stand Lead-in Lines:
A long single solid yellow line in the middle of an aircraft operational stand that guides aircraft into the parking position. The nose wheel of the aircraft is centered on these lines to ensure the wings do not hit any known obstructions.

Aircraft Parking Boundary Lines:
An Aircraft Parking Boundary Line is a single yellow broken line, often parallel to the Apron Taxiway and is used to outline aircraft parking pads. Aircraft are parked behind Aircraft Parking Boundary Lines to ensure they are safely separated and clear of taxiing aircraft.

Note: Aircraft Parking pads are not designated parking areas for vehicles of equipment. All vehicles and GSE must be removed unless actively in use to service an aircraft at that location. All vehicles and GSE must not block active aircraft operations. All vehicle and GSE operators must give right-of-way to aircraft at all times.

On the South Airfield, there is a small parking pad on the North side of Taxiway P. This space is not often used for aircraft parking due to its size.

7.6 Apron to Taxiway Boundary

A **Taxiway Incursion** or **Manoeuvring Area Incursion** occurs when any part of a vehicle, tow tractor, or aircraft crosses the Apron Limit Line or Manoeuvring Area Delimitation (MAD) Line into the Manoeuvring Area, or crosses onto a Taxiway without the proper AVOP license, or when any part of a vehicle or aircraft crosses an Apron Limit Line or MAD Line without authorization from Air Traffic Control, as applicable to the operation and AVOP type.

All Taxiway, Runway, and Manoeuvring area incursions with a tow tractor and/or aircraft must be immediately reported to Air Traffic Control followed by the company supervisor and then to the IOC.

7.7 Indicators – Apron to Taxiway

7.7.1 Apron Lighting & Markings

Apron Edge Lights:

Single blue lights are used along the edge of the Apron. Apron Edge Lights run parallel with Apron Edge Lines.

Apron Edge Lines:
Apron Edge Lines are double solid yellow lines used to indicate the edge weight bearing surface of the Apron. Paved surfaces outside of the Apron Edge Lines are not designed as weight bearing surfaces adequate for aircraft. Vehicles and equipment parked or operating outside of the Apron Edge Lines are NOT guaranteed safe clearance from aircraft.

7.7.2 Taxiway Lighting, Markings, and Signage

Taxiway Center Line:
The Taxiway Center Line is a single solid yellow line on a Taxiway and is used to provide guidance for aircraft to taxi from the Runway center line to a point on the Apron where aircraft operational stand markings begin. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on the pavement, and the wings will not contact known obstructions.

Taxiway Center Line Lights:
On the East side of Apron I, the Taxiway Center Line is accompanied with inset green Taxiway Center Line Lights. Taxiway Center Line Lights are installed on the East Airfield taxiways.

Taxiway Edge Lights:
Single blue lights are used along the edge of the Taxiway. Taxiway Edge Lights run parallel with Apron Edge Lines.

Taxi Side Stripe Markings:
Taxi Side Stripe Markings consist of double solid yellow lines. The double solid yellow lines along with a series of single blue lights on a Taxiway are used to indicate the edge of the usable portion of the Taxiway. Paved surfaces outside the lines are not designed for aircraft.

One-Way Taxiway Lights:
One-way taxiways are equipped with lights that are half blue and half red. The red portion of the lights is visible when traveling in the wrong direction for aircraft, serving as a clear indication that entry from that direction is prohibited.

End of Paved Surface Lights:
Single red lights at the end of the paved surface.

Fall Hazard Lights:
Double red lights are used to indicate areas where fall hazards exist. These lights are installed on Taxiway J and E above the J/E underpass and on Taxiway R where the taxiway crosses over the roadway. Their purpose is to provide a clear visual warning to operators of elevated sections that present a risk of falling.

No Entry Signs:

"No Entry" signs are located at the apron entrances to Taxiway G and Taxiway GB, as well as Taxiway G and Taxiway GD. These signs are intended to control the direction of aircraft movement and indicate areas where entry is prohibited.

7.7.3 Apron – Taxiway Intersection Lighting, Markings, & Signage

Double Amber – Intersection Lights:
Double amber lights (Aviation Yellow) are used at the intersection of Aprons and Taxiways.

Manoeuvring Area Delimitation (MAD) Line:
The Manoeuvring Area Delimitation Line is a single solid yellow line and a single broken yellow line. The solid yellow line is positioned on Apron side. The MAD Line indicates the intersection of the Apron and Taxiway.

Apron Limit Line:
The Apron Limit Line is a single broken yellow line. It is another name for the Manoeuvring Area Delimitation Line and is treated the same.

Information Signs:
Black writing on yellow signage that provides information primarily used by aircraft operators. The information is also helpful for vehicle operators when entering the Manoeuvring Area.

Directional Signs:
Directional signs (black writing on yellow) have an arrow indicating the direction to proceed to get to the specified Apron, Taxiway or Runway.

Location Signs:
Location signs (yellow writing on black) identify (by letter) the Taxiway the aircraft (or vehicle) is on.

The Double Amber Intersection Lights, Manoeuvring Area Delimitation (MAD) Line or Apron Limit Line, Directional and Location Signs are **co-located** on Apron I meaning that all indicators are grouped together, or in-line, with one another.

** **No part of a vehicle, piece of equipment, or aircraft under tow is permitted to cross the MAD Line or Apron Limit Line without permission from ATC.**

What if I cause a taxiway or runway incursion during a taxi / tow operation?

1. Do not panic.
2. Contact Air Traffic Control on the appropriate Ground frequency.
3. Follow all instructions given by ATC.
4. Once you have safely completed the taxi / tow operation, report the incident to your supervisor. Your supervisor will then call the Integrated Operations Centre (IOC) and report the incident on your behalf.

5. Once the incident is reported, you must be prepared to speak with an SCO who will complete an investigation and share any findings with you and your employer(s).

7.8 Indicators – Taxiway to Taxiway

Intermediate Holding Position Marking (Taxiway Intersection Marking):
An Intermediate Holding Position Marking, or Taxiway Intersection Marking, consists of a single broken yellow line. It is positioned so that an aircraft or vehicle holding at the marking does not extend into the intersecting taxiway strip. When instructed to hold short of a Taxiway, the aircraft or vehicle must remain completely behind this line. These markings are co-located with location and directional signs to provide clear guidance.

Note: Not all intersections are marked with an Intermediate Holding Position Marking. If there is no Intermediate Holding Position Marking, taxi/tow operators must Hold Short at least 51 m from the Taxiway Center Line of the intersecting taxiway.

7.8.1 Taxiway N Holding Short of Taxiway M

There is no Intermediate Holding Position Marking (Taxiway Intersection Marking) on Taxiway N holding short of Taxiway M and the directional signage is installed too close to the N – M intersection. Operators are required to hold short 51 m of the Taxiway Center Line; therefore, in this location, operators must hold short of the gravel perimeter road on the East side of Taxiway N, or ensure that the aircraft nose (if taxiing) or front the nose tractor (if towing) is behind Hangar 2 on Apron V.

7.8.2 Taxiway M Holding Short of Taxiway YB

There is no Intermediate Holding Position Marking (Taxiway Intersection Marking) on Taxiway N holding short of Taxiway M and the directional signage is installed too close to the N – M intersection. Operators are required to hold short 51 m of the Taxiway Center Line; therefore, in this location, operators must hold when the aircraft nose (if taxiing) or front the nose tractor (if towing) is in line with the Sky Service Hangar on Apron IV.

7.9 Indicators – Taxiway to Runway

7.9.1 Primary Five - Taxiway to Runway Indicators

Enhanced Taxiway Center Line:

Enhanced Taxiway Center Lines are standard taxiway center lines that have been modified to provide additional visual guidance. For a distance of 47.5 m leading up to the Runway Holding Position Markings, these center lines are enhanced by adding broken yellow lines on both sides of the solid yellow center line.

Runway Holding Position Markings:
Runway Holding Position Markings consist of two solid yellow lines and two broken yellow lines painted across the width of a taxiway. The broken lines are positioned closest to the runway, indicating the runway holding position. Vehicles must stop two vehicle lengths behind the solid lines. Neither vehicles nor aircraft may proceed beyond the Runway Holding Position Markings without explicit permission from ATC. Crossing without permission will result in a **Runway Incursion**. These markings may appear as straight lines or as bent lines, depending on the location.

Runway Designator Signs:
Runway Designator Signs display either a single runway heading or both runway headings. These signs feature white lettering on a red background and convey a combined message: "hold short" of the runway and the runway's designation. At a taxiway and runway intersection, a Runway Designator Sign is accompanied by a Location Sign positioned on the outboard side, furthest from the taxiway. Signs that display only one heading are located exclusively at runway thresholds.

Painted Runway Designator:
A red rectangle displaying the runway designation in white lettering is positioned alongside the Runway Holding Position markings at the point where a taxiway enters a runway. This marking provides clear visual confirmation of the runway designation and reinforces the requirement to hold short until clearance is granted.

Runway Guard Lights (WigWag Lights):
Runway Guard Lights, commonly referred to as WigWag Lights, are installed at every runway holding position where a taxiway meets a runway. These lights serve as a visual warning to indicate the presence of a runway ahead. Elevated Runway Guard Lights are positioned on the shoulder of the taxiway adjacent to the Runway Holding Position markings and provide an additional layer of caution for operators approaching the runway. Runway Guard Lights are located at every Taxiway to Runway Intersection but are NOT located at every Runway to Runway Intersection.

7.9.2 Runway 17L/35R - Additional Taxiway to Runway Indicators

Inset Runway Guard Lights:
Inset Runway Guard Lights are installed alongside Elevated Runway Guard Lights to provide additional visual reinforcement of the runway warning. These inset lights are only located adjacent to the Runway Holding Position markings for Runway 17L/35R.

STOP Bar Lights:
STOP bar lights are elevated red lights positioned on the shoulder of the taxiway and co-located with inset red lights at the Runway Holding Position markings for Runway 17L/35R. These lights are activated during Reduced and Low Visibility Operations and serve as a physical restriction to

prevent vehicles and aircraft from entering the runway. When the STOP bar lights are illuminated, vehicles and aircraft are strictly prohibited from crossing, and ATC cannot provide verbal clearance to proceed.

Under Low Visibility Operations, when approaching a Runway Holding Position Marking at a threshold, the yellow guard lights will be turned off, and the solid red STOP bar lights will be illuminated. Once ATC grants permission to enter the runway, the controller will deactivate the STOP bar lights at that specific location and activate the green centerline lighting, signaling that the vehicle or aircraft may proceed.

Under Low Visibility Operations, when approaching a Runway Holding Position Marking at a threshold, the yellow guard lights will be turned off, and the solid red STOP bar lights will be illuminated. Once ATC grants permission to enter the runway, the controller will deactivate the STOP bar lights at that specific location and activate the green centerline lighting, signaling that the vehicle or aircraft may proceed.

Operators must never enter a runway when the red STOP bar lights are active under any circumstances.

7.10 Indicators – Runway to Runway

7.10.1 Intersection Runway 17R/35L & Runway 11/29

- Runway Holding Position Marking
- Runway Designator Sign
- Runway Guard Lights (depending on the direction of travel)

7.11 Indicators – Runway to Taxiway

- Taxiway Center Line
- Directional Signs

7.12 Runway Lighting and Markings

Runway Edge Lights:
Single white lights installed along the edges of runways to provide clear visual guidance. If the white runway edge lights begin flashing on and off, all vehicles must immediately vacate the runway without delay.

On Runway 17L/35R, the lights feature a two-color configuration. The final 600 m of the runway are marked with lights that are yellow on one side and white on the other. The yellow lights serve as a warning to pilots that the runway is nearing its end.

On Runway 17R/35L, the Runway Edge Lights are inset. The final 600 m of the runway are marked with lights that are yellow on one side and white on the other. The yellow lights serve as a warning to pilots that the runway is nearing its end.

Runway Threshold Lights:
Two-sided lights that are half red and half green, positioned at the threshold of a runway. The red side faces the runway to indicate its end, while the green side faces the approach, providing a clear visual cue for pilots during landing.

On Runway 17R/35L, the Runway Threshold Lights are inset. The green lights span the entire end of the threshold; however, the red lights are in two sets of four lights on both sides of the threshold and not span the end of the threshold.

Runway Center Line Lights:
Inset white lights that run along the center of the runway, with directional red lights positioned at the runway extremities. The final 300 m of the centerline lights are solid red, while the lights between 300 m and 900 m alternate between red and white. This alternating pattern serves as a visual warning to pilots that the runway is nearing its end. Runway centerline lights are inset on both Runway 17L/35R and Runway 17R/35L.

Touchdown Zone Lights:
Series of three parallel inset white lights positioned between the runway centerline and the runway edge, extending for 900 m. These lights are used during low visibility conditions to clearly mark the aircraft landing and touchdown zone. Touchdown zone lights are installed inset on Runway 17L/35R and Runway 17R/35L.

Rapid Exit Center Line Lights:
Series of inset lights that alternate between green and yellow. These lights are used to mark high-speed exits from a runway to a taxiway. The lights are two-directional, meaning the alternating colors are visible only when exiting the runway, while they display green when viewed from the taxiway toward the runway.

Rapid Exit Center Line lights are installed on all high-speed exits for Runway 17L/35R.

7.13 Reduced and Low Visibility Operations (RVOP / LVOP)

The Reduced and Low Visibility Operations Plans establish specific airfield operational procedures when the Runway Visual Range (RVR) falls below 2,600 feet. Low Visibility Operations Plan (LVOP), rather than Reduced Visibility Operations Plan (RVOP), may be initiated when the RVR is below 1,200 feet or at the discretion of Air Traffic Control (ATC) whenever ground visibility is less than 2,600 feet. When the RVR drops below 1,200 feet, airfield vehicle movements, aircraft towing, and maintenance operations become increasingly restricted. If the RVR decreases to below 600 feet, these activities are strictly limited due to the heightened risks associated with significantly reduced visibility.

During reduced or low visibility conditions, aircraft movements, as long as operationally required, are permitted. Aircraft run-ups are not permitted during conditions when LVOP are in effect. Run-ups during RVOP conditions may be authorized at the discretion of the IOC and NAV Canada.

7.14 CAT I Hold Line

A Category I (CAT I) Hold Line consists of two parallel yellow lines with multiple pairs of yellow lines positioned between them, in addition to red backed, white lettered signage. These markings extend across the width of a taxiway and are located farther from the runway than the standard Runway Holding Position Markings. CAT I Hold Lines are placed in the hold bays of Runway 17R (off Taxiway A) and Runway 29 (off Taxiway U). The purpose is to prevent aircraft and vehicles from entering the Instrument Landing System (ILS) critical area, which includes the glide path and localizer.

As all taxi / tow operations are under positive control, ATC will advise if the taxi / tow operator is required to hold short of the CAT I Hold Line. Only then is the operator required to hold short.

7.15 CAT II Hold Line

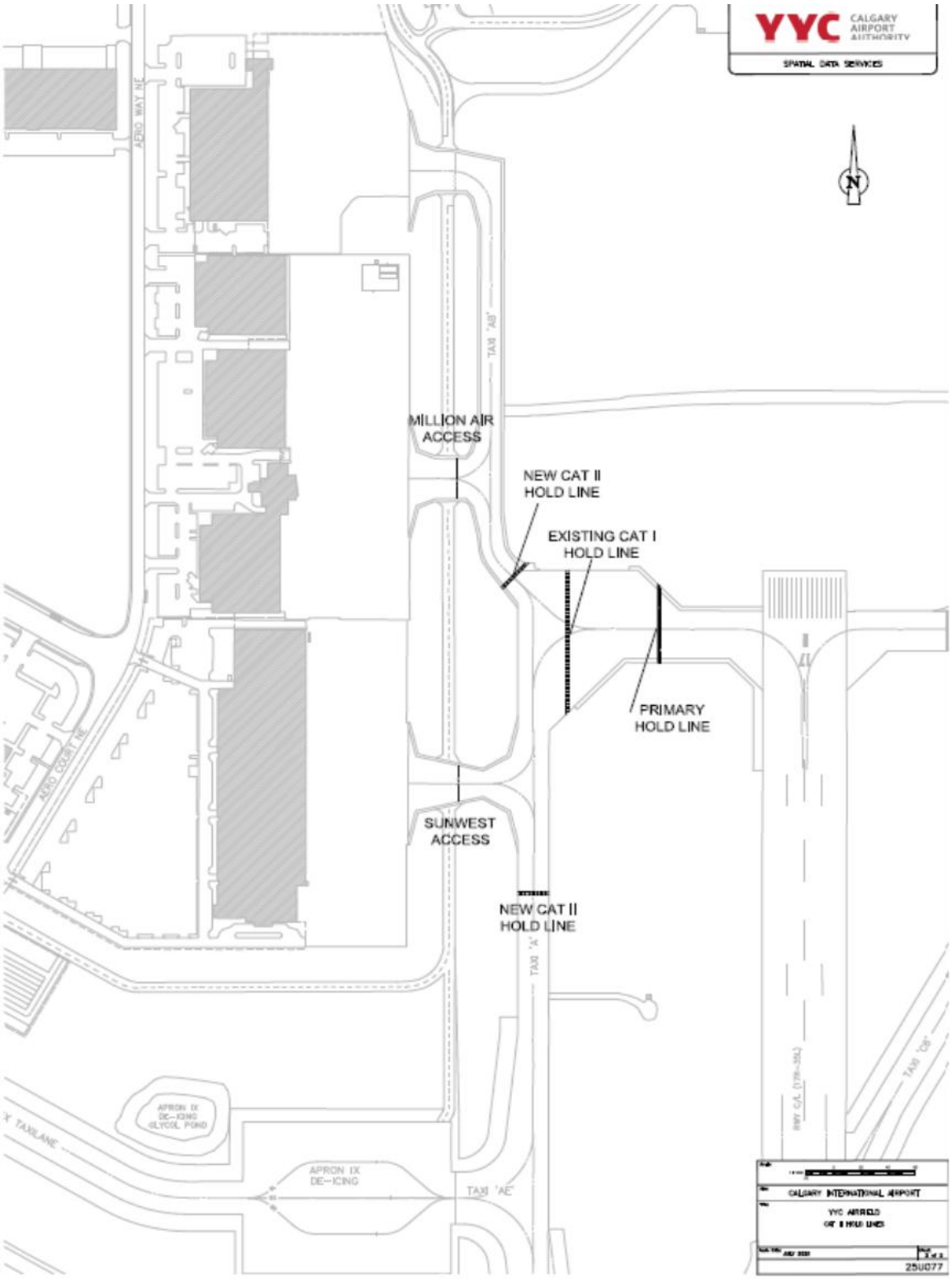
Category II (CAT II) Hold Line consists of two parallel yellow lines with multiple pairs of yellow lines positioned between them, in addition to red backed, white lettered signage, and Guard Lights (WigWags).

Category II (CAT II) operations apply to both vehicles and aircraft operating on the movement area of the airport when the cloud ceiling decreases to between 200 feet and 100 feet on the West Runway (Runway 17R/35L).

CAT II holding positions are to be used by vehicle operators and aircraft only when specifically instructed by ATC. Whenever CAT II operations are required, all vehicle operations on the airfield will be under positive control to ensure ATC can instruct vehicle operators to remain clear of ILS Critical Areas required for CAT II approaches.

Aircraft and vehicles under positive control must hold short of CAT II holding positions whenever directed by ATC, even if RVOP or LVOP procedures are not active. This requirement aligns with existing procedures for holding short of a CAT I Hold Line versus holding short of a runway at the current CAT I holding positions located at the thresholds of Runway 29 and Runway 17R.

7.15.1 CAT II Hold Line Locations – Map



Calgary Airport

Technical Areas are unmaintained areas on the airfield that can be utilized for additional aircraft parking. Companies are to contact the IOC to organize aircraft parking allowances.

7.16 Technical Areas

7.16.1 Technical Area VII South

Separated by Taxiway A with Taxi Side Stripe Markings and a large yellow 'X' painted marking. Only aircraft tows are permitted within Technical Area VII South. Vehicle speed limit is 30 km/h.

7.16.2 Technical Area L East

Separated by Taxiway L with Taxi Side Stripe Markings and a large yellow 'X' painted marking. Only aircraft tows are permitted within Technical Area L East. Vehicle speed limit is 50 km/h, unless aircraft is parked, then it is 30 km/h.

7.17 Compass Rose

A compass rose provides a physical, magnetic north-referenced point for pilots and mechanics to calibrate the aircraft's magnetic compass, correcting for errors caused by the plane's metal, ensuring accurate heading readings for safe navigation, even if modern GPS fails. It helps pilots align their aircraft and confirm their instruments, serving as a crucial backup for primary navigation systems

7.17.1 Compass Rose Locations

- Apron IX Deice
- Taxiway P
- Holding Bay Taxiway M
- Holding Bay Runway 29

7.17.2 Aircraft Tow to Compass Rose

Aircraft tows to a compass rose is permitted. The tow tractor must remain connected to the aircraft at all times and be repositioned immediately following request from ATC.

7.18 Air Traffic Control and Radio Procedures

All personnel who complete taxi / tow operations, or those who may need to operate a radio for aviation purposes at YYC must be trained, licensed (ROC-A), and communicate correctly according to Science, Innovation and Economic Development Canada radio operator standards, including the use of proper phraseology when communicating with ATC.

Note: All D-TT AVOP applicants MUST obtain a ROC-A license BEFORE applying for the D-TT AVOP. Applicants and D-TT AVOP holders must be prepared to present their physical ROC-A certificate and, if applicable their valid AME License if requested by Airside Traffic Enforcement Personnel.

7.18.1 Aircraft Tow - Callsign

For tow operations, the best practice is to use the company tow vehicle name, the vehicle number, and the aircraft identifier. If the tow vehicle does not have a unique number, operators on aprons may use the company name followed by the word "Tow" (i.e.: "[Company Name] Tow [XXX]" or "[Company Name] Tow with aircraft registration C-[XXXX]"). Tow operations may also reference the vehicle's unique call sign in relation to the tow (i.e.: "Staff 80 plus tow").

7.18.2 Aircraft Taxi - Callsign

For taxi operations, anyone other than a pilot taxiing an aircraft for active flight operations must use the aircraft's civil registration number. Flight numbers are permitted only when the aircraft is taxiing as part of an active flight operation.

7.18.3 Radio Standards

A readback of all ATC radio permissions is mandatory. This readback serves as an acknowledgment that the operator has received, understood, and will comply with all instructions exactly as given. The readback must include all instructions and conclude with the operator or vehicle callsign. Responses such as "Roger," "Affirmative," or only the vehicle callsign are incomplete and unacceptable. If clarification is needed, the correct phraseology is "Say again" or "Confirm." All communication with ATC must remain clear and concise.

When ATC instructs an operator to "stand by," the operator must wait and monitor the frequency without proceeding beyond the last clearance. ATC will re-establish contact when able.

7.18.4 Radio Failure in the Manoeuvring Area

If the radio fails during a taxi or tow operation, you must immediately stop all movement. After stopping, contact the Integrated Operations Centre (IOC) using an alternative communication method. Remain in position and wait for further instructions before proceeding.

7.18.5 Unable to Comply with ATC Instructions

If a vehicle, piece of equipment, or aircraft experiences a breakdown, or if the operator is unable to comply with ATC instructions or permissions after initially acknowledging them, the operator must immediately inform ATC of their exact location and the nature of the problem and request assistance. It is the operator's responsibility to seek clarification or confirmation from ATC regarding any instructions or permissions that were missed, forgotten, or not fully understood.

7.19 Foreign Object Debris in the Manoeuvring Area

When FOD is identified in the Manoeuvring Area, operators must report the FOD to the appropriate Ground frequency. Depending on the size of the FOD, ATC may advise the taxi / tow operator to hold short or provide rerouting instructions. Once the taxi / tow is complete,

the operator then must contact the company supervisor. The supervisor must then report the incident, description of the FOD, and location to the IOC.

7.20 Radio Frequencies

Radio transmissions must be completed on the correct frequency and must be kept to a minimum. Radio operators must listen for a moment on the correct frequency before making a call to avoid interfering with other transmissions.

** **It is the responsibility of the operator to monitor the appropriate frequencies while in the Manoeuvring Area and/or under positive control with ATC.**

Area	Frequency (MHz)
Apron I	**121.30**
West Ground	**121.90**
East Ground	**125.35**
ATIS	**128.225**
West Deice Apron Pad Control	**122.350**
East Deice Apron Pad Control	**129.125**
West Tower	**118.40**
East Tower	**118.70**
Emergency / Alternate	**124.95**

7.20.1 Apron I – Apron Advisory

All aprons at Calgary International Airport are uncontrolled; however, Apron Advisory on frequency 121.3 MHz must be contacted prior to any aircraft movement on Apron I. Between the hours of 01:00 and 05:00 (but may vary), when NAV Canada is not monitoring Apron Advisory, taxi and tow operators are still required to announce their intentions on 121.3 MHz using correct radio phraseology.

ATC may instruct the taxi / tow operation to proceed “at your discretion.” This phrase means the operator may only continue when it is safe to do so, while coordinating with and considering all other aircraft traffic, and in full compliance with all applicable policies and procedures, including AVOP and Gate Matrix requirements.

After hours, when Air Traffic Control is not operating on the Apron Advisory frequency, all taxi / tow operators on the Apron must:

a. Broadcast their intentions on Apron Advisory (using correct radio procedures and terminology).
b. Maintain a listening watch throughout the taxi / tow operation.
c. Comply with the Hierarchy of the Right-of-Way at all times.
d. Make all applicable radio calls enroute.

Note: Aircraft traffic is not organized based on the taxiway or runway closest to the aircraft's gate or apron destination. Instead, traffic flow is managed through a ground sort process that considers operational requirements, including active runways and ongoing deicing operations.

Operators are expected to follow all directional instructions provided by Apron Advisory. It is essential to pay close attention to these instructions, as they may differ from what you anticipate.

7.20.2 Dual Ground Control Frequency

Vehicles and aircraft operating in the Manoeuvring Area must have radios that can operate on all YYC ATC Ground Control frequencies.

ATC uses two primary frequencies to manage aircraft and vehicle movements within the Manoeuvring Area. All ground transmissions on the East side of the airfield are conducted on the East Ground frequency, 125.35 MHz, while all transmissions on the West side of the airfield use the West Ground frequency, 121.9 MHz. ATC may also utilize alternate frequencies, such as 124.95 MHz, when necessary.

The boundary between the East and West Ground frequencies is located along Taxiway J between Taxiway JS and Taxiway JT, as well as at the intersection of Taxiway F and Taxiway R.

NAV Canada controls aircraft as follows:

East Ground

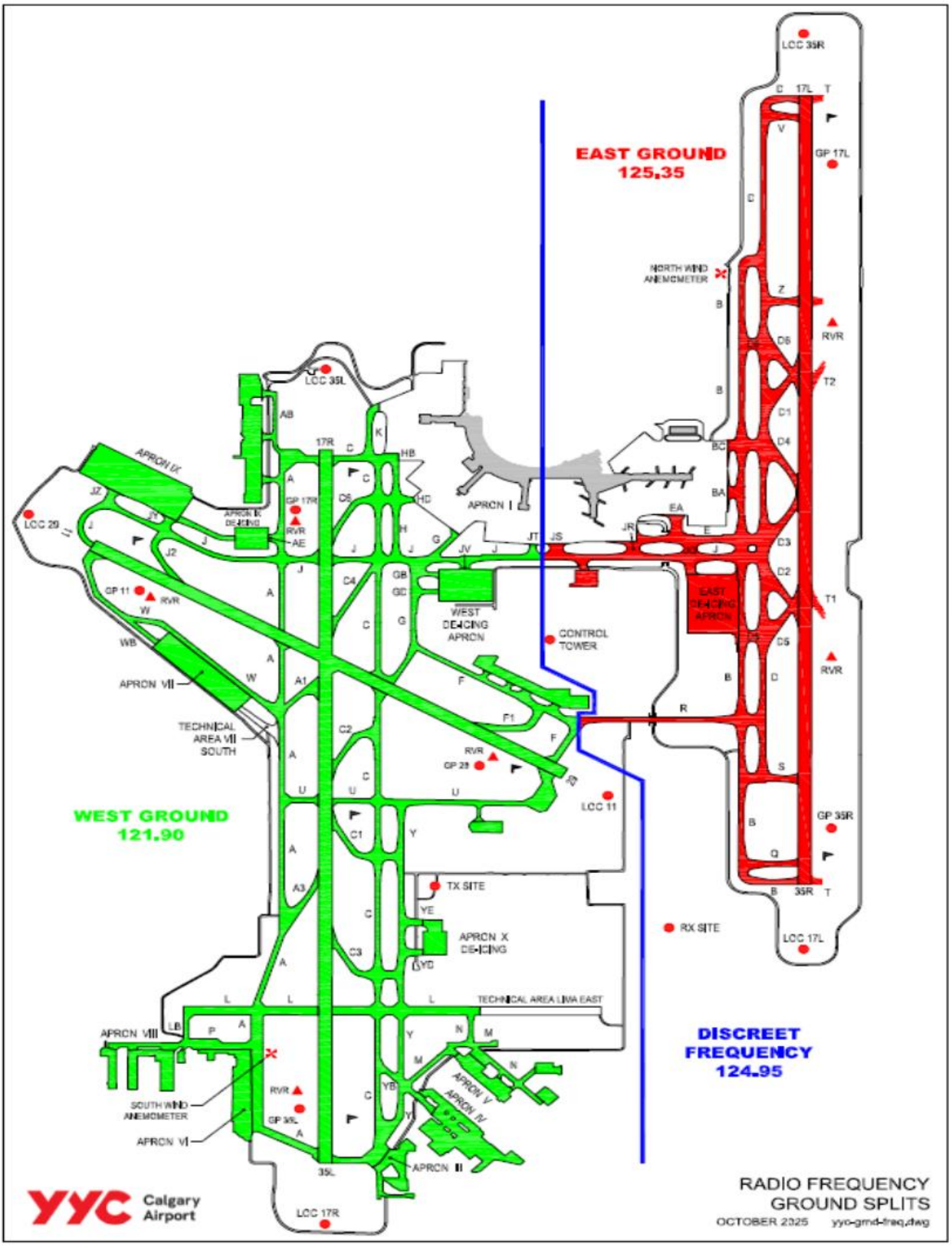
- Runway 17L/35R
- All taxiways East of Taxiway JT and East of Taxiway F

West Ground

- Runway 17R/35L
- Runway 11/29
- All taxiways West of Taxiway JS and West of Taxiway R

Note: Operators under positive control must wait until instructed by ATC to change frequencies.

7.20.3 Dual Ground Control Frequency – Airfield Map



YYC Calgary Airport

7.21 Radio Calls – Examples

7.21.1 Standards and Tips

Factors that contribute to good radio communication for aircraft taxi / tows:

- Situational awareness.
- Planning ahead.
- Normal tone and rate of speech.
- Monitoring the frequency before transmitting to avoid interfering with another call.
- Attentiveness and good listening.

Tips for good radio communication:

- Keep the mic from getting too close to your mouth.
- Begin with your callsign, where you are, and your request.
- Read back all hold short instructions.
- Read back every clearance to cross or enter Runways.
- Always include the word 'Runway' or 'Threshold Runway' and the Runway number for Runway related radio calls.
- Add additional words "Threshold Runway…" if there is only one heading on the Runway Designator sign.
- End ALL read backs with your call sign.

7.21.2 Determining the Active Runway(s)

It is best practice to determine the active runway, or runways, before proceeding with the initial radio call. There are four ways to determine the active runway(s):

1. Monitor ATIS.
2. Monitor East and/or West Ground.
3. Observe departing and landing aircraft.
4. Observe windsock direction.

Do not call East or West Ground to ask for the active runway(s).

7.21.3 Aircraft Tow – Radio Call Examples

Example – Apron I Gate 17 to East Parking Pad 182

Tow Vehicle	Air Traffic Control
Apron I, [Company Name] Tow [XXX] on Gate 17 with B737 requesting reposition to East Parking Pad one eight two.	
	[Company Name] Tow [XXX] proceed Apron your discretion to SPOT 6.

Proceeding Apron my discretion to SPOT 6, [Company Name] Tow [XXX].	
	[Company Name] Tow [XXX] proceed Apron your discretion to East Pad one eight two.
Proceeding Apron my discretion to East Pad one eight two [Company Name] Tow [XXX].	

Do not contact ATC to advise of tow complete unless specifically requested by ATC.

Example – Apron I Gate 82 to Gate 21

Tow Vehicle	Air Traffic Control
Apron I, [Company Name] Tow [XXX] on Gate 82 with B737 requesting reposition to Gate 21.	
	[Company Name] Tow [XXX] proceed Apron your discretion to SPOT 24.
Proceeding Apron my discretion to SPOT 24, [Company Name] Tow [XXX].	
	[Company Name] Tow [XXX] contact East Ground 125.35
Contacting East Ground 125.35 [Company Name] Tow [XXX].	
East Ground, [Company Name] Tow [XXX] on SPOT 24 with B737 for Gate 21.	
	[Company Name] Tow [XXX] proceed Bravo Charlie, Bravo, Juliet, hold short Juliet Tango.
Proceed Bravo Charlie, Bravo, Juliet, hold short Juliet Tango [Company Name] Tow [XXX].	
	[Company Name] Tow [XXX] contact West Ground 121.90.
Contacting West Ground 121.90 [Company Name] Tow [XXX].	

West Ground, [Company Name] Tow [XXX] holding short **of** Juliet Tango with Q400 for Gate 21.	
	[Company Name] Tow [XXX] proceed Juliet, Hotel, Hotel Bravo, contact Apron 121.30 before entering the Apron.
Proceed Juliet, Hotel, Hotel Bravo, and contact Apron 121.30 before entering the Apron, [Company Name] Tow [XXX].	
Apron I, [Company Name] Tow [XXX], at Hotel Bravo with B737 for Gate 21.	
	[Company Name] Tow [XXX] proceed Apron your discretion for Gate 21.

When holding short, do not state “at” or “on” as it gives ATC conflicting information and is not acceptable. When holding short, the correct language is “of,” as seen in the example above. Stating only “roger” or “affirmative” to ATC instructions is not permitted.

Example – Apron I Gate 76 to Gate 91

Tow Vehicle	Air Traffic Control
Apron I, [Company Name] Tow [XXX] Heavy on Gate 76 with B787 requesting reposition to Gate 91.	
	[Company Name] Tow [XXX] Heavy proceed Apron your discretion to SPOT 16.
Proceeding Apron my discretion to SPOT 16, [Company Name] Tow [XXX] Heavy.	
	[Company Name] Tow [XXX] Heavy contact East Ground 125.35
Contacting East Ground 125.35 [Company Name] Tow [XXX] Heavy.	

East Ground, [Company Name] Tow [XXX] Heavy on SPOT 16 with B787 for Gate 91.	
	[Company Name] Tow [XXX] Heavy proceed Echo, Bravo, Bravo Charlie, stay with me, Apron your discretion to Gate 91.
Proceed Echo, Bravo, Bravo Charlie, stay with you, Apron my discretion to Gate 91. [Company Name] Tow [XXX] Heavy.	

Example – Apron I Advisory Call – Gate 24 to West Parking Pad 127

Tow Vehicle	Air Traffic Control
Apron Advisory, [Company Name] Tow [XXX] on Gate 24 with B737 repositioning to West Pad 127. Please advise if any conflicts.	
	N/A. Other traffic may respond.

Example – Apron X to Apron VI

Tow Vehicle	Air Traffic Control
West Ground, [Company Name] Tow [XXX] on Apron Ten with B757 requesting reposition to Apron Six.	
	[Company Name] Tow [XXX] proceed Yankee Echo, Yankee, Lima, hold short Runway Three Five Left.
Proceeding Yankee Echo, Yankee, Lima, hold short Runway Three Five Left, [Company Name] Tow [XXX].	
	[Company Name] Tow [XXX] proceed across Runway Three Five Left, Lima, Alpha to Apron Six.
Proceeding across Runway Three Five Left, Lima, Alpha to Apron Six, [Company Name] Tow [XXX].	

Radio operators must state “runway” when crossing or discussing a runway. Do not proceed onto a runway without permission from ATC and have a fully completed readback. The readback, ending with the callsign, provides confirmation to ATC full and complete understanding of instructions.

Example – Apron IX Deice to Apron IV

Tow Vehicle	Air Traffic Control
West Ground, [Company Name] Tow [XXX] on Apron Nine Deice with B737 requesting reposition to Apron Four.	
	[Company Name] Tow [XXX] proceed Alpha Echo, Alpha, Juliet, hold short Runway One Seven Right.
Proceeding Alpha Echo, Alpha, Juliet, hold short Runway One Seven Right, [Company Name] Tow [XXX].	
	[Company Name] Tow [XXX] proceed onto Runway One Seven Right, across Runway Two Nine, Lima, Charlie, Yankee Bravo, to Apron Four.
Proceeding onto Runway One Seven Right, across Runway Two Nine, Lima, Charlie, Yankee Bravo, to Apron Four, [Company Name] Tow [XXX].	

7.21.4 Aircraft Taxi – Radio Call Examples

Example – Apron V to Apron X

Maintenance Taxi	Air Traffic Control
West Ground, [Aircraft tail registration] requesting Q400 maintenance taxi on Apron five for Apron ten.	
	[Aircraft tail registration] proceed November, Lima, Yankee, Yankee Delta to Apron ten.

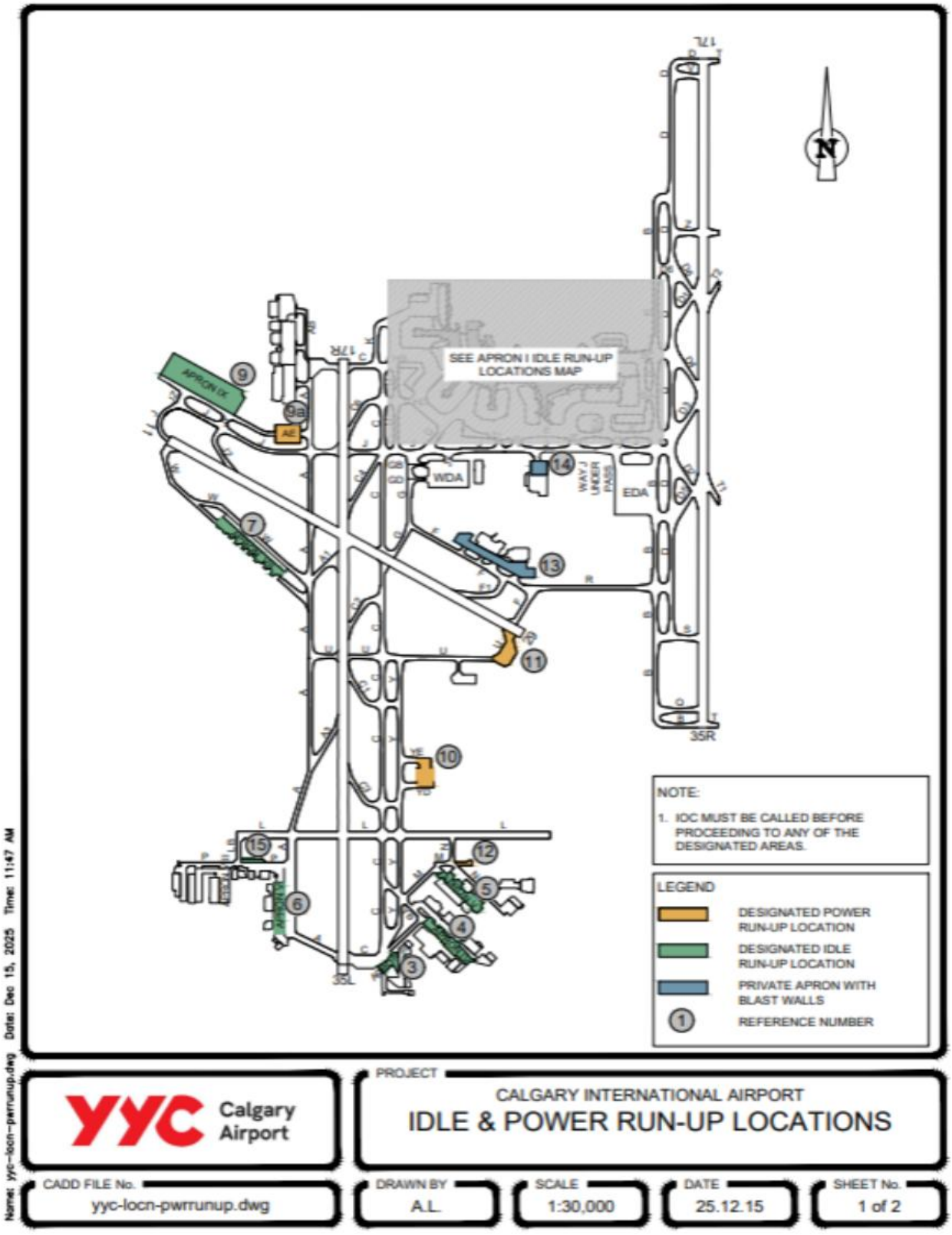
Proceeding November, Lima, Yankee, Yankee
Delta to Apron ten, [Aircraft tail registration].

Refer to Section 7.19.3 for more examples. The language remains the same; however, the callsign for taxis versus tows is what is different.

7.22 Aircraft Maintenance Run-up Locations

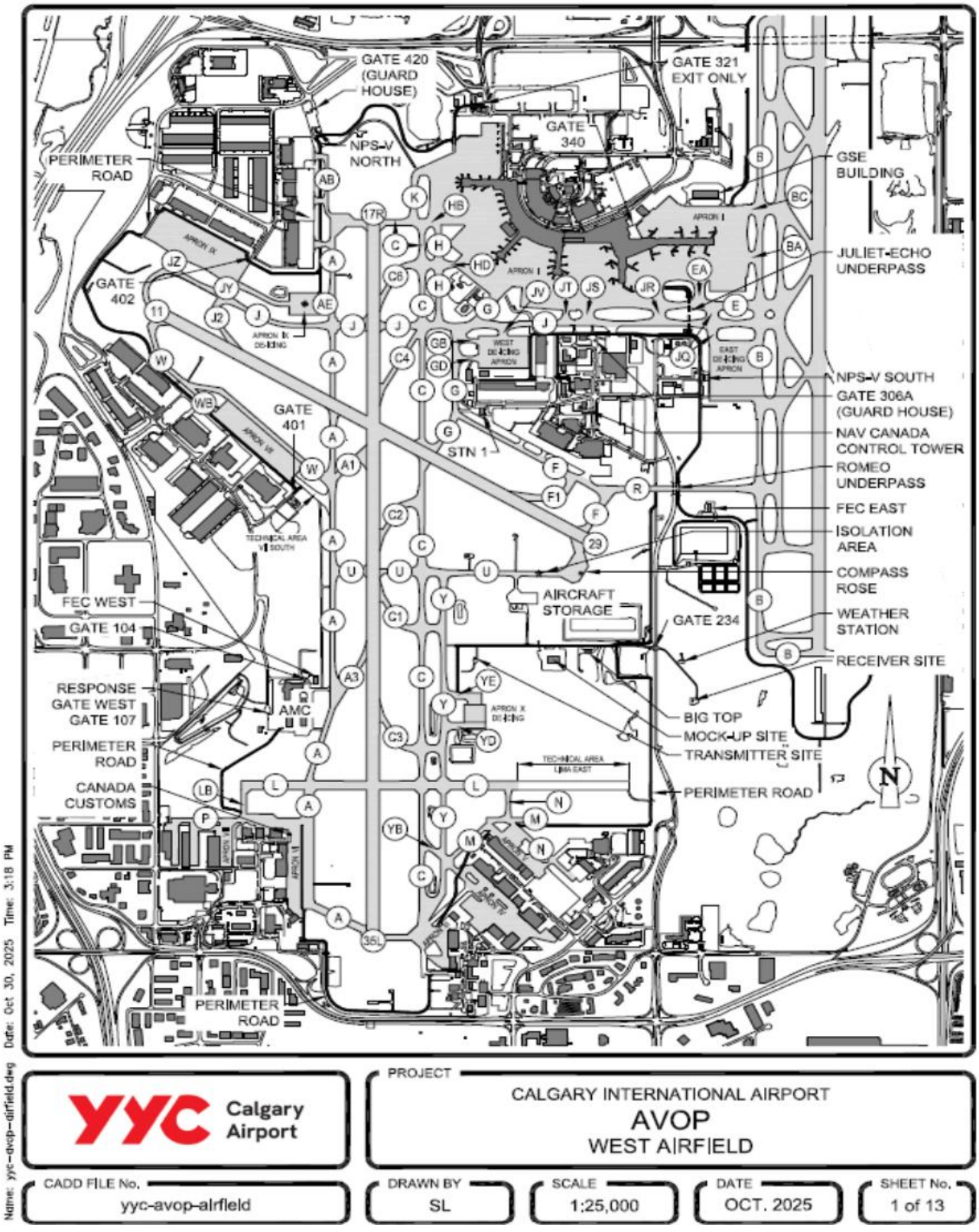
Companies must call the IOC for permission prior to proceeding to a run-up designated area.

7.22.1 Aircraft Maintenance Run-up Locations Map

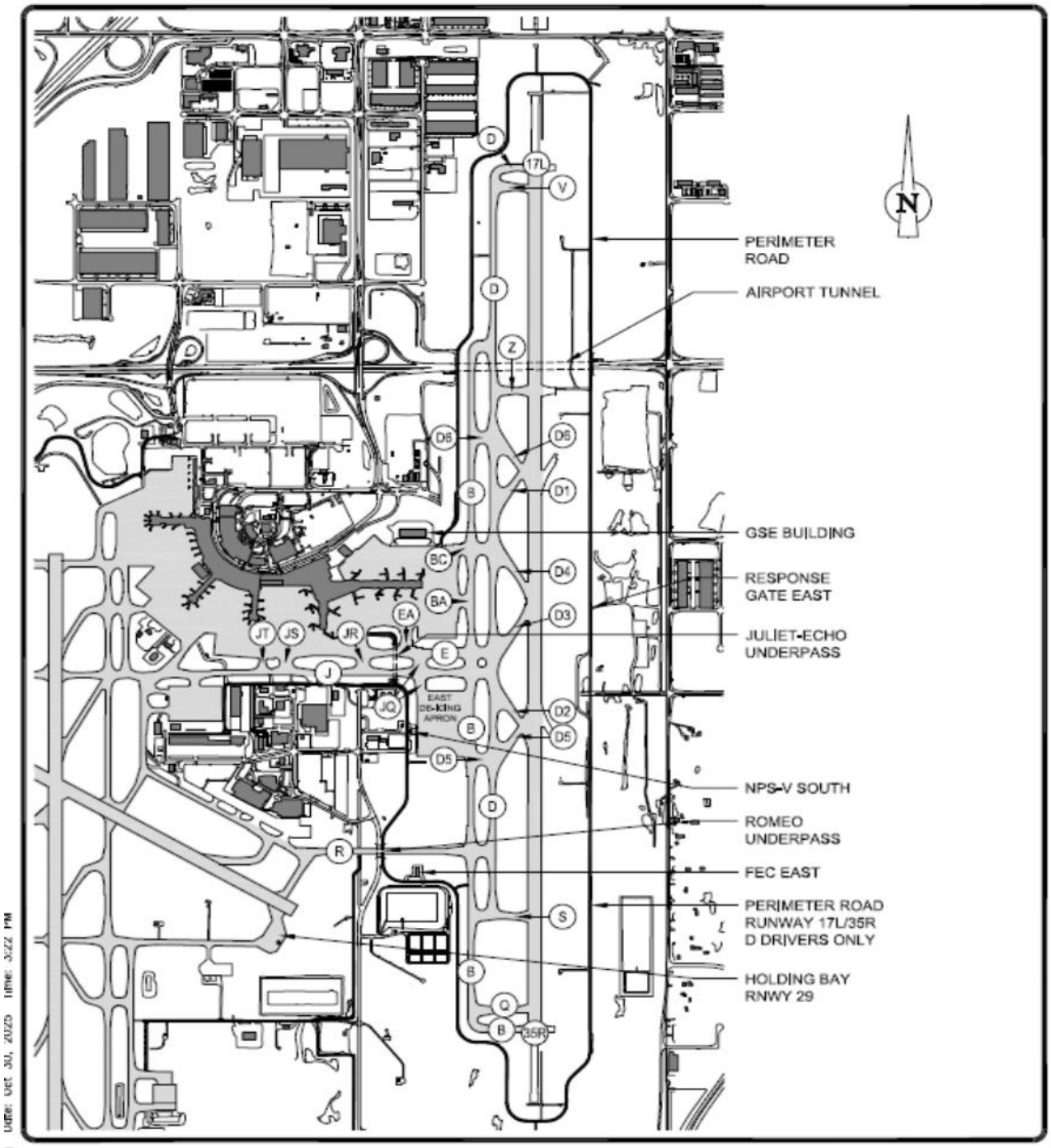


Calgary Airport

7.22.2 West Airfield



7.22.3 East Airfield



7.23 Right-of-Way

Hierarchy of Right-of-Way:

1. Aircraft under their own power or under tow.
2. Emergency vehicles (with red lights flashing).
3. Airport maintenance vehicles (snow, ice, line painting, and FOD control equipment) while performing their duties.
4. Marshallers and tractors during aircraft arrival, pushback, and when returning from pushback.
5. Fuel trucks and fuel carts engaged in fueling operations, including when maneuvering into or backing out of an operational stand.
6. Pedestrians in walkways, crosswalks, bag halls, and load sheds.
7. All other vehicles.

Aircraft under their own power or under tow always have the right-of-way and must be given priority over all other traffic. All vehicle operators are required to always give right-of-way to all aircraft.

7.24 Freezing the Scene

AVOP holders involved in an accident with a vehicle, aircraft, ground service equipment, or other object must **freeze the scene** and immediately contact their supervisor and the IOC.

Freezing the Scene:

- When safe to do so, the scene of an accident must be frozen (left in place) until the company supervisor and IOC has been informed. Calgary Airports will authorize when a scene can be unfrozen.
- At times, and depending on the location of the accident, scenes need to be temporarily unfrozen (moved) to a safe area. This may be to avoid active aircraft or other hazards such as fire. Scenes should ONLY be unfrozen when absolutely necessary for safety and when approved by the Airport Authority.

In some cases, it may not be possible to freeze the scene as the incident took place in the Manoeuvring Area. If this is the case, individuals involved will freeze the scene by staying at a safe location nearest to where the incident took place and immediately report the incident to the supervisor. Individuals must remain at the scene until Calgary Airports have permitted the individuals to leave the scene.

Note: Failure to immediately report an accident and freeze the scene may result in a safety violation.

7.25 Nighttime Operations

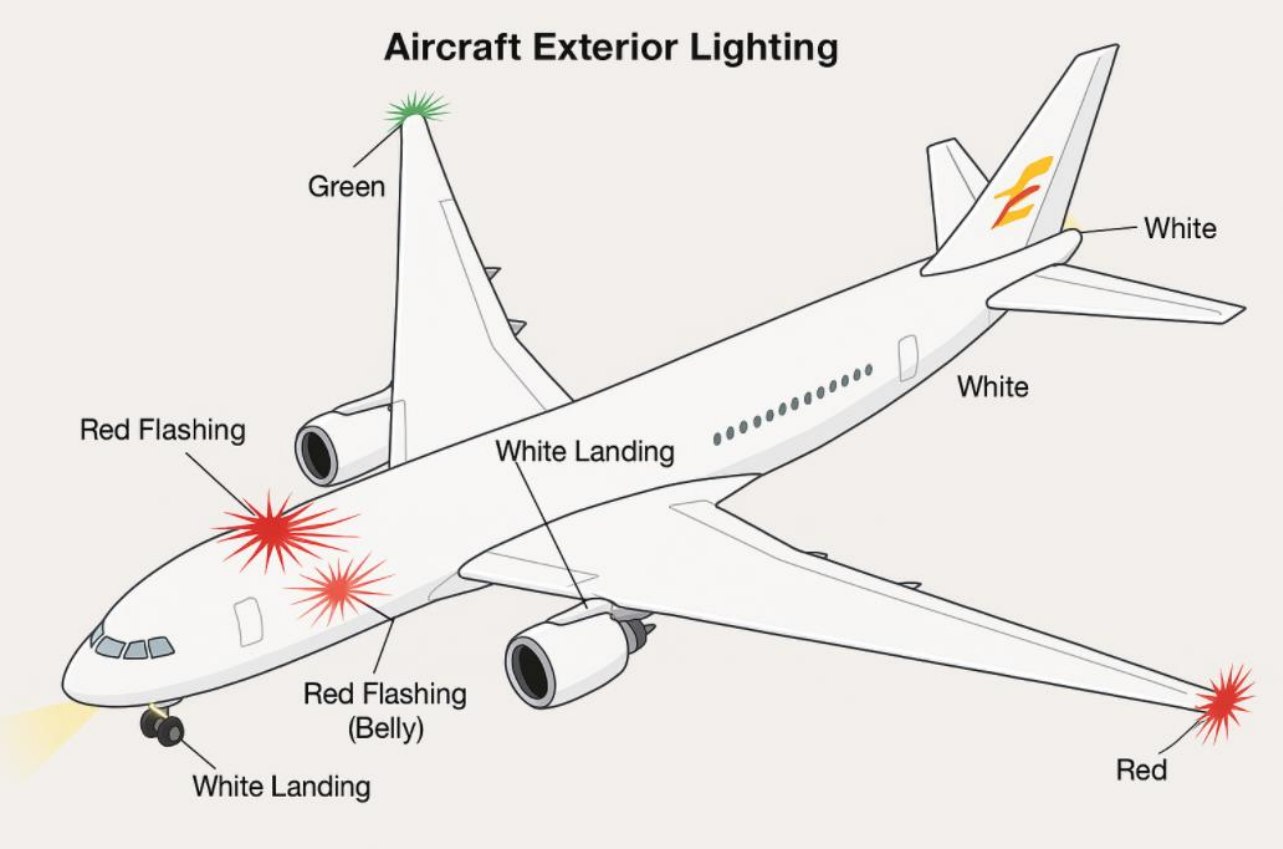
Airfield lighting is significantly brighter during hours of darkness, while aircraft become harder to see.

When an aircraft is travelling towards you (you are facing the aircraft nose), you should see:

- Aircraft Anti-Collision Light (red or white depending on aircraft)
- Nose Gear Light (white)
- Navigational Lights (red on your right side, green on your left side)

When an aircraft is travelling away from you (you are facing the aircraft tail), you should see:

- Aircraft Anti-Collision Light (red or white depending on aircraft)
- Flashing Taillight (white)
- Flashing Navigational Lights (flashing white on both sides)



7.26 D-TT Written and Practical Testing Preparation

- [x] I have read and understood Section 1 – 4 of the ATD and AVOP Manual
- [x] I have read and understood Section 7 of the ATD and AVOP Manual
- [x] I understand that if I hold a DA or DA-WS when completing the D-TT Practical Assessment, I am required to know and showcase DA or DA-WS competencies. Failure to do so will result in immediate failure of the D-TT Practical Assessment.
- [x] I have completed the practice questions in the section below
- [x] I understand the following concepts:
    - Apron I Spots
    - Apron to Taxiway Intersection Indicators
    - Hierarchy of Right-of-Way
    - All Pavement Markings
    - Taxiway Incursion Procedure
    - Critical Area Exemptions
    - Routing Progression of Runway(s) and Major Taxiway(s)
    - Radio Frequencies and Split Locations
    - Airfield Lighting, Signage, and Markings
    - Taxiway to Runway Indicators
    - Runway to Runway Indicators
    - CAT I and CAT II Hold Lines – Locations and Procedures
    - Compass Rose Locations
    - Determining Active Runway(s)
- [x] I have completed all company training.
- [x] I have booked and/or completed a D-TT Familiarization Drive with the YYC AVOP Office (recommended but not required).

7.26.1 D-TT AVOP – Practice Questions

1. What documents must a person hold to taxi or tow aircraft outside their company's leased area at YYC?
    a. Pilot's license and ROC-A
    b. AME license and ROC-A
    c. ROC-A and DA AVOP
    d. YYC RAIC, YYC D-TT AVOP, ROC-A

2. Who is responsible for overseeing a taxi or tow operation?
    a. The pilot of the aircraft
    b. Designated responsible person with proper AVOP and authorization
    c. Any AVOP holder present
    d. The supervisor on duty

3. Which lights must remain illuminated for the entire duration of a tow operation?
    a. Apron edge lights
    b. Runway guard lights
    c. Taxiway edge lights
    d. Anti-collision and navigational lights

4. What is the priority of operations at YYC?
    a. Tow operations have priority over live aircraft movements
    b. Maintenance vehicles have priority over aircraft
    c. Live aircraft movements always take precedence
    d. Fuel trucks have priority over aircraft

5. What must be inspected before conducting a tow operation?
    a. Tow vehicle for required safety equipment and markings
    b. Apron markings
    c. ATC frequency
    d. Aircraft only

6. What is the correct squawk code if ATC does not assign one for a tow vehicle?
    a. 7500
    b. 7700
    c. 1000
    d. 1200

7. Who can ride the brakes during a tow?
    a. Tow vehicle operator
    b. ATC personnel

c. Any AVOP holder
d. Only trained personnel meeting airline requirements

8. What is required for anyone communicating on an aeronautical radio?

a. Pilot's license
b. ROC-A certificate
c. AVOP only
d. AME license

9. What must be done if a radio fails during a taxi or tow operation?

a. Use hand signals
b. Stop immediately and contact IOC
c. Switch to another frequency
d. Continue to destination

10. What phrase means you may proceed only when safe and in compliance with all procedures?

a. Cleared to cross
b. Hold short
c. Proceed immediately
d. At your discretion

11. What marking indicates the MAD Line?

a. Double solid yellow line
b. Two solid and two broken yellow lines
c. Single solid and single broken yellow line
d. Broken white line

12. What color are Apron Edge Lights?

a. Blue
b. Green
c. Amber
d. White

13. What does a Runway Designator Sign look like?

a. White on red
b. Red on white
c. Black on yellow
d. Yellow on black

14. What is the maximum wingspan allowed between Taxiway EA and BC on Apron I?

a. 48 m
b. 60 m
c. 36 m
d. 24 m

15. What is the first action if you cause a taxiway or runway incursion?

a. Call your supervisor
b. Exit immediately
c. Freeze the scene
d. Do not panic and contact ATC

16. What is the beginning of the hierarchy of right-of-way?

a. Aircraft, emergency vehicles, maintenance vehicles
b. Fuel trucks, aircraft, pedestrians
c. Pedestrians, aircraft, vehicles
d. Emergency vehicles, aircraft, pedestrians

17. What does a CAT I Hold Line prevent entry into?

a. Runway
b. ILS Critical Area
c. Apron
d. Taxiway

18. What lights indicate a fall hazard?

a. Amber lights
b. Double red lights
c. Blue lights
d. Single red lights

19. What must be included in all ATC readbacks?

a. Full instructions and your call sign
b. Only the word ‘Roger’
c. Clearance only
d. Affirmative only

20. What is the frequency for Apron Advisory?

a. 125.35 MHz
b. 124.95 MHz
c. 121.3 MHz
d. 121.9 MHz

21. What color are Runway Edge Lights?
    a. Green
    b. White
    c. Blue
    d. Amber
22. What does a STOP bar indicate?
    a. Do not cross under any circumstances when lit
    b. Proceed with caution
    c. Stop only during daytime
    d. Clearance granted
23. What is the speed limit in Technical Area VII South?
    a. 30 km/h
    b. 40 km/h
    c. 20 km/h
    d. 50 km/h
24. What marking guides aircraft into a parking position?
    a. Solid yellow lead-in line
    b. Broken yellow line
    c. Amber dashed line
    d. Double white line
25. What color are Taxiway Center Line Lights?
    a. Green
    b. Amber
    c. Blue
    d. Red
26. What does ‘Stand by’ from ATC mean?
    a. Proceed immediately
    b. Repeat instructions
    c. Switch to another frequency
    d. Wait and monitor frequency
27. What color are Runway Threshold Lights?
    a. Red and white
    b. Red and green
    c. White and amber
    d. Blue and white

7.26.2 D-TT AVOP – Practice Questions ANSWERS

1. What documents must a person hold to taxi or tow aircraft outside their company's leased area at YYC?

   a. Pilot's license and ROC-A
   b. AME license and ROC-A
   c. ROC-A and DA AVOP
   d. **YYC RAIC, YYC D-TT AVOP, ROC-A**

2. Who is responsible for overseeing a taxi or tow operation?
   a. The pilot of the aircraft
   b. **Designated responsible person with proper AVOP and authorization**
   c. Any AVOP holder present
   d. The supervisor on duty

3. Which lights must remain illuminated for the entire duration of a tow operation?
   a. Apron edge lights
   b. Runway guard lights
   c. Taxiway edge lights
   d. **Anti-collision and navigational lights**

4. What is the priority of operations at YYC?
   a. Tow operations have priority over live aircraft movements
   b. Maintenance vehicles have priority over aircraft
   c. **Live aircraft movements always take precedence**
   d. Fuel trucks have priority over aircraft

5. What must be inspected before conducting a tow operation?
   a. **Tow vehicle for required safety equipment and markings**
   b. Apron markings
   c. ATC frequency
   d. Aircraft only

6. What is the correct squawk code if ATC does not assign one for a tow vehicle?
   a. 7500
   b. 7700
   c. **1000**
   d. 1200

7. Who can ride the brakes during a tow?
   a. Tow vehicle operator
   b. ATC personnel

c. Any AVOP holder
d. **Only trained personnel meeting airline requirements**

8. What is required for anyone communicating on an aeronautical radio?
   a. Pilot's license
   b. **ROC-A certificate**
   c. AVOP only
   d. AME license

9. What must be done if a radio fails during a taxi or tow operation?
   a. Use hand signals
   b. **Stop immediately and contact IOC**
   c. Switch to another frequency
   d. Continue to destination

10. What phrase means you may proceed only when safe and in compliance with all procedures?
   a. Cleared to cross
   b. Hold short
   c. Proceed immediately
   d. **At your discretion**

11. What marking indicates the MAD Line?
   a. Double solid yellow line
   b. Two solid and two broken yellow lines
   c. **Single solid and single broken yellow line**
   d. Broken white line

12. What color are Apron Edge Lights?
   a. **Blue**
   b. Green
   c. Amber
   d. White

13. What does a Runway Designator Sign look like?
   a. **White on red**
   b. Red on white
   c. Black on yellow
   d. Yellow on black

14. What is the maximum wingspan allowed between Taxiway EA and BC on Apron I?
   a. 48 m
   b. 60 m
   c. **36 m**

d. 24 m

15. What is the first action if you cause a taxiway or runway incursion?
    a. Call your supervisor
    b. Exit immediately
    c. Freeze the scene
    d. **Do not panic and contact ATC**

16. What is the beginning of the hierarchy of right-of-way?
    a. **Aircraft, emergency vehicles, maintenance vehicles**
    b. Fuel trucks, aircraft, pedestrians
    c. Pedestrians, aircraft, vehicles
    d. Emergency vehicles, aircraft, pedestrians

17. What does a CAT I Hold Line prevent entry into?
    a. Runway
    b. **ILS Critical Area**
    c. Apron
    d. Taxiway

18. What lights indicate a fall hazard?
    a. Amber lights
    b. **Double red lights**
    c. Blue lights
    d. Single red lights

19. What must be included in all ATC readbacks?
    a. **Full instructions and your call sign**
    b. Only the word 'Roger'
    c. Clearance only
    d. Affirmative only

20. What is the frequency for Apron Advisory?
    a. 125.35 MHz
    b. 124.95 MHz
    c. **121.3 MHz**
    d. 121.9 MHz

21. What color are Runway Edge Lights?
    a. Green
    b. **White**
    c. Blue
    d. Amber

22. What does a STOP bar indicate?
    a. **Do not cross under any circumstances when lit**
    b. Proceed with caution
    c. Stop only during daytime
    d. Clearance granted

23. What is the speed limit in Technical Area VII South?
    a. **30 km/h**
    b. 40 km/h
    c. 20 km/h
    d. 50 km/h

24. What marking guides aircraft into a parking position?
    a. **Solid yellow lead-in line**
    b. Broken yellow line
    c. Amber dashed line
    d. Double white line

25. What color are Taxiway Center Line Lights?
    a. **Green**
    b. Amber
    c. Blue
    d. Red

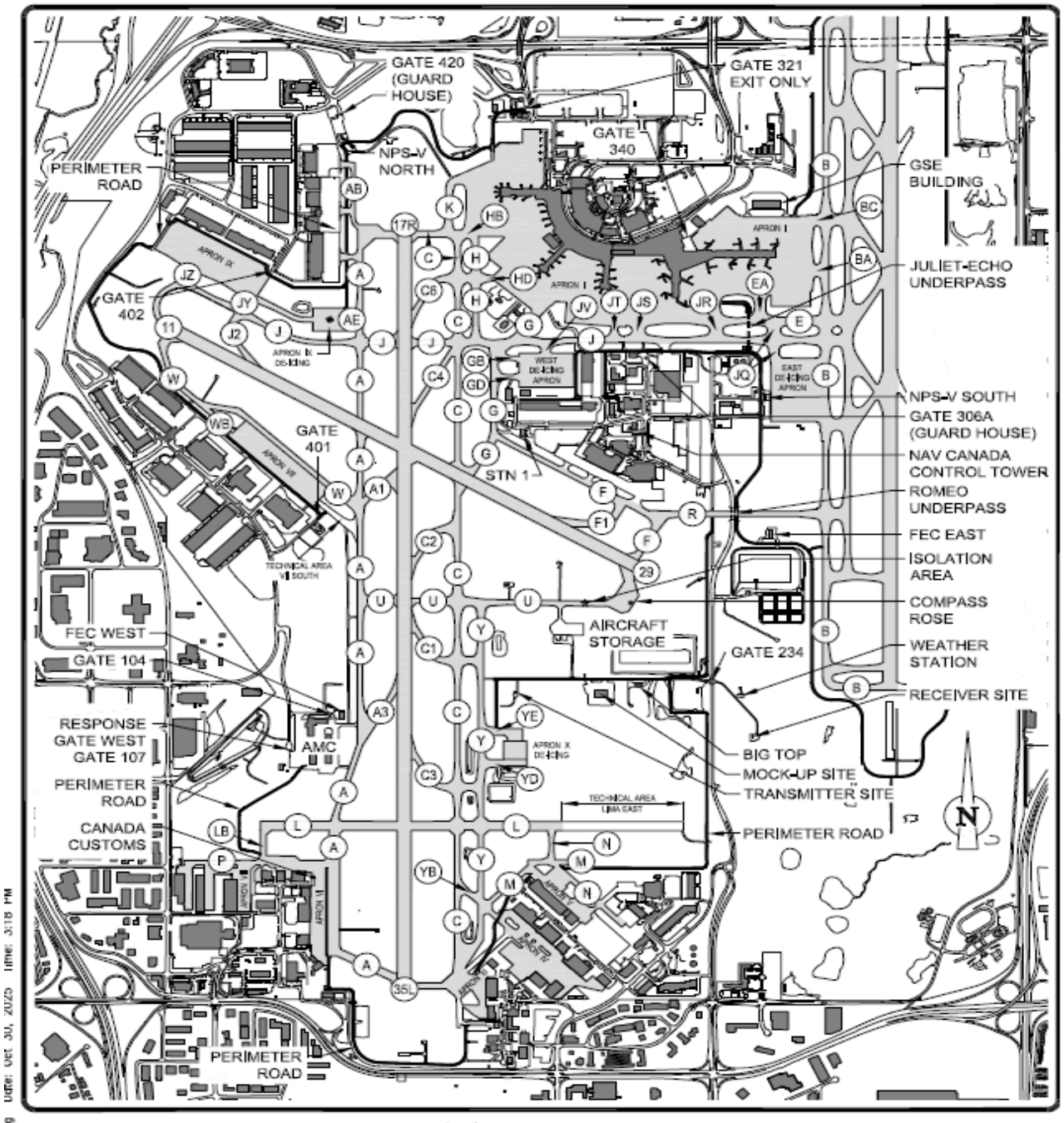
26. What does ‘Stand by’ from ATC mean?
    a. Proceed immediately
    b. Repeat instructions
    c. Switch to another frequency
    d. **Wait and monitor frequency**

27. What color are Runway Threshold Lights?
    a. Red and white
    b. **Red and green**
    c. White and amber
    d. Blue and white

Section 8
D AVOP Requirements

8 D AVOP Requirements

8.0.1 West Airfield Map



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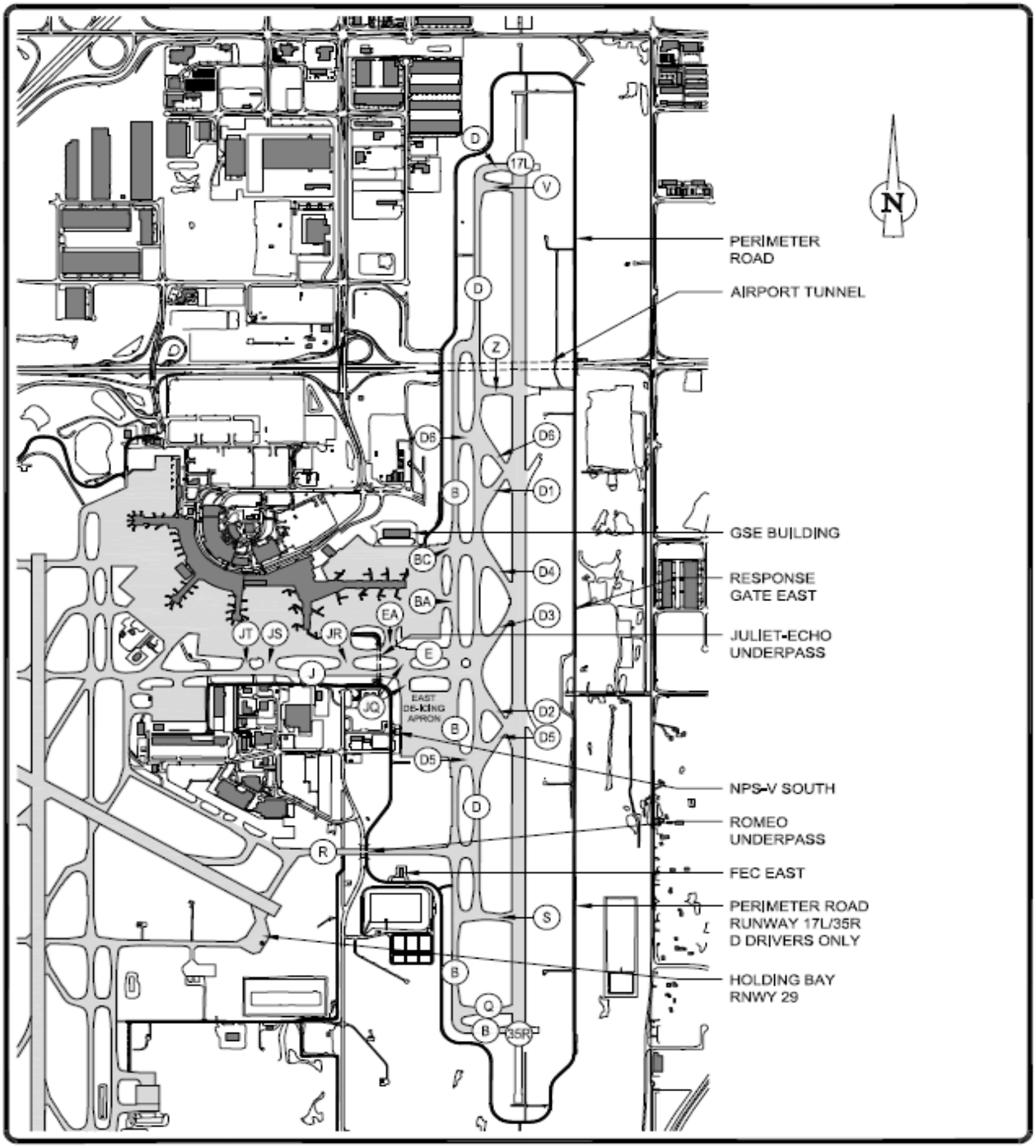
yyc Calgary Airport	PROJECT: CALGARY INTERNATIONAL AIRPORT AVOP WEST AIRFIELD				
CADD FILE No.: yyc-avop-airfield	DRAWN BY: SL	SCALE: 1:25,000	DATE: OCT. 2025	SHEET No.: 1 of 13	

8.0.2 East Airfield Map



Calgary Airport

PROJECT
CALGARY INTERNATIONAL AIRPORT
AVOP
EAST AIRFIELD

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Calgary Airport

8.1 D AVOP – Permitted Surfaces

☑ Step 1: read and understand Section 5: DA AVOP Requirements

☑ Step 2: read and understand Section 6: DA-WS AVOP Requirements

The D AVOP authorizes vehicle operators to drive on all airfield surfaces. It is the only AVOP that permits driving on controlled taxiways and runways. Holders of a D AVOP may operate vehicles on taxiways, runways, airfield roads, and off hard surfaces (paved surfaces and roads).

Positive Controlled Vehicle Operations:
AVOP holder is operating under direct ATC supervision while in the Manoeuvring area. The operator must maintain continuous two-way radio communication with ATC and comply with all instructions.

Uncontrolled Vehicle Operations:
AVOP holder is operating on aprons and taxiways without the direction of ATC. AVOP holders are responsible for ensuring safe separation between active aircraft and other vehicles in order to avoid conflicts by actively listening to the appropriate frequency. The AVOP holder is required to communicate with ATC when entering into the RPA and onto a Runway.

8.2 D AVOP Holders - Responsibilities

8.2.1 Vehicle & Equipment Requirements

Anyone operating a vehicle or equipment airside at YYC must conduct a pre-trip walkaround inspection to ensure it is in safe working condition.

Operators are responsible for entering the airfield in a vehicle with:

a. A properly working aeronautical radio (receiving and transmitting before entering the Manoeuvring Area).
b. A properly functioning Veelo or transponder. ATC may instruct the operator to vacate the Manoeuvring Area if the Veelo or transponder is non-functional.
c. Required safety equipment and markings.

8.2.2 Foreign Object Debris (FOD)

When operations require driving off hard surfaces, the vehicle operator is solely responsible for ensuring that FOD is not tracked onto any hard surface.

8.3 Manoeuvring Area Speed Limits

All vehicle operators driving airside must always maintain a safe driving speed, considering factors such as weather, road conditions, visibility, traffic congestion, proximity to aircraft, vehicles, GSE, bridges, infrastructure, pedestrian areas, etc.

MAXIMUM SPEED LIMITS:

Area	Speed Limit
Perimeter Roads	50 km/h (unless otherwise posted – i.e.: South Perimeter Road which is posted at 30 km/h)
Technical Area VII South	30 km/h
Technical Area L East	50 km/h (unless aircraft is parked, then 30 km/h)
Taxiway Papa (uncontrolled)	30 km/h
Taxiways and Runways	Recommended and best practice: 40 km/h – 60 km/h Absolute maximum: 80 km/h
Taxiways that cross underpasses (Taxiway R, J, and E)	50 km/h (when crossing the portion of the underpass)

** Emergency vehicles with red flashing beacons responding to a call may exceed the speed limit (including vehicles under escort)

8.3.1 Slow Moving Vehicles

Slow moving vehicles operating in the Manoeuvring Area must remain under positive control and advise ATC of their speed limit and intended route to ensure they stay clear of aircraft and all other traffic. Any abnormal vehicle operations, such as high-speed testing near runway hold lines, must be coordinated with ATC to prevent potential conflicts.

8.4 Apron Signs, Lights, & Markings

Apron Taxiway / Aircraft Stand Taxilane:

A single solid yellow line located on an Apron. The Apron Taxiway is a portion of an Apron designated as a taxiway providing a through taxi route across the Apron. The Aircraft Stand Taxilane is a portion of an Apron providing access to aircraft stands. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on the pavement and the wings do not make contact with any known obstructions. Airside personnel are not permitted to walk across an Apron Taxilane.

Note: There are limited Apron Taxilanes on the South Aprons.

Aircraft Stand Lead-in Lines:
A long single solid yellow line in the middle of an aircraft operational stand that guides aircraft into the parking position. The nose wheel of the aircraft is centered on these lines to ensure the wings do not hit any known obstructions.

The Aircraft Stand Lead-in Line can be straight or curved. On Apron I, when aircraft is arriving into Gate 21, jet blast from the arriving aircraft onto aircraft and equipment on Gates 11 and 13 must be avoided; therefore, when an aircraft is established on Gate 11, aircraft arriving into Gate 21 will shut down at the beginning of the Aircraft Stand Lead-in Line and be towed into Gate 21. Drivers must give right away to all ground support staff and aircraft during this transition.

On Apron VII, curved Aircraft Stand Lead-in Lines are utilized to arrive smaller aircraft to avoid the need for pushback.

Aircraft Parking Boundary Lines:
An Aircraft Parking Boundary Line is a single yellow broken line, often parallel to the Apron Taxiway and is used to outline aircraft parking pads. Aircraft are parked behind Aircraft Parking Boundary Lines to ensure they are safely separated and clear of taxiing aircraft.

On the South Airfield, there is a small parking pad on the North side of Taxiway P. This space is not often used for aircraft parking due to its size.

Note: Aircraft parking pads are not designated parking areas for vehicles or equipment. All vehicles and GSE must be removed unless actively in use to service an aircraft at that location. All vehicles and GSE must not block active aircraft operations. All vehicle and GSE operators must give right-of-way to aircraft to aircraft at all times.

Apron Edge Lights:
Single blue lights are used along the edge of the Apron. Apron Edge Lights run parallel with Apron Edge Lines.

Apron Edge Lines:
Apron Edge Lines are double solid yellow lines used to indicate the edge of the Apron. Paved surfaces outside of the Apron Edge Lines are not designed as weight bearing surfaces adequate for aircraft. Vehicles and equipment parked or operating outside of the Apron Edge Lines are NOT guaranteed safe clearance from aircraft.

Double Amber – Intersection Lights:
Double amber lights (Aviation Yellow) are used at the intersection of Aprons and Taxiways.

Manoeuvring Area Delimitation (MAD) Line:
The Manoeuvring Area Delimitation Line is a single solid yellow line and a single broken yellow line. The solid yellow line is positioned on Apron side. The MAD Line indicates the intersection of the Apron and Taxiway.

Apron Limit Line:
The Apron Limit Line is a single broken yellow line. It is another name for the Manoeuvring Area Delimitation Line and is treated the same.

Information Signs:
Black writing on yellow signage that provides information primarily used by aircraft operators. The information is also helpful for vehicle operators when entering the Manoeuvring Area.

Directional Signs:
Directional signs (black writing on yellow) have an arrow indicating the direction to proceed to get to the specified Apron, Taxiway or Runway.

Location Signs:
Location signs (yellow writing on black) identify (by letter) the Taxiway the aircraft (or vehicle) is on.

Note: It is best practice for all light vehicle operators departing an Apron to slow down and YIELD or come to a complete STOP before entering a Taxiway. This will allow the operator time to look for aircraft and gain situational awareness prior to entering the Manoeuvring Area.

The Double Amber Intersection Lights, Manoeuvring Area Delimitation (MAD) Line or Apron Limit Line, Directional and Location Signs may be **co-located** meaning that all indicators are grouped together, or in-line, with one another; or the indicators may be separated.

8.5 Taxiway Signs, Lights, & Markings

Taxiway Center Line:
The Taxiway Center Line is a single solid yellow line on a Taxiway and is used to provide guidance for aircraft to taxi from the Runway center line to a point on the Apron where aircraft operational stand markings begin. The nose wheel of the aircraft is centered on this line to ensure that the main wheels are on the pavement and the wings will not contact known obstructions.

Taxiway Center Line Lights:

On the East side of Apron I, the Taxiway Center Line is accompanied with inset green Taxiway Center Line Lights. Taxiway Center Line Lights are installed on the East Airfield taxiways.

Taxiway Edge Lights:
Single blue lights are used along the edge of the Taxiway. Taxiway Edge Lights run parallel with Apron Edge Lines.

Taxi Side Stripe Markings:
Taxi Side Stripe Markings consist of double solid yellow lines. The double solid yellow lines along with a series of single blue lights on a Taxiway are used to indicate the edge of the usable portion of the Taxiway. Paved surfaces outside the lines are not designed for aircraft.

Intermediate Holding Position Marking (Taxiway Intersection Marking):
An Intermediate Holding Position Marking, or Taxiway Intersection Marking, consists of a single broken yellow line. It is positioned so that an aircraft or vehicle holding at the marking does not extend into the intersecting taxiway strip. When instructed to hold short of a Taxiway, the aircraft or vehicle must remain completely behind this line. These markings are co-located with location and directional signs to provide clear guidance.

When a vehicle is yielding to an aircraft in the Manoeuvring Area, pilots must feel confident that there is ample space between the aircraft and the vehicle, rather than just enough clearance from the vehicle operator's perspective. Vehicle operators are required to stop behind the Intermediate Holding Position Marking, which provides a minimum clearance of 51.0 m. Operators can use the visual reference of the 51.0 m distance from the taxiway centerline to the edge of the taxiway to help determine safe clearance.

Note: Not all intersections are marked with an Intermediate Holding Position Marking. If there is no Intermediate Holding Position Marking, vehicle operators must Hold Short behind the directional signs.

Taxiway Safety Area Marking:
Single parallel solid yellow lines located on the shoulders of taxiways above underpasses. These areas indicate locations where vehicles and pedestrians are prohibited from entering due to the presence of an unprotected drop-off.

One-Way Taxiway Lights:
One-way taxiways are equipped with lights that are half blue and half red. The red portion of the lights is visible when traveling in the wrong direction for aircraft, serving as a clear indication that entry from that direction is prohibited.

End of Paved Surface Lights:
Single red lights at the end of the paved surface.

Fall Hazard Lights:
Double red lights are used to indicate areas where fall hazards exist. These lights are installed on Taxiway J above the J/E underpass and on Taxiway R where the taxiway crosses over the roadway. Their purpose is to provide a clear visual warning to operators of elevated sections that present a risk of falling.

No Entry Signs:
"No Entry" signs are located at the apron entrances to Taxiway G and Taxiway GB, as well as Taxiway G and Taxiway GD. These signs are intended to control the direction of aircraft movement and indicate areas where entry is prohibited. D AVOP holders operating vehicles may only enter these areas for operational, emergency response and maintenance purposes and MUST have prior permission from the lease holder.

8.5.1 Indicators – Taxiway to Taxiway

Intermediate Holding Position Marking (Taxiway Intersection Marking):
A Intermediate Holding Position Marking, or Taxiway Intersection Marking, consists of a single broken yellow line. It is positioned so that an aircraft or vehicle holding at the marking does not extend into the intersecting taxiway strip. When instructed to hold short of a Taxiway, the aircraft or vehicle must remain completely behind this line. These markings are co-located with location and directional signs to provide clear guidance.

When a vehicle is yielding to an aircraft in the Manoeuvring Area, pilots must feel confident that there is ample space between the aircraft and the vehicle, rather than just enough clearance from the vehicle operator's perspective. Vehicle operators are required to stop behind the Intermediate Holding Position Marking, which provides a minimum clearance of 51.0 m. Operators can use the visual reference of the 51.0 m distance from the taxiway centerline to the edge of the taxiway to help determine safe clearance.

Note: Not all intersections are marked with an Intermediate Holding Position Marking. If there is no Intermediate Holding Position Marking, vehicle must Hold Short behind the directional signs.

8.5.1.1 Taxiway N Holding Short of Taxiway M

There is no Intermediate Holding Position Marking (Taxiway Intersection Marking) on Taxiway N holding short of Taxiway M and the directional signage is installed too close to the N – M intersection. Operators are required to hold short 51 m of the Taxiway Center Line; therefore, in this location, drivers must hold short of the gravel perimeter road on the East side of Taxiway N, or remain behind Hangar 2 on Apron V.

8.5.1.2 Taxiway M Holding Short of Taxiway YB

There is no Intermediate Holding Position Marking (Taxiway Intersection Marking) on Taxiway N holding short of Taxiway M and the directional signage is installed too close to the N – M intersection. Operators are required to hold short 51 m of the Taxiway Center Line; therefore, in this location, drivers must hold when the vehicle is in line with the Sky Service Hangar on Apron IV.

8.6 Indicators – Taxiway to Runway

8.6.1 Primary Five - Taxiway to Runway Indicators

Enhanced Taxiway Center Line:
Enhanced Taxiway Center Lines are standard taxiway center lines that have been modified to provide additional visual guidance. For a distance of 47.5 m leading up to the Runway Holding Position Markings, these center lines are enhanced by adding broken yellow lines on both sides of the solid yellow center line.

Runway Holding Position Markings:
Runway Holding Position Markings consist of two solid yellow lines and two broken yellow lines painted across the width of a taxiway. The broken lines are positioned closest to the runway, indicating the runway holding position. Vehicles must stop two vehicle lengths behind the solid lines. Neither vehicles nor aircraft may proceed beyond the Runway Holding Position Markings without explicit permission from ATC. Crossing without permission will result in a **Runway Incursion**. These markings may appear as straight lines or as bent lines, depending on the location.

Runway Designator Signs:
Runway Designator Signs display either a single runway heading or both runway headings. These signs feature white lettering on a red background and convey a combined message: “hold short” of the runway and the runway’s designation. At a taxiway and runway intersection, a Runway Designator Sign is accompanied by a Location Sign positioned on the outboard side, furthest from the taxiway. Signs that display only one heading are located exclusively at runway thresholds.

Painted Runway Designator:
A red rectangle displaying the runway designation in white lettering is positioned alongside the Runway Holding Position markings at the point where a taxiway enters a runway. This marking provides clear visual confirmation of the runway designation and reinforces the requirement to hold short until clearance is granted.

Runway Guard Lights (WigWag Lights):
Runway Guard Lights, commonly referred to as WigWag Lights, are installed at every runway holding position where a taxiway meets a runway. These lights serve as a visual warning to indicate the presence of a runway ahead. Elevated Runway Guard Lights are positioned on the shoulder of the taxiway adjacent to the Runway Holding Position markings and provide an additional layer of caution for operators approaching the runway. Runway Guard Lights are located at every Taxiway to Runway Intersection but are NOT located at every Runway to Runway Intersection

8.6.2 Runway 17L/35R - Additional Taxiway to Runway Indicators

Inset Runway Guard Lights:
Inset Runway Guard Lights are installed alongside Elevated Runway Guard Lights to provide additional visual reinforcement of the runway warning. These inset lights are only located adjacent to the Runway Holding Position markings for Runway 17L/35R.

STOP Bar Lights:
STOP bar lights are elevated red lights positioned on the shoulder of the taxiway and co-located with inset red lights at the Runway Holding Position markings for Runway 17L/35R. These lights are activated during Reduced and Low Visibility Operations and serve as a physical restriction to prevent vehicles and aircraft from entering the runway. When the STOP bar lights are illuminated, vehicles and aircraft are strictly prohibited from crossing, and ATC cannot provide verbal clearance to proceed.

Under Low Visibility Operations, when approaching a Runway Holding Position Marking at a threshold, the yellow guard lights will be turned off, and the solid red STOP bar lights will be illuminated. Once ATC grants permission to enter the runway, the controller will deactivate the STOP bar lights at that specific location and activate the green centerline lighting, signaling that the vehicle or aircraft may proceed.

Operators must never enter a runway when the red STOP bar lights are active under any circumstances.

8.7 Indicators – Runway to Runway

8.7.1 Intersection Runway 17R/35L & Runway 11/29

- Runway Holding Position Marking
- Runway Designator Sign
- Runway Guard Lights (depending on the direction of travel)

8.8 Indicators – Runway to Taxiway

- Taxiway Center Line
- Directional Signs

8.9 Runway Lighting and Markings

Runway Edge Lights:
Single white lights installed along the edges of runways to provide clear visual guidance. If the white runway edge lights begin flashing on and off, all vehicles must immediately vacate the runway without delay.

On Runway 17L/35R, the lights feature a two-color configuration. The final 600 m of the runway are marked with lights that are yellow on one side and white on the other. The yellow lights serve as a warning to pilots that the runway is nearing its end.

On Runway 17R/35L, the Runway Edge Lights are inset. The final 600 m of the runway are marked with lights that are yellow on one side and white on the other. The yellow lights serve as a warning to pilots that the runway is nearing its end.

Runway Threshold Lights:
Two-sided lights that are half red and half green, positioned at the threshold of a runway. The red side faces the runway to indicate its end, while the green side faces the approach, providing a clear visual cue for pilots during landing.

On Runway 17R/35L, the Runway Threshold Lights are inset. The green lights span the entire end of the threshold; however, the red lights are in two sets of four lights on both sides of the threshold and not span the end of the threshold.

Runway Center Line Lights:
Inset white lights that run along the center of the runway, with directional red lights positioned at the runway extremities. The final 300 m of the centerline lights are solid red, while the lights between 300 m and 900 m alternate between red and white. This alternating pattern serves as a visual warning to pilots that the runway is nearing its end. Runway centerline lights are inset on both Runway 17L/35R and Runway 17R/35L.

Touchdown Zone Lights:
Series of three parallel inset white lights positioned between the runway centerline and the runway edge, extending for 900 m. These lights are used during low visibility conditions to clearly mark the aircraft landing and touchdown zone. Touchdown zone lights are installed inset on Runway 17L/35R and Runway 17R/35L.

Rapid Exit Center Line Lights:
Series of inset lights that alternate between green and yellow. These lights are used to mark high-speed exits from a runway to a taxiway. The lights are two-directional, meaning the alternating colors are visible only when exiting the runway, while they display green when viewed from the taxiway toward the runway. Rapid Exit Centerline lights are installed exclusively on Runway 17L/35R.
Rapid Exit Center Line lights are installed on all high-speed exits for Runway 17L/35R.

Runway Designation (Heading) Marking:
Each end of a runway is marked with a number that represents the runway heading in tens of degrees, corresponding to its orientation relative to a magnetic compass. These numbers are painted in white and face toward the end of the runway. At Calgary International Airport (YYC), the runway headings are 11, 17R, 17L, 29, 35R, and 35L.

Runway Center Line:
The center of a runway is marked with broken white lines consisting of multiple short segments placed close together. Each group of lines measures 30 m in length, with a 30 m gap between consecutive groups.

Threshold Markings:
Threshold markings indicate the beginning of the usable portion of the runway for aircraft landing. These markings consist of a series of solid white lines arranged in groups that run parallel to the length of the runway. The number of lines in each group, as well as the total number of groups, depends on the width of the runway.

Displaced Threshold Markings:
Displaced threshold markings are used when the beginning of the paved runway surface does not align with the beginning of the usable portion of the runway. These markings consist of lines painted close together to form arrows that point toward a solid bar across the runway. The bar indicates the point where the runway becomes usable for aircraft operations. Currently, Calgary International Airport does not have any displaced threshold markings. Such markings would typically be implemented for construction purposes at YYC.

8.10 Runway Protected Area (RPA)

The Runway Protected Area (RPA) is the designated surface for aircraft landing and takeoff. This area extends between the runway hold lines on each side and includes the space inside the localizer antenna arrays at each end of the runway. ATC must ensure that this protected area is completely clear before authorizing an aircraft to land or take off on the runway.

Vehicles and equipment may occasionally need to operate within the RPA. Before entering the RPA, the vehicle operator must request and receive permission from ATC. The request must include the specific location where the operator intends to work, the approximate distance of the vehicle or equipment from the nearest runway edge, and the expected duration of the activity. A continuous radio listening watch must be maintained at all times, using an external speaker when appropriate.

When performing tasks in the grassy area adjacent to the runway edge, operators must hold short of the correct runway designator signs rather than relying solely on the painted holding position markings. The runway designator signs are more visible and provide a clearer reference point. Operators should remain behind an imaginary line drawn parallel to the runway through the designator signs and always err on the side of caution. Required distances from the runway centerline for each runway must be observed as specified in the applicable guidelines.

When completing work near the vicinity of the RPA, contact the appropriate Ground frequency to confirm purpose of the work being completed and that there is not intention to enter the RPA.

8.10.1 Minimum Safe Distances Off Runways & Taxiways

The minimum safe distance off each Runway (distance from the Runway Center Line to the Runway Holding Position Marking) at YYC is as follows:

Runway	Distance Off
Runway 11/29	**105 m**
Runway 17R/35L	**105 m**
Runway 17L/35R	**110 m**

The minimum safe distance from the centerline of each taxiway at Calgary International Airport (YYC) is 51.0 m. Pilots must always feel confident that there is ample clearance between their aircraft and any vehicle or obstruction, rather than just enough space.

For construction activities or when a vehicle is parked, the required safe distances increase significantly. Runway strip widths of 122 m apply during all construction activities, and these distances vary depending on the type and height of equipment being used. These requirements must be determined before work begins. The minimum safe distance will be specified in the project plan and must be communicated to all drivers, including those operating escort vehicles.

8.11 Crossing or Entering Runways

AVOP holders must contact ATC and request permission before crossing or proceeding onto an open or closed runway, before crossing a CAT I Hold Line to enter a holding bay, and crossing a CAT II Hold Line during Category II operations. Prior to making the call, the operator must perform a visual check to ensure that their movement will not interfere with aircraft operations.

Whenever an AVOP holder is instructed to hold short of a runway, CAT I Hold Line or CAT II Hold Line, or is waiting for permission to cross or enter a runway, the vehicle must come to a complete stop at least two vehicle lengths before the applicable holding position markings. Once stopped, the operator must call ATC to obtain permission to cross or enter the runway. Permission from ATC must be granted, and the readback of all instructions must be complete and correct before the vehicle moves, touches, or crosses the runway holding position marking or CAT I / CAT II Hold Lines.

Note: Permission to cross a runway is specific to that runway. It is acceptable to use either runway heading when requesting clearance; however, the active runway heading is preferred. Do not include both runway headings in the radio call.

If ATC provides permission for an incorrect runway, immediately call and use the word “confirm” to clarify the runway designation. Do not proceed or cross until the correct clearance has been issued by ATC and your readback is complete.

On occasion, ATC may issue permission to cross a runway before the vehicle or radio operator makes the call. In such cases, the operator must acknowledge all instructions from ATC as understood or request clarification by saying “say again” if the instructions are not clear.

8.11.1 Emergency Response

When requiring permission to cross one or more than runways or enter a runway with priority access during an emergency situation, the AVOP holder must include the phrase “responding to” followed by the specific location and request in their initial radio call to ATC. ATC will then provide routing instructions, which will include the use of applicable taxiways and permission to cross runways as necessary, while ensuring coordination with other traffic.

8.11.2 Runway Inspections (RSC), FOD Removal, Wildlife Management, Electrical Inspections or Repairs

Notify ATC (Ground or Tower controller, as applicable) when approaching a runway to perform a specific task:

1. Hold short of the runway behind the Runway Holding Position Markings until Tower instructs the vehicle operator to enter the runway.
2. Remain under positive control with Ground or Tower at all times (as applicable), including if the inspection cannot be completed in one pass and the vehicle is directed to exit the runway to an appropriate taxiway.
3. Call and confirm “OFF the Runway,” including your location, once the inspection or task is complete and the vehicle has exited the runway.
4. After exiting the runway and transitioning to operations not under positive control, switch to and monitor the appropriate ground frequency.

When instructed to leave the runway, AVOP holders must acknowledge the instructions and proceed to the required safe distance from the runway, as measured from the centerline for each specific runway. Operators must then contact Air Traffic Control (ATC) and clearly state that they are “OFF” the runway, along with their exact location.

It is critical to inform ATC when you are off the runway and provide your location. Never use the word “clear” when reporting your status. Always use the word “OFF” to confirm that you have exited the runway.

8.11.3 Authority Airfield Maintenance

8.11.3.1 Runway 17R/35L & Runway 11/29 Intersection

This indicates that the maintenance vehicle operator has access to both runways as specified, extending beyond the Runway Holding Position Markings to include the edges and short corners in close proximity (approximately 120 m from the Runway Holding Position Markings). During intersection snow removal operations, vehicle operators will clear snow beyond the Runway

Holding Position Markings but will not proceed past the next taxiway. This limitation is intended to minimize the time required to remove snow from the intersection. The vehicle operator will typically be provided with a time frame for traffic coordination. In all circumstances, the vehicle operator must yield to all aircraft and vacate the intersection when requested or once the operation is complete. Permission must then be requested and obtained before snow removal operations or inspections can resume or begin in any designated area.

8.11.3.2 180-degree Turn on Runway from Taxiway

This indicates that the vehicle operator has permission from ATC to perform a single U-turn on the runway from the taxiway to allow maintenance vehicles to clean the Runway Holding Position Markings and the areas beyond, including short corners. Any additional U-turns must be specifically requested and approved by ATC prior to execution.

8.11.4 Runway Incursion Procedure

A **Runway Incursion** occurs when any part of a vehicle or aircraft enters the RPA or crosses any portion of the Runway Holding Position Markings without prior permission from ATC.

What if I cause a runway incursion? I realized I was on the runway as soon as I crossed the Runway Holding Position Marking.

1. Do not panic.
2. If possible, exit the runway onto the same taxiway that was used to enter the runway.
3. Exit the Manoeuvring Area and report incident to your supervisor. Your supervisor will then contact the IOC and report the incident on your behalf.
4. Once the incident is reported, all airside driving is immediately suspended. You must be prepared to speak with an SCO who will complete an investigation and share any investigative conclusions with you and your employer(s).

What if I cause a runway incursion? I did not realize I crossed the Runway Holding Position Marking and I am established on the runway surface.

1. Do not panic.
2. Contact ATC on the appropriate Ground frequency.
3. Follow all instructions given by ATC.
4. Exit the Manoeuvring Area and report incident to your supervisor. Your supervisor will then contact the IOC and report the incident on your behalf.
5. Once the incident is reported, all airside driving is immediately suspended. You must be prepared to speak with an SCO who will complete an investigation and share any investigative conclusions with you and your employer(s).

8.12 D AVOP Restrictions

8.12.1 Entering Apron I Without NPS-V Screening

8.12.1.1 Exceptional Circumstances

D AVOP vehicle operators are permitted to enter the Critical Area only under exceptional circumstances, an imminent life safety concern, or another potentially serious incident.

8.12.1.2 Entering West & East Deice Aprons

The West and East Deicing Aprons are controlled by AeroMag. Free flow entry is not permitted at any time. In order to enter the West and East Deice Aprons at any time,
including aircraft avoidance, the vehicle operator must contact the appropriate frequencies to request entry and movement on the Aprons. contact Pad Control on the applicable East Deice or West Deice frequency, state your vehicle call sign and purpose, and request permission to enter the applicable apron.

Area	Frequency (MHz)
West Deice Apron Pad Control	**122.350**
East Deice Apron Pad Control	**129.125**

8.12.1.3 Conflict Avoidance

D AVOP vehicle operators may be required to enter the Critical Area when there is an immediate risk of failing to yield the appropriate right-of-way to an aircraft. Entry into the Critical Area is allowed only when it is the sole viable option to prevent a collision or to stop the situation from escalating. Operators must exercise extreme caution when entering the Critical Area. Once the danger or issue has been resolved, the operator must promptly exit the Critical Area, proceed to a safe location off the Manoeuvring Area, and immediately report the incident to the company supervisor and the IOC.

8.12.2 Unacceptable Vehicles & Equipment

Any vehicle that is not equipped with a radio and Veelo or transponder is prohibited from entering the Manoeuvring Area unless escorted by a radio-equipped vehicle operated by a D AVOP holder. The escort vehicle operator is responsible for the safety and security of the escorted vehicle and must make all required radio transmissions, including requesting permission and acknowledging and complying with all ATC instructions.

8.12.3 Overpass Shoulders

Vehicle operators are not permitted to operate on the shoulders of Taxiway R, J, or E above the underpasses where Taxiway Safety Area Markings are present, except when performing pre-authorized maintenance duties or when specifically authorized by the Authority AVOP

Coordinator. Retrieving Foreign Object Debris (FOD) from the shoulders of these taxiways above the underpasses requires specialized equipment. Operators must contact the IOC to report any safety concerns in these areas. The IOC will notify and dispatch personnel who are authorized to work in this location.

If the FOD is large and/or causing immediate threat to aircraft, please notify the appropriate Ground frequency so the controller is able to hold or reroute aircraft traffic if need be.

8.12.4 Runway Restrictions

8.12.4.1 STOP Bar Lights

Both vehicle and aircraft operators are strictly prohibited from entering a runway when the red STOP bar lights are illuminated, even if verbal permission has been granted by ATC. If the STOP Bar lights become active while a group of vehicles are crossing (i.e.: a convoy of sweepers), the next driver in line must stop before the Runway Holding Position Markings and may not proceed. Under no circumstances is an AVOP holder permitted to enter a runway when the red STOP bar lights are on.

8.12.4.2 Close Runway Access & Procedures

If a runway is closed, all vehicle operators must contact ATC and request permission before entering the runway. Operators are also required to call ATC and confirm they are "OFF" the runway every time they exit, for each individual access event. This procedure ensures that ATC can grant proper clearance and establish the boundaries of the operator's authorization.

8.12.4.3 Continuous Access

Requests for "continuous access" to a closed runway are project-specific and must be planned in advance. These requests must be submitted and approved by the YYC AVOP Coordinator prior to any operations. This process ensures that operational considerations, safety and risk assessments, and planning for operational boundaries, including designated entry and exit points, are properly evaluated. Vehicle operators are not permitted to request continuous access for any closed surface without prior approval from the YYC AVOP Coordinator.

8.12.4.4 Closed Taxiway or Runway

Taxiway and runway closures must be coordinated and approved by the YYC Airfield department. When a taxiway or runway is closed, high-profile traffic barrels will be placed to ensure vehicle and aircraft traffic have physical and visual identification of the closure. Only the IOC and/or an AOS can reopen a taxiway or runway following a surface inspection.

8.13 Emergency Operations

Runway 17L/35R is designated as the preferential emergency runway. Whenever possible, emergency landings will take place on this runway. Taxiway S is operationally significant because it can accommodate the largest aircraft, such as the Airbus A380, while still allowing aircraft to land on Runway 29.

The all-weather emergency access road to Runway 17L/35R at Taxiway Z is reserved exclusively for emergency use. This road is clearly marked with flashing red stop lights, a stop sign, white transverse pavement markings, and safe-hit delineators to indicate that it is restricted during normal operations.

8.13.1 Response Gates

To maintain operations as best as possible during an Airside incident, crossing active runways is prohibited unless operationally required.

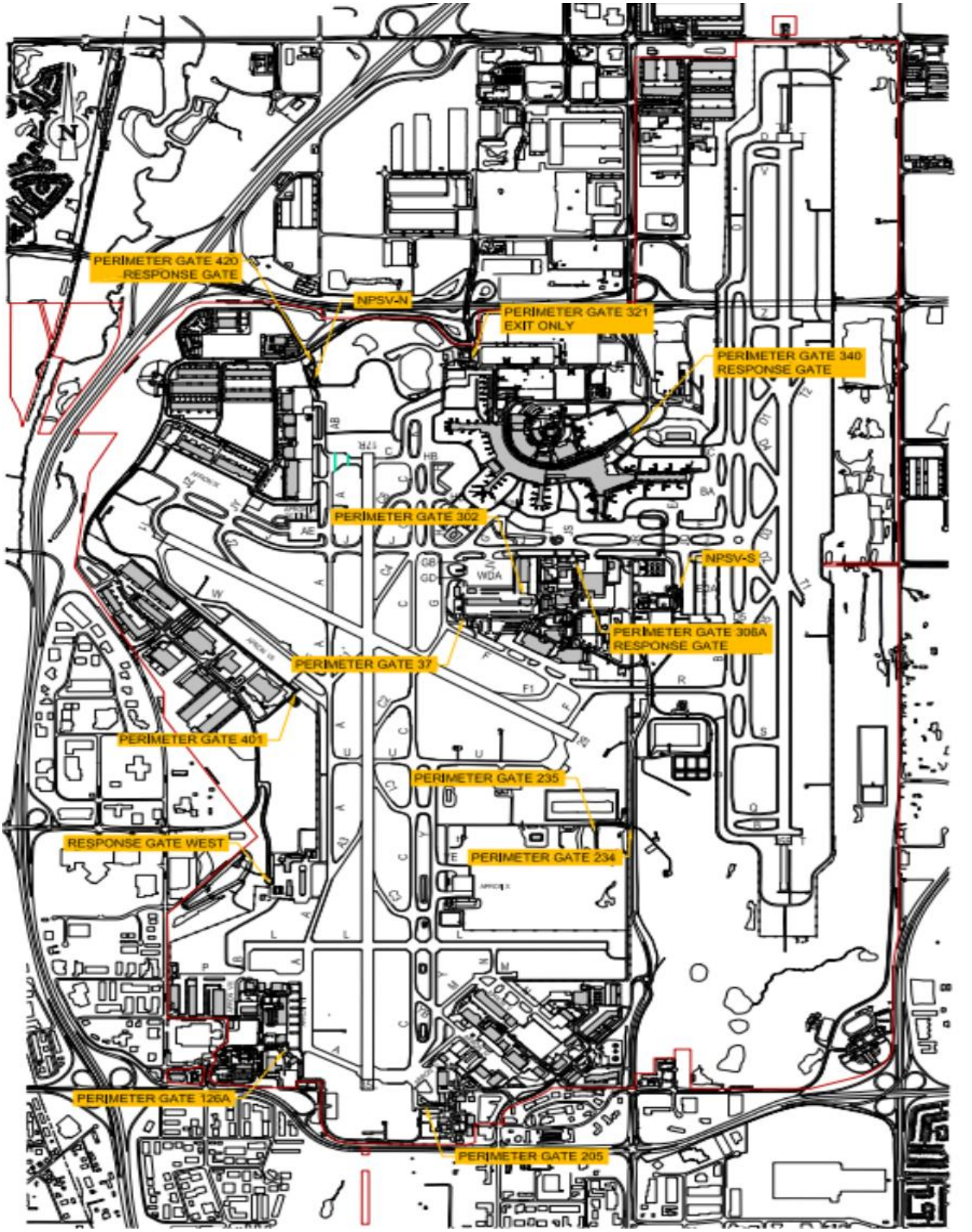
Response Gates:

a. Response Gate West and Perimeter Gate 306A are primarily to be used for declared aircraft emergencies.
b. Perimeter Gate 420 is to be used for other types of Airside incidents that do not occur on the active surfaces.
    - Typically for emergencies on Apron I and West Deicing Apron (WDA) from Gates A4 to C58.
c. Perimeter Gate 340 is also to be used for other types of Airside incidents that do not occur on the active surfaces.
    - Typically for emergencies on Apron I from Gates E82 to C59.
d. Gates 201/205 is the main access to the South end of the airfield.
e. Gate 234 is the main access to Apron X de-ice and Fire Training.

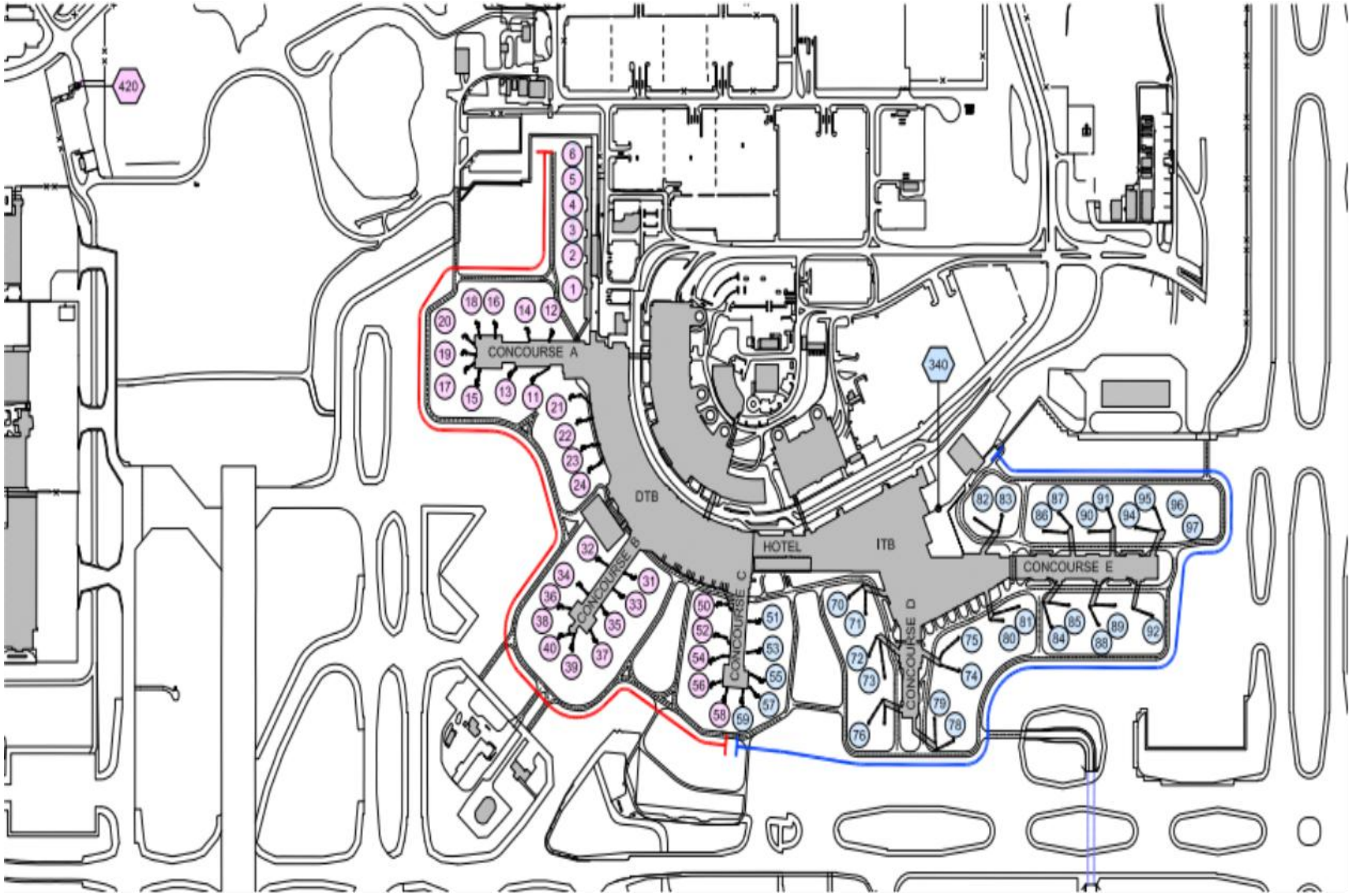
Note: The IOC will determine the Muster Point emergency vehicles are to respond to and will advise Calgary 911 and Alberta Health Services runway headings in the radio call.

When a vehicle operator is required to proceed to a specific airside location during an emergency, the standard requirement to use perimeter roads is waived; however, the operator must avoid crossing the runway designated for emergency response until it becomes necessary and only after receiving explicit instructions from ATC.

8.13.2 Airside Access Point



8.13.3 Apron I Access Points



8.14 Reduced & Low Visibility Operations (RVOP / LVOP)

The Reduced and Low Visibility Operations Plans establish specific airfield operational procedures when the Runway Visual Range (RVR) falls below 2,600 feet. Low Visibility Operations Plan (LVOP), rather than Reduced Visibility Operations Plan (RVOP), may be initiated when the RVR is below 1,200 feet or at the discretion of Air Traffic Control (ATC) whenever ground visibility is less than 2,600 feet. When the RVR drops below 1,200 feet, airfield vehicle movements, aircraft towing, and maintenance operations become increasingly restricted. If the RVR decreases to below 600 feet, these activities are strictly limited due to the heightened risks associated with significantly reduced visibility.

During reduced or low visibility conditions, only vehicles that are operationally essential for the continued functioning of the airport are permitted on Manoeuvring Areas, and all such vehicles must remain under positive control. Operators are informed of these conditions through the Authority's automated call-out system(xMatters), ATC, company radio, or the Automatic Terminal Information Service (ATIS) on frequency 128.225 MHz. Drivers entering airfield movement and Manoeuvring Areas when visibility is obscured or estimated to be less than 2,600 feet must confirm whether reduced or low visibility procedures are in effect and obtain explicit permission from ATC before proceeding into the Manoeuvring Area.

8.14.1 Vehicle Access – RVOP Event (RVR below 2600 ft)

Vehicle access is restricted during RVOP as follows:

Manoeuvring Area:
Only operationally required vehicles in performance of their duties are authorized to operate on the Manoeuvring Area (i.e.: airfield inspection, emergency response, and snow removal). All vehicles must be under positive control.

Aprons:
Only operationally required personnel and vehicles are allowed on the Apron. This includes GSE vehicle operations required to service actively arriving and departing aircraft.

8.14.2 Vehicle Access – LVOP Event (RVR below 1200 ft)

Vehicle access is restricted during LVOP as follows:

Manoeuvring Area:
Only operationally required vehicles in performance of their duties are authorized to operate on the Manoeuvring Area (i.e.: airfield inspection, emergency response, and snow removal). All vehicles must be under positive control.

Aprons:
Only operationally required personnel and vehicles are allowed on the Apron. This includes GSE vehicles actively servicing aircraft.

8.15 CAT I Hold Line

A Category I (CAT I) Hold Line consists of two parallel yellow lines with multiple pairs of yellow lines positioned between them. These markings extend across the width of a taxiway and are located farther from the runway than the standard Runway Holding Position Markings. At Calgary International Airport, CAT I Hold Lines are placed in the hold bays of Runway 17R (via Taxiway A) and Runway 29 (via Taxiway U). The purpose is to prevent aircraft and vehicles from entering the Instrument Landing System (ILS) critical area, which includes the glide path and localizer.

Vehicle operators must always stop short of a CAT I Hold Line until permission is granted by Air Traffic Control (ATC). When operating under positive control, ATC will issue instructions and specify whether to "hold short" or "hold short on the CAT I Hold Line." If instructed to "hold short," the driver should stop at the conventional Hold Line. If directed to "hold short on the CAT I Hold Line," the driver must stop at the designated CAT I marking.

8.16 CAT II Hold Line

Category II (CAT II) Hold Line consists of two parallel yellow lines with multiple pairs of yellow lines positioned between them, in addition to red backed, white lettered signage, and Guard Lights (WigWags).

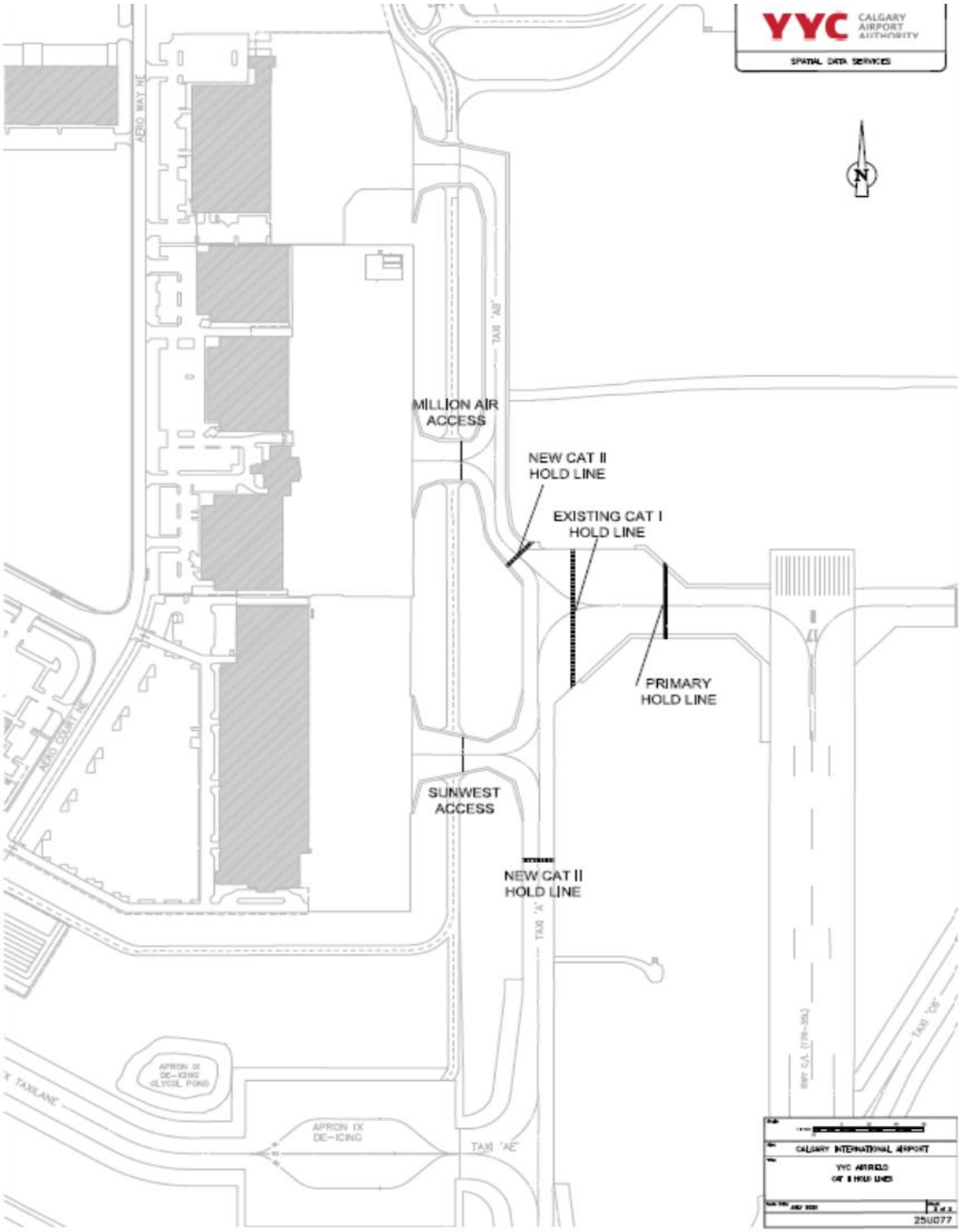
Category II (CAT II) operations apply to both vehicles and aircraft operating on the movement area of the airport when the cloud ceiling decreases to between 200 feet and 100 feet on the West Runway (Runway 17R/35L). During CAT II operations, all ground vehicles are placed under positive control to ensure that Instrument Landing System (ILS) critical areas remain protected.

CAT II holding positions are to be used by vehicle operators only when specifically instructed by Air Traffic Control (ATC). Whenever CAT II operations are required, all vehicles within the maneuvering area will be required to operate under positive control. ATC will manage communications to guide movements between CAT II holding positions on Taxiways AB and A, as well as crossings that require holding short of a taxiway, such as holding short of Taxiway U on Taxiway A or Taxiway C when requesting to cross Runway 17R-35L.

Aircraft and vehicles under positive control must hold short of the CAT II holding positions whenever directed by ATC, even if CAT II, RVOP, or LVOP procedures are not active. This requirement aligns with existing procedures for holding short of a CAT I Hold Line versus holding short of a runway at the current CAT I holding positions located at the thresholds of Runway 29

and Runway 17R. Additional caution is required when exiting the Sunwest Apron. Drivers must ensure that CAT II operations are not in effect to avoid causing a runway incursion.

8.16.1 CAT II Hold Line – Map



8.17 Technical Areas

Technical Areas are unmaintained areas on the airfield that can be utilized for additional aircraft parking. Companies are to contact the IOC to organize aircraft parking allowances.

8.17.1 Technical Area VII South

Separated by Taxiway A with Taxi Side Stripe Markings and a large yellow 'X' painted marking. Only aircraft tows are permitted within Technical Area VII South. Vehicle speed limit is 30 km/h.

8.17.2 Technical Area L East

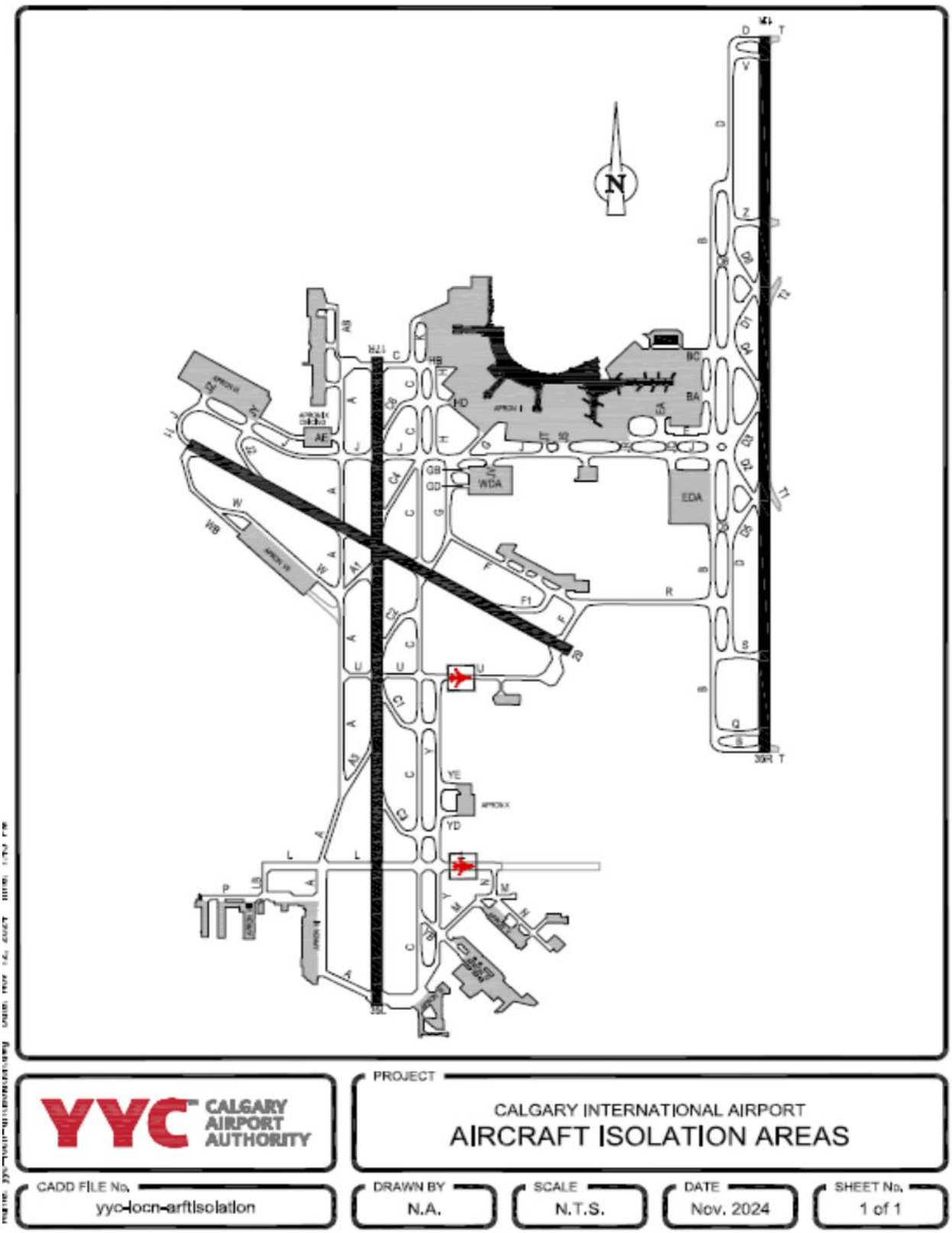
Separated by Taxiway L with Taxi Side Stripe Markings and a large yellow 'X' painted marking. Only aircraft tows are permitted within Technical Area L East. Vehicle speed limit is 50 km/h, unless aircraft is parked, then it is 30 km/h.

8.18 Aircraft Isolation Areas

An aircraft isolation area at Calgary International Airport YYC is a designated remote location used to park aircraft that present technical, security, or health concerns. These areas are strategically positioned away from normal airport operations, passenger facilities, and other infrastructure to minimize disruption and ensure safety.

Isolation areas are utilized in situations such as bomb threats, hijackings, contagious disease concerns, or hazardous conditions like fuel leaks. At YYC, specific taxiway segments and secure holdrooms may be configured for isolation purposes, and access is strictly controlled under established emergency response and operational procedures.

8.18.1 Isolation Areas – Map



8.19 Compass Rose

A compass rose provides a physical, magnetic north-referenced point for pilots and mechanics to calibrate the aircraft's magnetic compass, correcting for errors caused by the plane's metal, ensuring accurate heading readings for safe navigation, even if modern GPS fails. It helps pilots align their aircraft and confirm their instruments, serving as a crucial backup for primary navigation systems

8.19.1 Compass Rose Locations

- Apron IX Deice
- Taxiway P
- Holding Bay Taxiway M
- Holding Bay Runway 29

8.20 Airline Tenants – Locations & Callsigns

Airline / Company Name	Callsign	Location
Air Canada	**Air Canada**	Apron I
Air North	**Air North**	Apron I
Air Partners	**Stampede**	Air Partners' Hangar
AirSprint Private Aviation	**AirSprint**	AirSprint Hangar (near Apron V), Apron IV
American Airlines	**Envoy**	Apron I
Canadian North	**Arctic**	Apron IV, Apron V
Alberta Health Services (Medivac)	**Canwest**	Million Air
Cargojet	**Cargojet**	Apron IX
Cargolux	**Cargolux**	Apron IX
Carson Air	**Carson**	Apron IV, Apron VII
Central Mountain Air (CMA)	**Glacier**	Apron VIII
Condor Airlines	**Condor**	Apron I
Delta Airlines	**Skywest**	Apron I
Dehavilland Aircraft of Canada	**Dehavilland**	Apron III, Apron VIII
Discover Airlines	**Ocean**	Apron I
Edelweiss Air	**Edelweiss**	Apron I

Encore	**Encore**	Apron I
FedEx	**Morningstar or FedEx**	Apron IV, Apron VII
Flair Airlines	**Flair**	Apron I, Apron IV
HAWCS Police Helicopter	**HAWCS**	AirSprint Hangar
Jazz Airlines	**Jazz**	Apron I
Kenn Borek	**Borek**	Apron IV
KLM	**KLM**	Apron I
Million Air	**Cartwright**	Million Air Hangar
North Cariboo Air	**North Cariboo or Arctic (when operating for Canadian North)**	Apron V
Royal Air Force (RAF)	**Ascot**	Various Aprons
Porter	**Porter**	Apron I
Samaritan's Purse	**Sam Purse**	Apron IX
STARS Helicopter	**STARS1, STARS2, etc.**	Apron VI
Sunwest	**Chinook**	Sunwest Hangar
Summit Air	**Summit**	Sunwest Hangar
United Airlines	**United**	Apron I
United Parcel Service (UPS)	**UPS**	Apron VII
WestJet	**WestJet**	Apron I
WestJet Encore	**Encore**	Apron I

8.20.1 Other Companies – Various Aircraft & Callsigns or Services

Airline / Company Name	Location
Air Canada Cargo	Apron IX
Aeromag	West and East Deice Aprons
Avmax	Apron IV
CBSA Offices	Apron VI, Apron IX

Condor Aircraft Accessories	Apron III
DHL Express	Apron IX
Eagle Copters	Apron III
Executive Flight Center (fuel services)	Apron V, Apron VII
Flightpath	Apron VIII
GTA Dnata	Apron IX
Hopkinson Luxury Aircraft Sales	Apron VIII
Live Animal Facility	Apron IX
Purolator	Apron VII
Rilpa Enterprises Ltd.	Apron VI
Shaw	Apron VIII
Signature	Apron VI
SkyService Business Aviation	Apron IV

8.21 Air Traffic Control and Radio Procedures

All personnel who operates, or those who may need to operate, a radio for aviation purposes at YYC must be trained, licensed (ROC-A), and communicate correctly according to Industry Canada radio operator standards, including the use of proper phraseology when communicating with ATC.

Note: All D AVOP applicants MUST obtain a ROC-A license BEFORE applying for the D AVOP. Applicants and D AVOP holders must be prepared to present their physical ROC-A certificate if requested by Airside Traffic Enforcement Personnel.

All radio transmissions must be made on the correct ground control frequency and should be kept to a minimum. Radio operators must ensure that the proper frequency is selected and must listen before transmitting to avoid interfering with other communications. Operators are required to monitor the appropriate frequencies at all times while operating in the Manoeuvring Area.

When making an initial radio call to request a location change or to obtain permission to cross a runway, the operator must clearly state the vehicle call sign (such as Sweeper, Blower, Electrical, or Staff), the vehicle number, current location, and intended actions.

8.21.1 Radio Standards

A readback of all ATC radio permissions is mandatory. This readback serves as an acknowledgment that the operator has received, understood, and will comply with all

instructions exactly as given. The readback must include all instructions and conclude with the operator or vehicle callsign. Responses such as “Roger,” “Affirmative,” or only the vehicle callsign are incomplete and unacceptable. If clarification is needed, the correct phraseology is “Say again” or “Confirm.” All communication with ATC must remain clear and concise.

When ATC instructs an operator to “stand by,” the operator must wait and monitor the frequency without proceeding beyond the last clearance. ATC will re-establish contact when able.

While operating in the Manoeuvring Area, operators:

- Always monitor and maintain a listening watch on the correct ATC Ground Radio Frequency. When under positive control, operators must not change frequency unless instructed by ATC.
- Acknowledge and comply with all ATC instructions as understood, or request clarification by saying “say again” if instructions are not clear.
- Request and obtain permission from ATC and complete the read back before entering or crossing a runway.
- Request and obtain permission from ATC and complete the read back before passing the Runway Holding Position Markings.
- Request and obtain permission from ATC and complete the read back before entering or passing within a Runway Protected Area (RPA).
- Inform ATC immediately if unable to comply with any ATC instructions.

8.21.1.1 Taxiway to Runway – Permission Required

Permission to Enter Runway for Inspection:
Request to enter a runway must include location for entry and time when the operator is due to inspect the Runway. ATC will give permission and direction, if and when the Runway becomes available.

Permission to Stop on a Runway to Pick up FOD:
Permission to stop on the runway during an inspection must always be coordinated and approved by ATC. The operator is required to provide a brief description of the FOD, including its approximate location relative to the centerline, to assist ATC in assessing the potential impact on aircraft operations. The operator may only stop to retrieve the FOD once ATC has granted explicit permission. While outside the vehicle, the operator must ensure that radio communications remain audible by selecting the exterior speaker. If an external speaker is not available, a second person must be present to maintain a continuous listening watch.

Permission to Cross a Runway:
The operator must request permission to cross the specified Runway at a specified location and must cross only at that location. Stopping for FOD or driving along the runway to inspect adjacent areas is not allowed.

8.21.2 Radio Failure or Vehicle Breakdown in the Manoeuvring Area

8.21.2.1 Radio Failure When Under Positive Control

In the event of a radio failure when under positive control, operators must position their vehicle so that they can use and respond to light signals from the Control Tower.

The following light signals will be provided by the Control Tower:

Flashing Green Light	Proceed.
Steady Red Light	STOP, hold your position.
Flashing Red Light	Immediately vacate the runway or taxiway.
Flashing White Light	Return to starting point on the airfield. The operator must hold short of each Runway, repeat the process and receive permission to proceed (flashing green light signal) before crossing each Runway.

If the vehicle cannot be positioned to receive light signals, the AVOP holder must immediately contact the IOC and request that the IOC communicate with ATC on their behalf. The AVOP holder must also notify their supervisor to advise them of the situation when safe.

8.21.2.2 Vehicle Breakdown When Under Positive Control

In the event of vehicle breakdown when under positive control, the AVOP holder must immediately contact the IOC and request that the IOC communicate with ATC on their behalf.

8.21.2.3 Radio Failure When Uncontrolled by ATC

In the event of a radio failure when uncontrolled by ATC, operators must exit the Manoeuvring Area as soon as possible and notify their supervisor so the vehicle can be tagged out until the radio can be serviced.

8.21.2.4 Vehicle Breakdown When Uncontrolled by ATC

In the event of vehicle breakdown when uncontrolled by ATC, the AVOP holder must immediately contact the IOC and request that the IOC communicate with ATC on their behalf.

8.21.3 Unable to Comply with ATC Instructions

If a vehicle, piece of equipment, or aircraft is unable to comply with ATC instructions or permissions after initially acknowledging them, the operator must immediately inform ATC of their exact location and the nature of the problem and request assistance. It is the operator's

responsibility to seek clarification or confirmation from ATC regarding any instructions or permissions that were missed, forgotten, or not fully understood.

8.22 Radio Frequencies

Radio transmissions must be completed on the correct frequency and must be kept to a minimum. Radio operators must listen for a moment on the correct frequency before making a call to avoid interfering with other transmissions.

** **It is the responsibility of the operator to monitor the appropriate frequencies relative to their location while in the Manoeuvring Area and/or under positive control with ATC.**

Area	Frequency (MHz)
Apron I	**121.30**
West Ground	**121.90**
East Ground	**125.35**
ATIS	**128.225**
West Deice Apron Pad Control	**122.350**
East Deice Apron Pad Control	**129.125**
West Tower	**118.40**
East Tower	**118.70**
Emergency / Alternate	**124.95**

Automated Terminal Information Service (ATIS):
Provides airport specific information including local weather to arriving and departing aircraft by means of a recorded continuous and repetitive broadcast.

8.22.1 Apron I – Apron Advisory

All aprons at Calgary International Airport are uncontrolled; however, Apron Advisory on frequency 121.3 MHz must be contacted prior to any aircraft movement on Apron I. Between the hours of 01:00 and 05:00 (but may vary), when NAV Canada is not monitoring Apron Advisory, taxi and tow operators are still required to announce their intentions on 121.3 MHz using correct radio phraseology.

ATC may instruct the person in charge of the taxi or tow operation to proceed “at your discretion.” This phrase means the operator may only continue when it is safe to do so, while coordinating with and considering all other aircraft traffic, and in full compliance with all applicable policies and procedures, including AVOP and Gate Matrix requirements.

Note: Aircraft traffic is not organized based on the taxiway or runway closest to the aircraft's gate or apron destination. Instead, traffic flow is managed through a ground sort process that considers operational requirements, including active runways and ongoing deicing operations.

Operators are expected to follow all directional instructions provided by Apron Advisory. It is essential to pay close attention to these instructions, as they may differ from what you anticipate.

8.22.2 Dual Ground Control Frequency

Vehicles and aircraft operating in the Manoeuvring Area must have radios that can operate on all YYC ATC Ground Control frequencies.

ATC uses two primary frequencies to manage aircraft and vehicle movements within the Manoeuvring Area. All ground transmissions on the East side of the airfield are conducted on the East Ground frequency, 125.35 MHz, while all transmissions on the West side of the airfield use the West Ground frequency, 121.9 MHz. ATC may also utilize alternate frequencies, such as 124.95 MHz, when necessary.

The boundary between the East and West Ground frequencies is located along Taxiway J between Taxiway JS and Taxiway JT, as well as at the intersection of Taxiway F and Taxiway R.

NAV Canada controls aircraft as follows:

East Ground

- Runway 17L/35R
- All taxiways East of Taxiway JT and East of Taxiway F

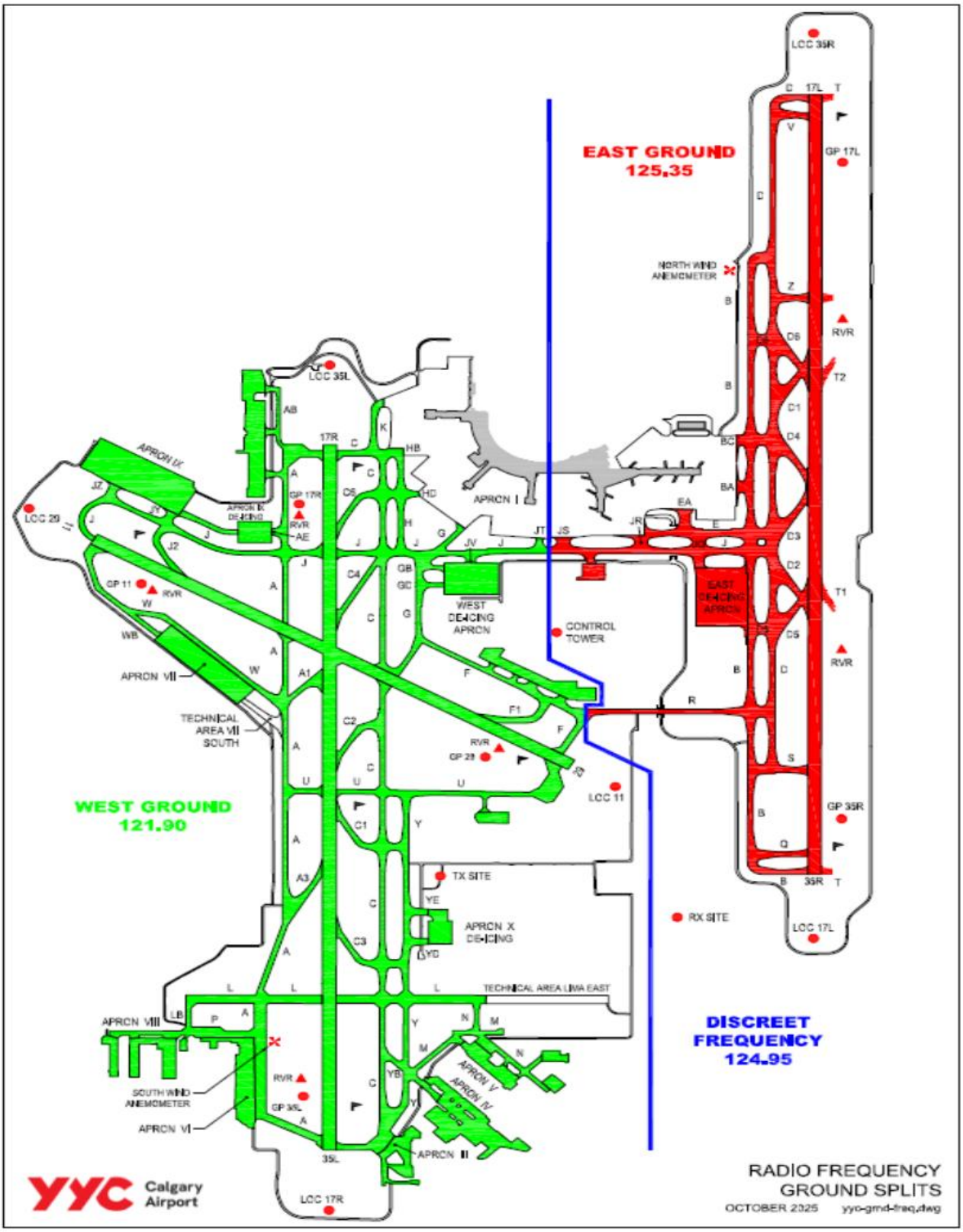
West Ground

- Runway 17R/35L
- Runway 11/29
- All taxiways West of Taxiway JS and West of Taxiway R

Note: Operators driving when NOT under positive control must switch between East and West Ground Frequencies even when the frequencies are coupled with one ATC controller operating multiple frequencies.

Operators under positive control must wait until instructed by ATC to change frequencies.

8.22.3 Dual Ground Control Frequency – Airfield Map



yyc Calgary Airport

8.23 Cautionary Areas

Certain areas of the airfield require extra caution due to obstructed sight lines:

- When traveling from Taxiway W to Taxiway A, operators must watch for traffic taxiing South on Taxiway A as it crosses Runway 29, as well as for traffic exiting Runway 17R/35L via Taxiway A1.
- At the south end near the threshold of Runway 29, operators should remain alert for traffic approaching Westbound on Taxiway R.
- When moving from Taxiway G to Taxiway F, visibility may be restricted due to buildings along the route.
- Traffic in and around the intersection of Taxiways C, H, and J requires heightened awareness because of limited visibility and obstructed sight lines caused by nearby structures.

Cautionary 'hot spot' locations include:

- Intersections of Taxiways C, G, H, and J, where congestion and restricted visibility increase operational risk.

Cautionary radio frequency change:

- Travelling West on Taxiway J past Taxiways JS and JT, operators must watch and listen for traffic moving Northbound on Taxiways C and G, as these aircraft may have received clearance earlier while still south of Runway 11/29. In addition, operators must consider aircraft North of Taxiway J taxiing Southbound on Taxiways C, H, and K, while also paying attention to aircraft exiting off Runway 17R/35L via high-speed exit C4.
- Travelling East on Taxiway J past Taxiways JT and JS, operators must watch and listen for traffic moving Northbound and Southbound on Taxiway B and D, in addition to aircraft exiting off Runway 17L/35R via high-speed exit D3.
- Intersection of Taxiways F and R, where operators should remain vigilant for potential conflicts.

8.24 Radio Calls – Examples

8.24.1 Standards and Tips

Factors that contribute to good radio communication for Manoeuvring Area operations:

- Situational awareness.
- Planning ahead.
- Normal tone and rate of speech.
- Monitoring the frequency before transmitting to avoid interfering with another call.
- Attentiveness and good listening.

Tips for good radio communication:

- Keep the mic from getting too close to your mouth.
- Begin with your callsign, where you are, and your request.
- Read back all hold short instructions.
- Read back every clearance to cross or enter Runways.
- Always include the word 'Runway' or 'Threshold Runway' and the Runway number for Runway related radio calls.
- Add additional words "Threshold Runway…" if there is only one heading on the Runway Designator sign.
- End ALL read backs with your call sign.

On the West Airfield (West side of the Ground frequency split) operators **must be on West Ground 121.90 MHz**.

On the East Airfield (East side of the Ground frequency split) operators **must be on East Ground 125.35 MHz**.

On Apron I operators have the discretion of monitoring **Apron I 121.30 MHZ**, or **West Ground 121.90 MHz** or **East Ground 125.35 MHz relative to their location.**

8.24.2 Determining the Active Runway(s)

It is best practice to determine the active runway, or runways, before proceeding with the initial radio call. There are four ways to determine the active runway(s):

1. Monitor ATIS.
2. Monitor East and/or West Ground.
3. Observe departing and landing aircraft.
4. Observe windsock direction.

Do not call East or West Ground to ask for the active runway(s).

8.24.3 Runway Crossings

Example – Cross Threshold Runway 35L, Taxiway A to C

Vehicle	Air Traffic Control
West Ground, [Vehicle Callsign] requesting permission to cross Threshold Runway Three Five Left Alpha to Charlie.	
	[Vehicle Callsign] cross Threshold Runway Three Five Left Alpha to Charlie.
Proceeding across Threshold Runway Three Five Left.	

Example – Cross Runway 29 proceeding North on Taxiway C

Vehicle	Air Traffic Control
West Ground, [Vehicle Callsign] requesting permission to cross Runway Two Niner northbound on Taxiway Charlie.	
	[Vehicle Callsign] cross Runway Two Niner.
Proceeding across Runway Two Niner, [Vehicle Callsign].	

8.24.4 Entering a Runway

Example – Entering onto Runway 17R for snow clearing.

Vehicle	Air Traffic Control
East Ground, [Vehicle Callsign] requesting permission to enter Threshold of Runway One Seven Right for snow clearing.	
	[Vehicle Callsign] enter Runway One Seven Right, holding short of Runway Two Niner at all times.
Proceeding onto Runway One Seven Right, holding short of Runway Two Niner at all times, [Vehicle Callsign].	

8.24.5 Maintenance on ILS Equipment

To avoid interference with an ILS, no vehicle may proceed closer than 150 m to any localizer, glide path antenna or shack except with permission from Ground control.

Example – Entering Runway 35R Glide Path Shack.

Vehicle	Air Traffic Control
Proceed on East Perimeter Road, holding short of Restricted Area signage.	
East Ground, [Vehicle Callsign] requesting permission to proceed towards the Glide	

Path Shack for Runway Three Five Right from the perimeter road.	
	ATC will acknowledge and may have follow-up questions. Proceed as instructed.
Complete readback.	

Example – Entering Runway 29 Localizer.

Vehicle	Air Traffic Control
Proceed on West Perimeter Road, holding short of Restricted Area signage.	
West Ground, [Vehicle Callsign] requesting permission to proceed towards the Runway Two Nine Localizer from the perimeter road.	
	ATC will acknowledge and may have follow-up questions. Proceed as instructed.
Complete readback.	

8.24.6 Positive Controlled Routings

Examples of positive controlled routings can be found in Section 7 of the YYC ATD & AVOP Manual.

8.25 Freezing the Scene

AVOP holders involved in an accident with a vehicle, aircraft, ground service equipment, or other objects must **freeze the scene** and immediately contact their supervisor and the IOC.

Freezing the Scene:

- When safe to do so, the scene of an accident must be frozen (left in place) until the company supervisor and IOC has been informed. Calgary Airports will authorize when a scene can be unfrozen.
- At times, and depending on the location of the accident, scenes need to be temporarily unfrozen (moved) to a safe area. This may be to avoid active aircraft or other hazards such as fire. Scenes should ONLY be unfrozen when absolutely necessary for safety and when approved by the Airport Authority.

In some cases, it may not be possible to freeze the scene as the incident took place in the Manoeuvring Area. If this is the case, individuals involved will freeze the scene by staying at a

safe location nearest to where the incident took place and immediately report the incident to the supervisor. Individuals must remain at the scene until Calgary Airports have permitted the individuals to leave the scene.

8.26 Nighttime Operations

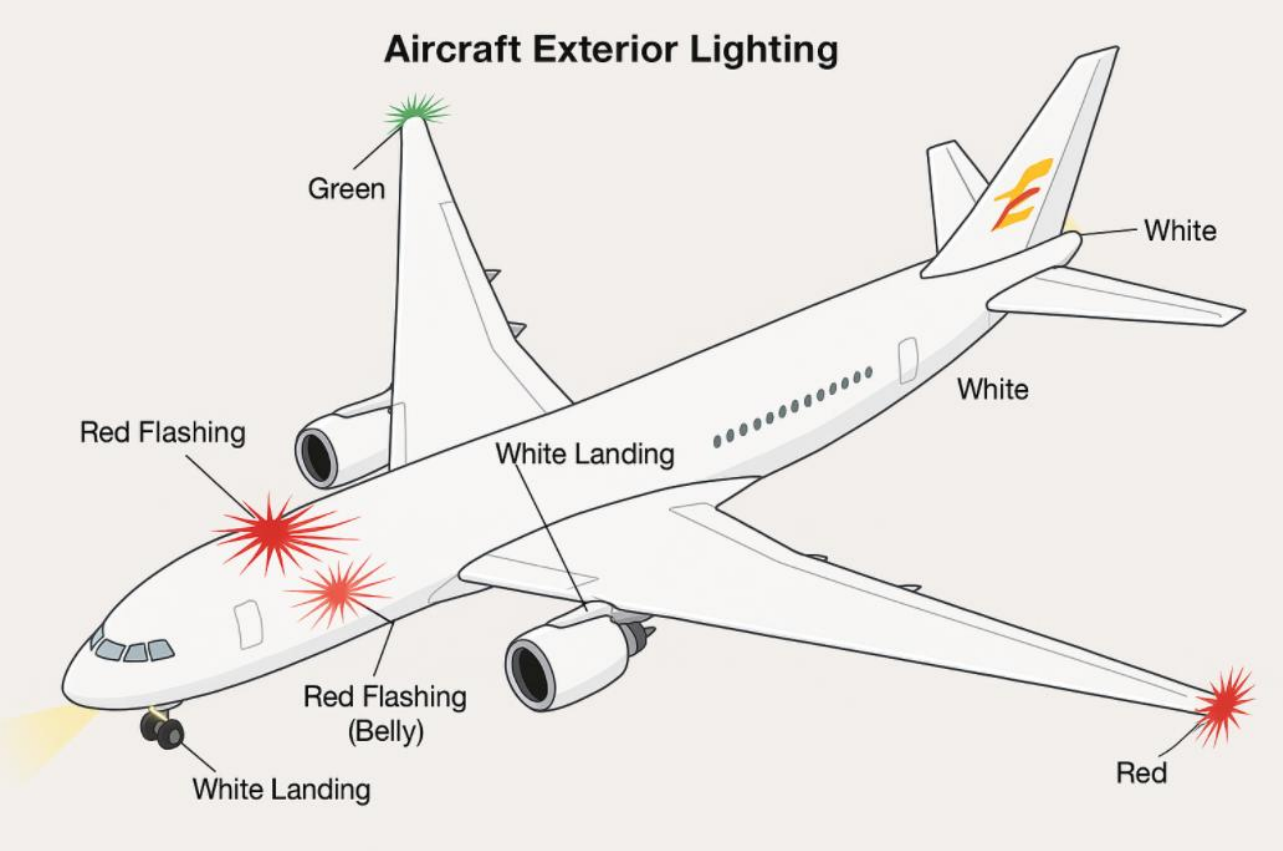
Airfield lighting is significantly brighter during hours of darkness, while aircraft become harder to see.

When an aircraft is travelling towards you (you are facing the aircraft nose), you should see:

- Aircraft Anti-Collision Light (red or white depending on aircraft)
- Nose Gear Light (white)
- Navigational Lights (red on your right side, green on your left side)

When an aircraft is travelling away from you (you are facing the aircraft tail), you should see:

- Aircraft Anti-Collision Light (red or white depending on aircraft)
- Flashing Taillight (white)
- Flashing Navigational Lights (flashing white on both sides)



8.27 D-TT Written and Practical Testing Preparation

☑ I have read and understood Section 1 – 4 of the ATD and AVOP Manual

☑ I have read and understood Section 5 of the ATD and AVOP Manual

☑ I have read and understood Section 6 of the ATD and AVOP Manual

☑ I understand that if I hold a DA or DA-WS when completing the D Practical Assessment, I am required to know and showcase DA and DA-WS competencies. Failure to do so will result in immediate failure of the D Practical Assessment.

☑ I have completed the practice questions in the section below

☑ I understand the following concepts:

- Apron I Spots
- Apron to Taxiway Intersection Indicators
- Hierarchy of Right-of-Way
- 9 Signs of Pushback
- Signs of Aircraft Arrival
- Circle of Safety
- VSR – Rules and Procedures
- Stop Lines – Rules and Procedures
- All Pavement Markings
- Critical Area Exemptions
- Routing Progression of Runway(s) and Major Taxiway(s)
- Radio Frequencies and Split Locations
- Airfield Lighting, Signage, and Markings
- Taxiway to Runway Indicators
- Runway to Runway Indicators
- CAT I and CAT II Hold Lines – Locations and Procedures
- Compass Ross Locations
- Determining Active Runway(s)
- Tenants and Callsigns
- RVOP and LVOP Operations
- Inoperable Radio Procedures
- Complete Radio Monitoring

- Showcase Aircraft Avoidance
- Proper Radio Vernacular
- Smooth Vehicle Operations and Situational Awareness
- General Location Knowledge

☑ I have completed all company training.

8.27.1 D AVOP – Practice Questions

1. What is the maximum speed limit for vehicles on Perimeter Roads unless otherwise posted?
   a. 30 km/h
   b. 80 km/h
   c. 50 km/h
   d. 40 km/h
2. What must an AVOP holder do before entering the Manoeuvring Area?
   a. Turn on hazard lights
   b. Check tire pressure
   c. Ensure the vehicle has a functioning aeronautical radio
   d. Obtain a parking permit
3. What color are Apron Edge Lights?
   a. Green
   b. Red
   c. Amber
   d. Blue
4. What marking indicates the intersection of an Apron and Taxiway?
   a. Apron Edge Line
   b. Taxiway Center Line
   c. Manoeuvring Area Delimitation (MAD) Line
   d. Double amber lights
5. What is the minimum safe distance from the centerline of a taxiway at YYC?
   a. 105 m
   b. 110 m
   c. 51.0 m
   d. 122 m
6. What should an AVOP holder do if they cause a runway incursion and realize it immediately?
   a. Panic and call for help
   b. Exit the runway onto the same taxiway used to enter
   c. Wait for ATC instructions before moving
   d. Continue driving
7. Which runway is designated as the preferential emergency runway at YYC?
   a. Runway 29
   b. Runway 17L/35R

c. Runway 17R/35L
d. Runway 11/29

8. What is the correct radio frequency for Apron I?
   a. 128.225 MHz
   b. 121.90 MHz
   c. 125.35 MHz
   d. 121.30 MHz

9. What color are Runway Threshold Lights?
   a. Red and amber
   b. Red and green
   c. Blue and white
   d. Yellow and white

10. What is required before crossing or entering a runway?
    a. Permission from ATC and a complete readback
    b. Checking the weather
    c. Turning on headlights
    d. Permission from the supervisor

11. What does a flashing red light signal from the Control Tower mean?
    a. Stop, hold your position
    b. Return to starting point
    c. Immediately vacate the runway or taxiway
    d. Proceed

12. Which company uses the callsign 'Morningstar' at YYC?
    a. FedEx
    b. Air Canada
    c. Sunwest
    d. WestJet

13. What is the purpose of a compass rose on the airfield?
    a. To show wind direction
    b. To mark the center of the runway
    c. To calibrate aircraft magnetic compasses
    d. To indicate taxiway intersections

14. During Reduced Visibility Operations (RVOP), which vehicles are allowed on the Manoeuvring Area?
    a. Only maintenance vehicles
    b. Only emergency vehicles

c. All vehicles
d. Only operationally required vehicles

15. What color are Taxiway Edge Lights?
    a. Green
    b. Blue
    c. Amber
    d. Red

16. What marking indicates a Runway Holding Position?
    a. Broken white lines
    b. Double amber lights
    c. Two solid and two broken yellow lines
    d. Single solid yellow line

17. What does a Runway Designator Sign look like?
    a. Yellow letters on black background
    b. Red letters on white background
    c. White letters on red background
    d. Black letters on yellow background

18. What color are STOP bar lights during LVOP?
    a. Blue
    b. Green
    c. Amber
    d. Red

19. What phrase must be used when reporting runway exit to ATC?
    a. Off
    b. Exit
    c. Clear
    d. Vacated

20. What is the speed limit in Technical Area VII South?
    a. 30 km/h
    b. 40 km/h
    c. 60 km/h
    d. 50 km/h

21. What is the speed limit in Technical Area L East when aircraft is parked?
    a. 40 km/h
    b. 60 km/h
    c. 30 km/h

d. 50 km/h

22. What color are Runway Edge Lights?
    a. Blue
    b. White
    c. Amber
    d. Green

23. What color are Fall Hazard Lights?
    a. Double red
    b. Double amber
    c. Blue
    d. Green

24. What color are One-Way Taxiway Lights when viewed from the wrong direction?
    a. Blue
    b. Red
    c. Green
    d. Amber

25. What is the correct East Ground frequency?
    a. 121.90 MHz
    b. 124.95 MHz
    c. 125.35 MHz
    d. 128.225 MHz

26. What is the correct West Ground frequency?
    a. 121.90 MHz
    b. 125.35 MHz
    c. 128.225 MHz
    d. 124.95 MHz

27. What is the ATIS frequency?
    a. 121.90 MHz
    b. 124.95 MHz
    c. 128.225 MHz
    d. 125.35 MHz

8.27.2 D AVOP – Practice Questions ANSWERS

1. What is the maximum speed limit for vehicles on Perimeter Roads unless otherwise posted?
    a. 30 km/h
    b. 80 km/h
    c. **50 km/h**
    d. 40 km/h
2. What must an AVOP holder do before entering the Manoeuvring Area?
    a. Turn on hazard lights
    b. Check tire pressure
    c. **Ensure the vehicle has a functioning aeronautical radio**
    d. Obtain a parking permit
3. What color are Apron Edge Lights?
    a. Green
    b. Red
    c. Amber
    d. **Blue**
4. What marking indicates the intersection of an Apron and Taxiway?
    a. Apron Edge Line
    b. Taxiway Center Line
    c. **Manoeuvring Area Delimitation (MAD) Line**
    d. Double amber lights
5. What is the minimum safe distance from the centerline of a taxiway at YYC?
    a. 105 m
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    c. **51.0 m**
    d. 122 m
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    a. Panic and call for help
    b. **Exit the runway onto the same taxiway used to enter**
    c. Wait for ATC instructions before moving
    d. Continue driving
7. Which runway is designated as the preferential emergency runway at YYC?
    a. Runway 29
    b. **Runway 17L/35R**
    c. Runway 17R/35L

d. Runway 11/29

8. What is the correct radio frequency for Apron I?
   a. 128.225 MHz
   b. 121.90 MHz
   c. 125.35 MHz
   d. **121.30 MHz**

9. What color are Runway Threshold Lights?
   a. Red and amber
   b. **Red and green**
   c. Blue and white
   d. Yellow and white

10. What is required before crossing or entering a runway?
    a. **Permission from ATC and a complete readback**
    b. Checking the weather
    c. Turning on headlights
    d. Permission from the supervisor

11. What does a flashing red light signal from the Control Tower mean?
    a. Stop, hold your position
    b. Return to starting point
    c. **Immediately vacate the runway or taxiway**
    d. Proceed

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    a. **FedEx**
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    d. WestJet

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    c. **To calibrate aircraft magnetic compasses**
    d. To indicate taxiway intersections

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    b. Only emergency vehicles
    c. All vehicles

d. **Only operationally required vehicles**

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    b. **Blue**
    c. Amber
    d. Red

16. What marking indicates a Runway Holding Position?
    a. Broken white lines
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    c. **Two solid and two broken yellow lines**
    d. Single solid yellow line

17. What does a Runway Designator Sign look like?
    a. Yellow letters on black background
    b. Red letters on white background
    c. **White letters on red background**
    d. Black letters on yellow background

18. What color are STOP bar lights during LVOP?
    a. Blue
    b. Green
    c. Amber
    d. **Red**

19. What phrase must be used when reporting runway exit to ATC?
    a. **Off**
    b. Exit
    c. Clear
    d. Vacated

20. What is the speed limit in Technical Area VII South?
    a. **30 km/h**
    b. 40 km/h
    c. 60 km/h
    d. 50 km/h

21. What is the speed limit in Technical Area L East when aircraft is parked?
    a. 40 km/h
    b. 60 km/h
    c. **30 km/h**
    d. 50 km/h

22. What color are Runway Edge Lights?
    a. Blue
    b. **White**
    c. Amber
    d. Green

23. What color are Fall Hazard Lights?
    a. **Double red**
    b. Double amber
    c. Blue
    d. Green

24. What color are One-Way Taxiway Lights when viewed from the wrong direction?
    a. Blue
    b. **Red**
    c. Green
    d. Amber

25. What is the correct East Ground frequency?
    a. 121.90 MHz
    b. 124.95 MHz
    c. **125.35 MHz**
    d. 128.225 MHz

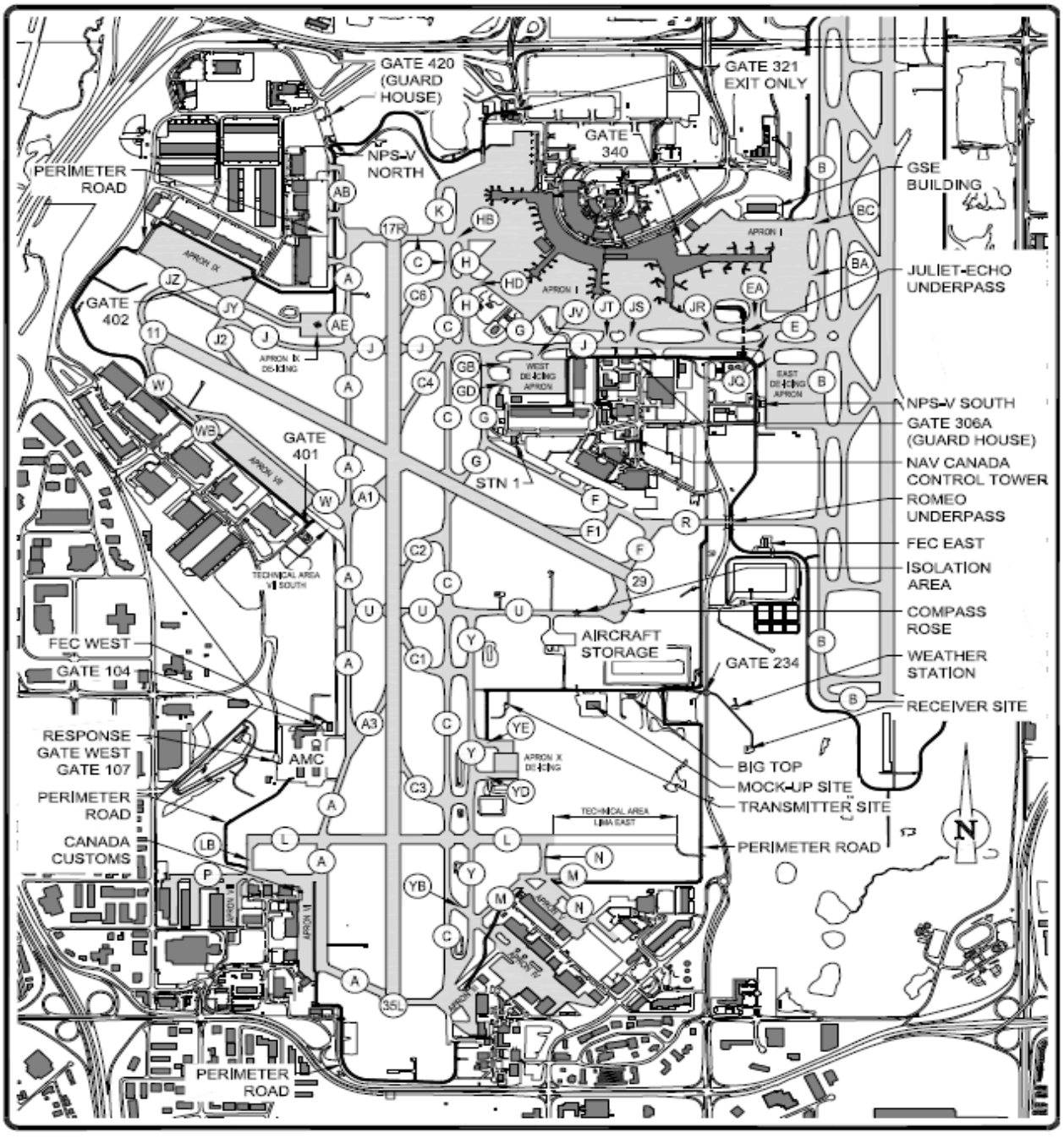
26. What is the correct West Ground frequency?
    a. **121.90 MHz**
    b. 125.35 MHz
    c. 128.225 MHz
    d. 124.95 MHz

27. What is the ATIS frequency?
    a. 121.90 MHz
    b. 124.95 MHz
    c. **128.225 MHz**
    d. 125.35 MHz

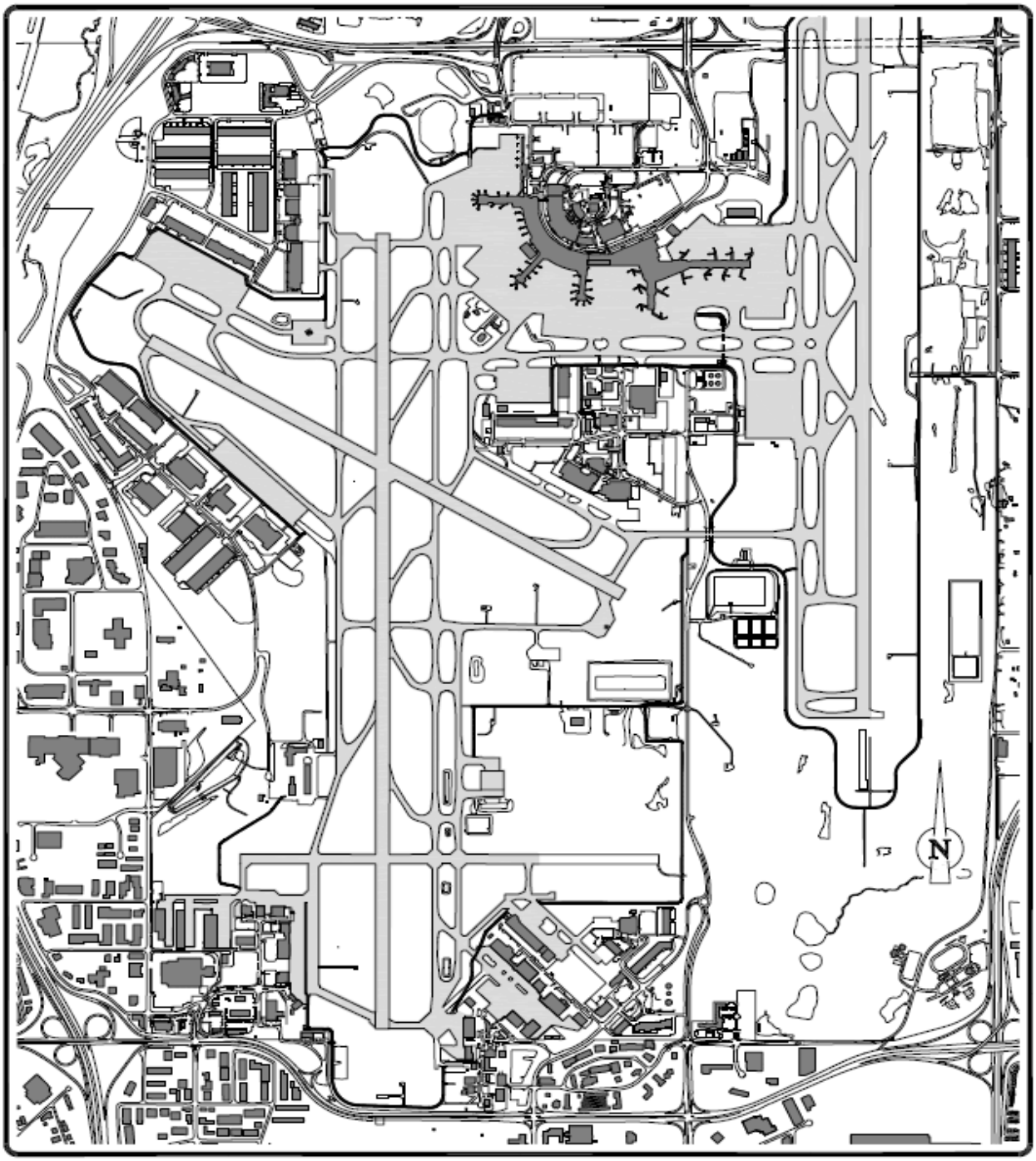
Section 9
Airfield Maps

9 Airfield Maps

9.1 West Airfield



9.1.1 West Airfield – UNMARKED



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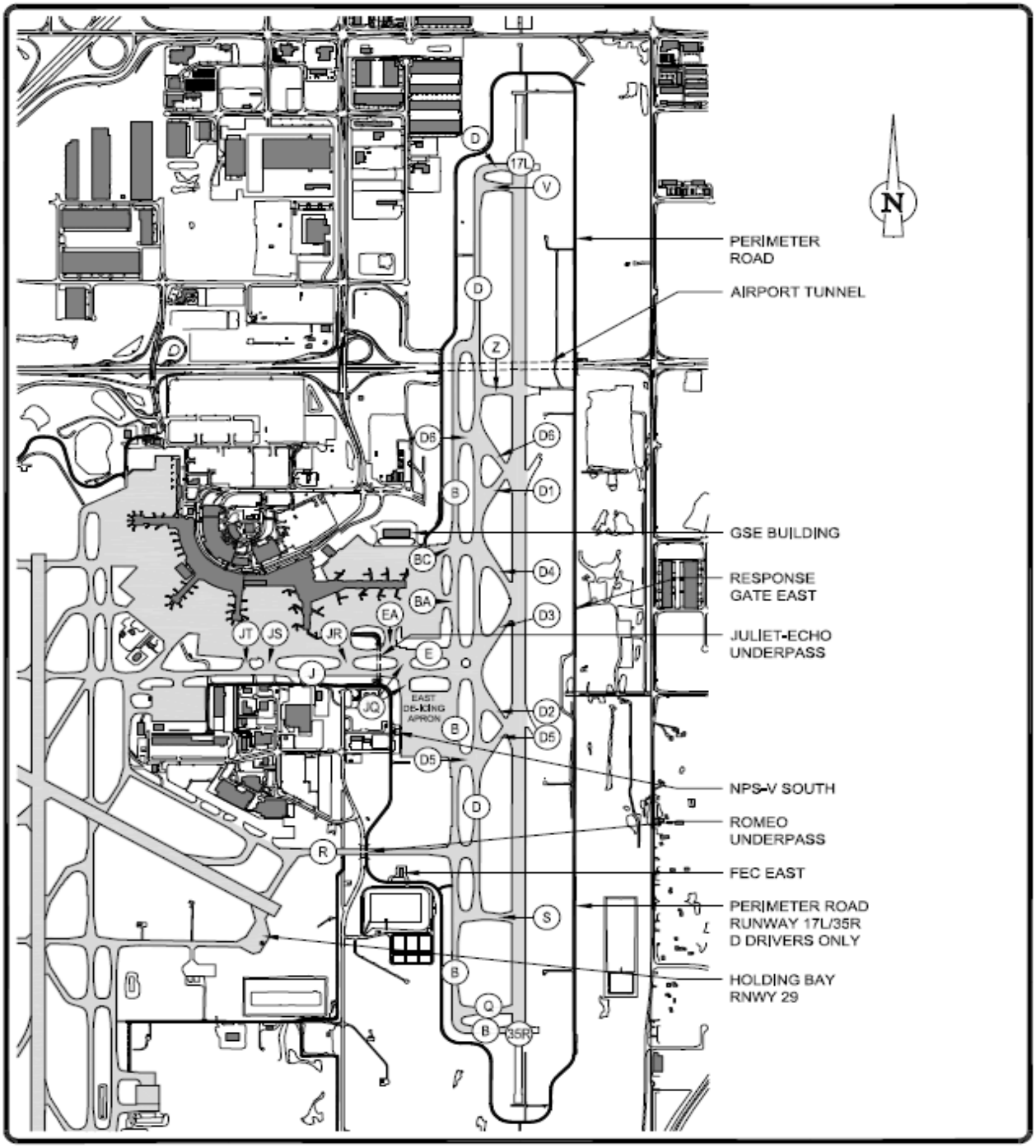
YYC Calgary Airport

PROJECT
CALGARY INTERNATIONAL AIRPORT
AVOP
WEST AIRFIELD

CADD FILE No.	DRAWN BY	SCALE	DATE	SHEET No.
yyc-avop-airfield	SL	1:25,000	OCT. 2025	2 of 13

9.2 East Airfield



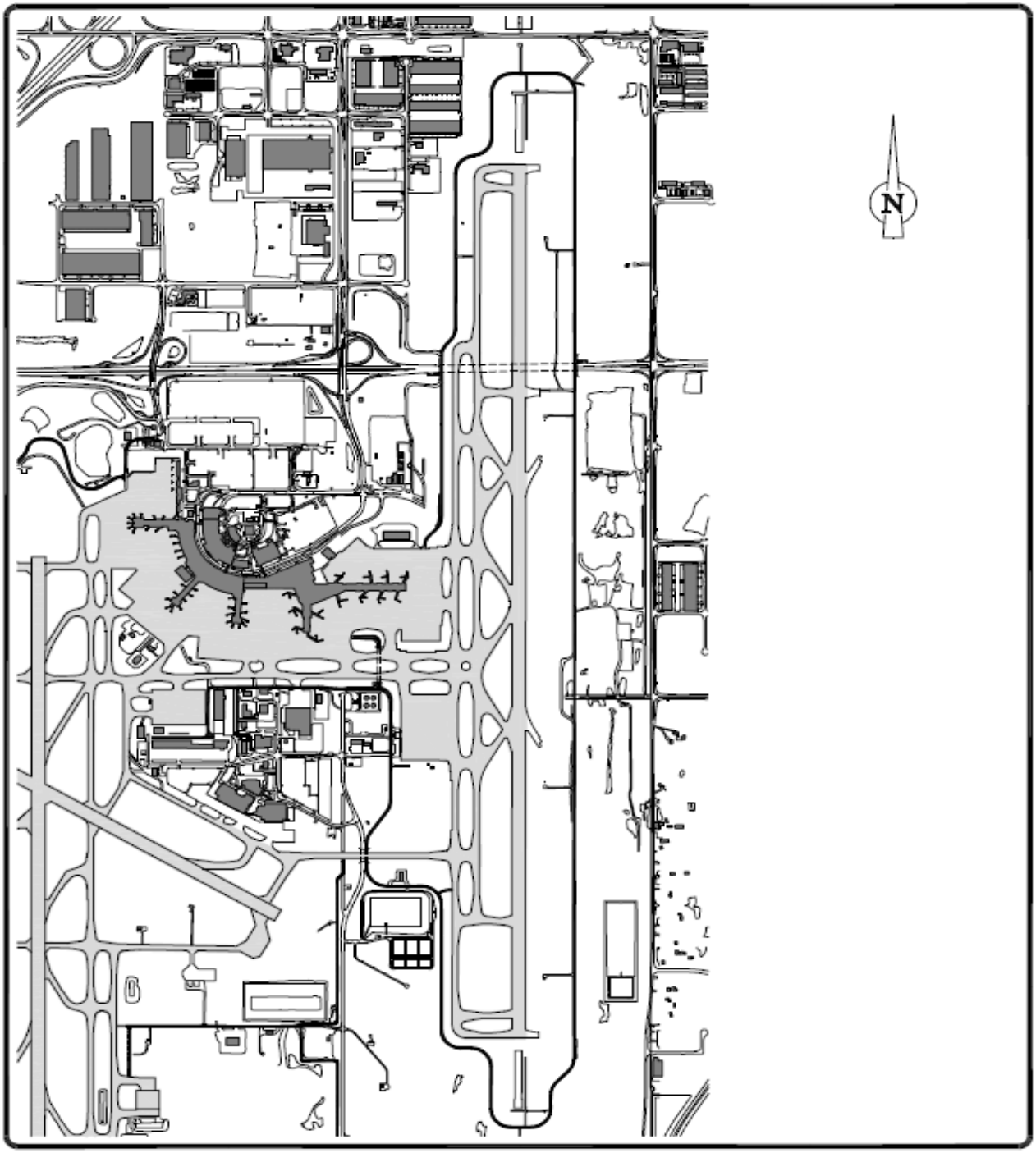
Calgary Airport

PROJECT

CALGARY INTERNATIONAL AIRPORT
AVOP
EAST AIRFIELD

CADD FILE No.	DRAWN BY	SCALE	DATE	SHEET No.
yyc-avop-airfield	SAK	1:25,000	OCT. 2025	3 of 13

9.2.1 East Airfield – UNMARKED



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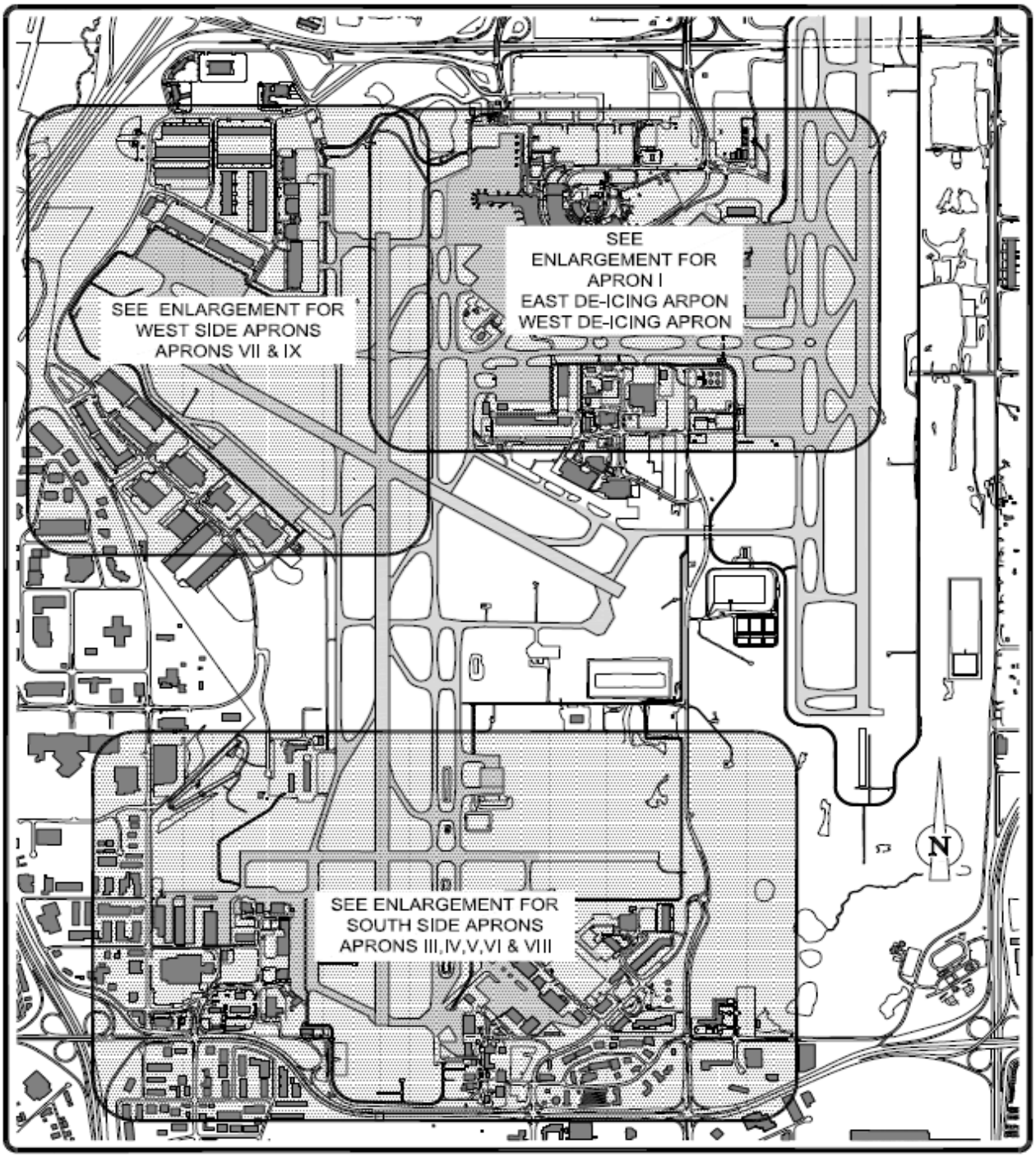
Calgary Airport

PROJECT

CALGARY INTERNATIONAL AIRPORT
AVOP
EAST AIRFIELD

CADD FILE No.	DRAWN BY	SCALE	DATE	SHEET No.
yyc-avop-airfield	SAK	1:25,000	OCT. 2025	4 of 13

9.3 Apron I, West Aprons, & South Aprons



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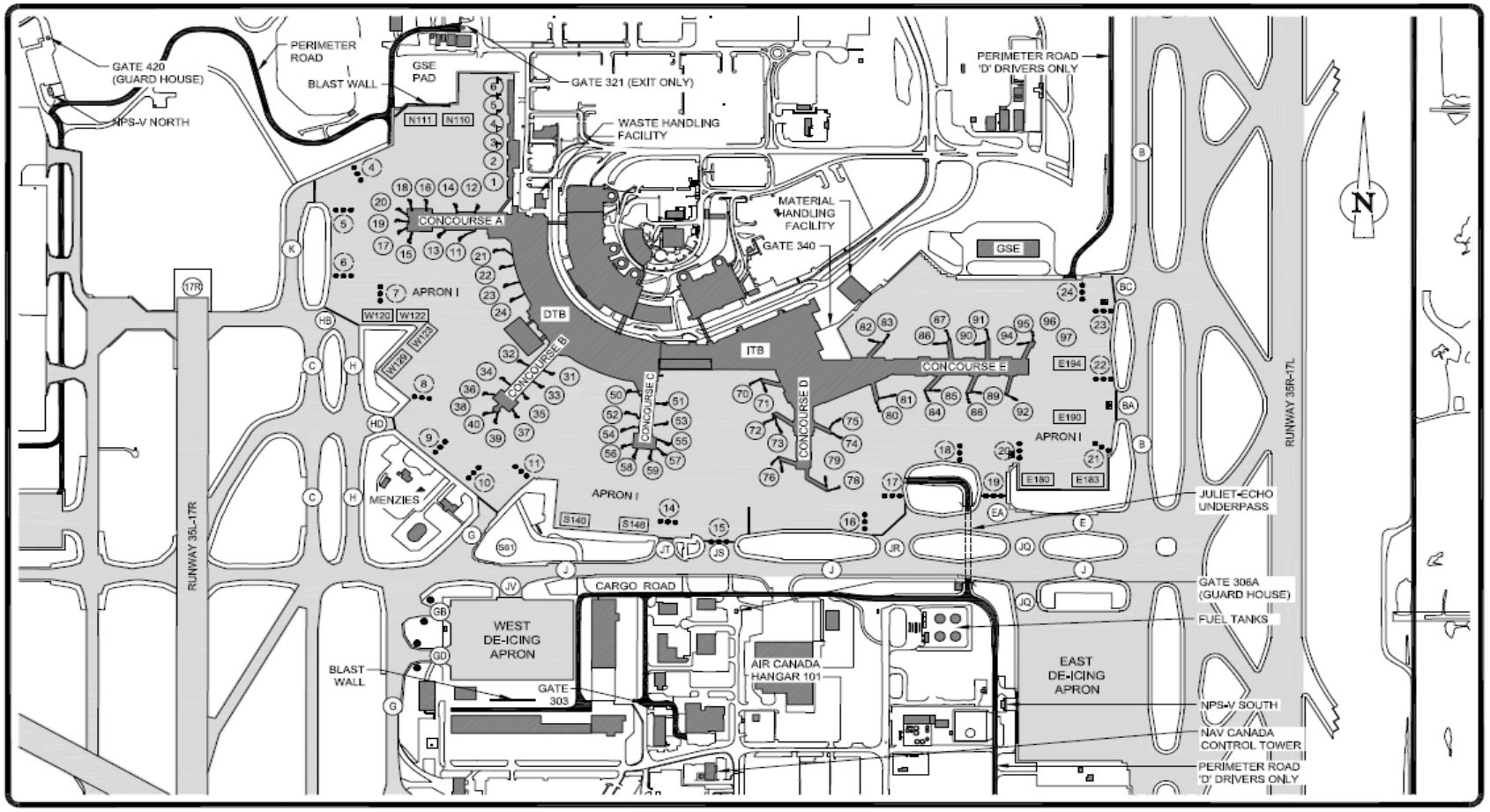
YYC Calgary Airport	PROJECT: CALGARY INTERNATIONAL AIRPORT AVOP AIRFIELD (AREAS OF ENLARGEMENT)				
CADD FILE No.: yyc-avop-airfield	DRAWN BY: AJ	SCALE: 1:25,000	DATE: OCT. 2025	SHEET No.: 5 of 13	

9.4 Apron I, East & West Deice Aprons



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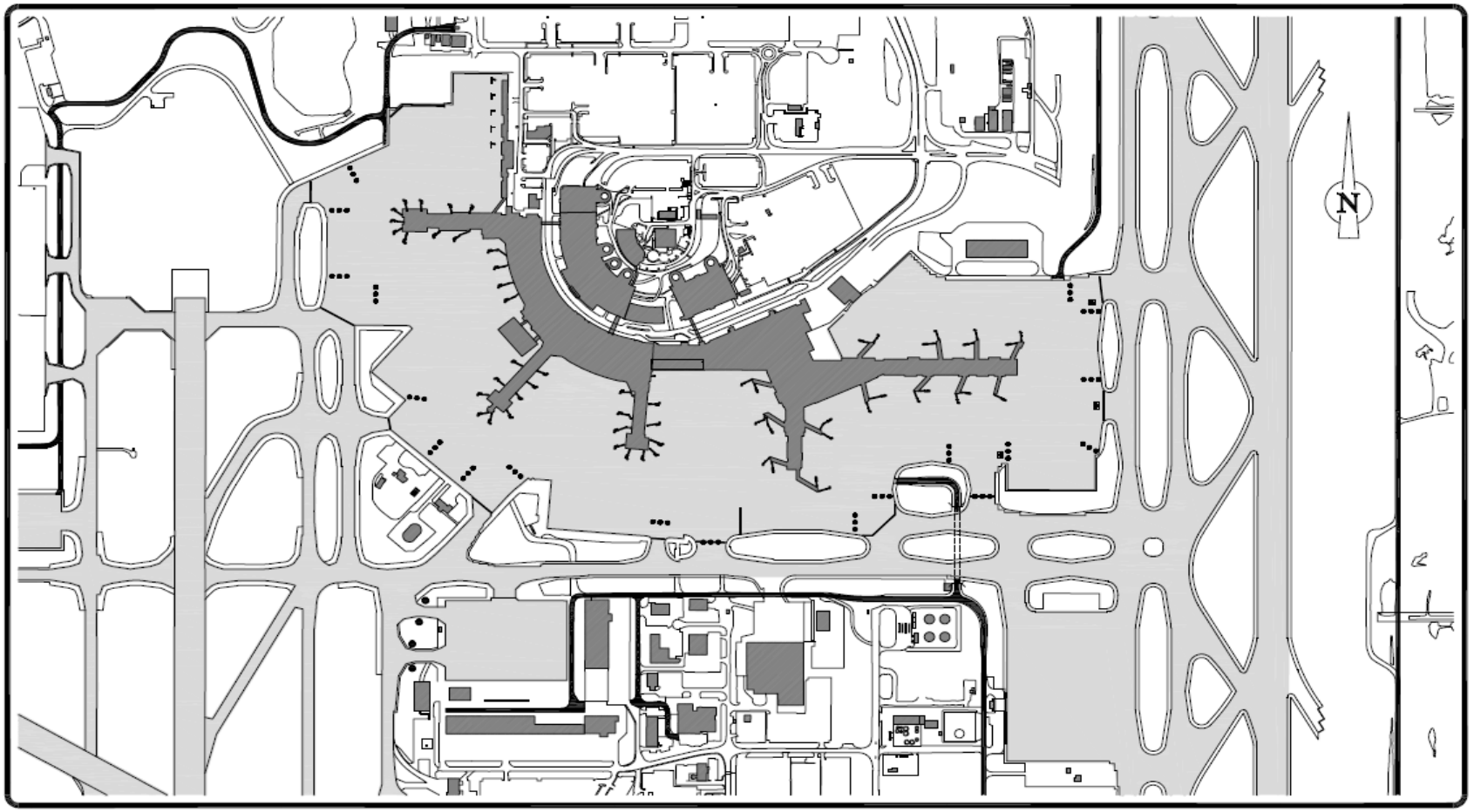
yyc Calgary Airport	PROJECT: CALGARY INTERNATIONAL AIRPORT AVOP APRON I, EAST DE-ICING APRON, WEST DE-ICING APRON				
CADD FILE No. yyc-avop-airside-apron1&2	DRAWN BY SAK	SCALE N.T.S.	DATE OCT. 2025	SHEET No. 6 of 13	

9.4.1 Apron I, East & West Deice Aprons – UNMARKED



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yyc Calgary Airport

PROJECT

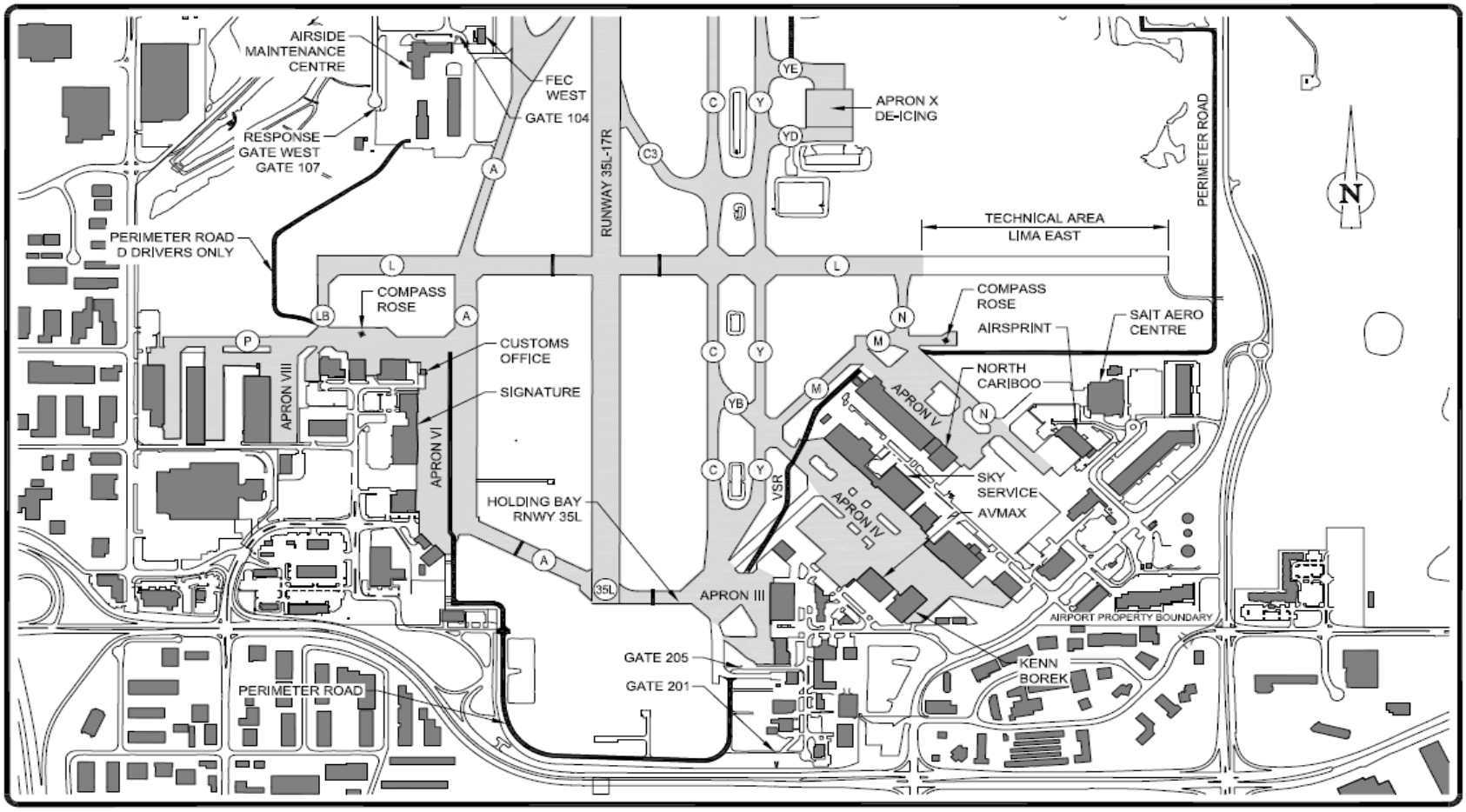
CALGARY INTERNATIONAL AIRPORT

AVOP

APRON I, EAST DE-ICING APRON, WEST DE-ICING APRON

CADD FILE No.	DRAWN BY	SCALE	DATE	SHEET No.
yyc-avop-airside-apron1&2	SAK	N.T.S.	OCT. 2025	7 of 13

9.5 South Aprons



Calgary Airport

PROJECT

CALGARY INTERNATIONAL AIRPORT
AVOP
SOUTH SIDE APRONS

CADD FILE No.	DRAWN BY	SCALE	DATE	SHEET No.
yyc-avop-airside-apronsouth	SL	N.T.S.	OCT. 2025	8 of 13

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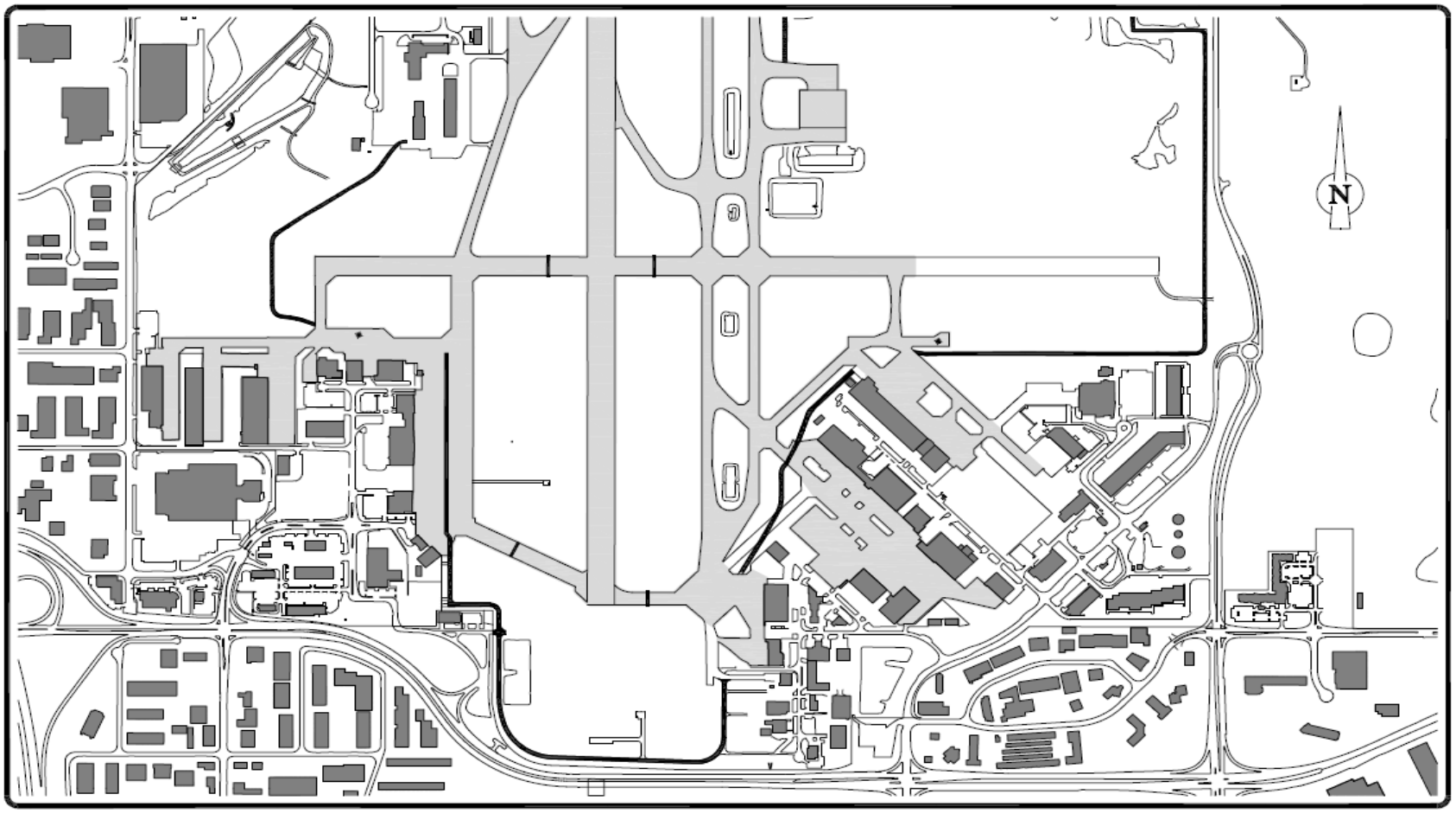
9.5.1 South Aprons – UNMARKED



yyc Calgary Airport

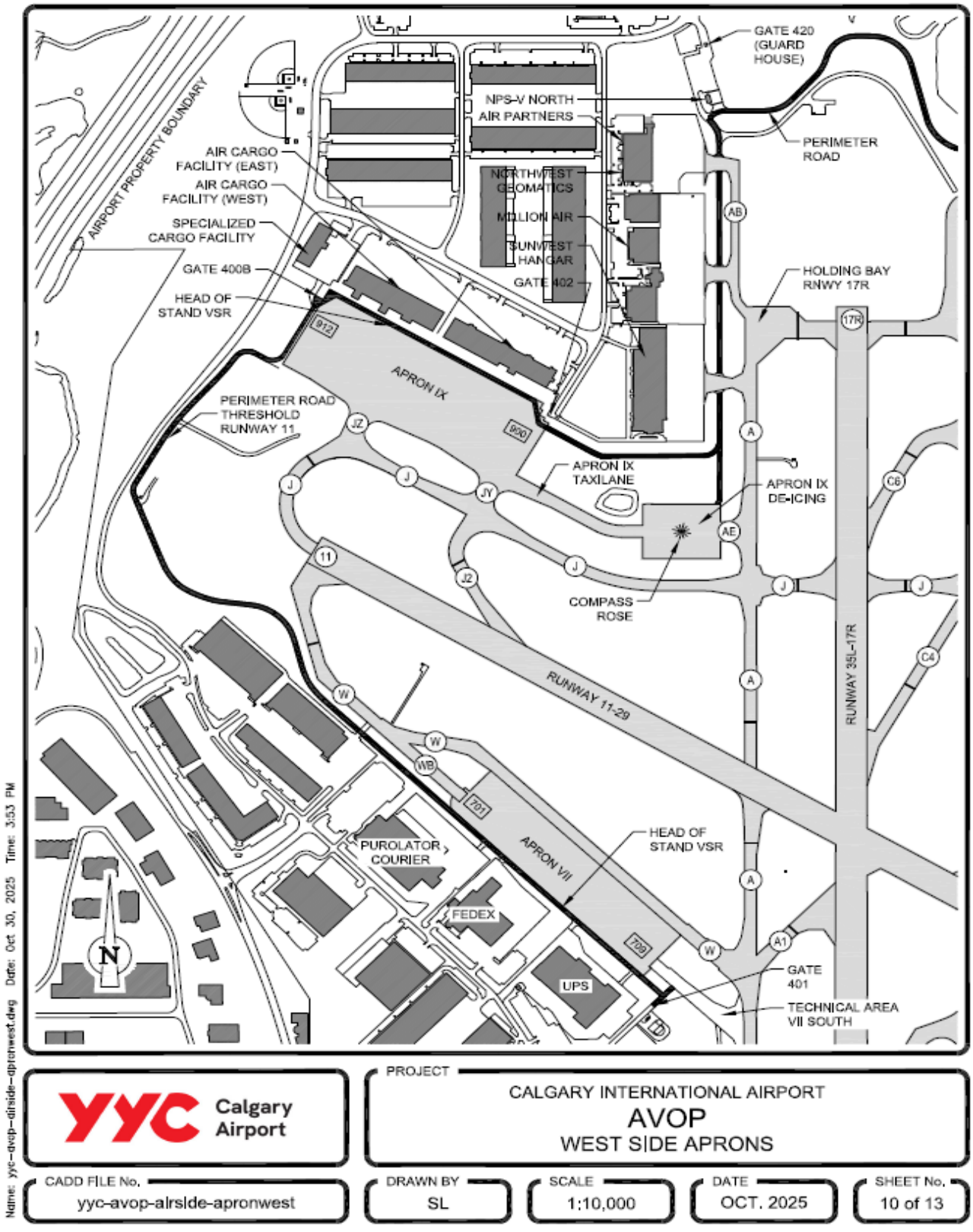
PROJECT

CALGARY INTERNATIONAL AIRPORT
AVOP
SOUTH SIDE APRONS

CADD FILE No.	DRAWN BY	SCALE	DATE	SHEET No.
yyc-avop-airside-apronsouth	SL	N.T.S.	OCT. 2025	9 of 13

Name: yyc-avop-airside-apronsouth.dwg Date: Oct 30, 2025 Time: 3:40 PM

9.6 West Aprons



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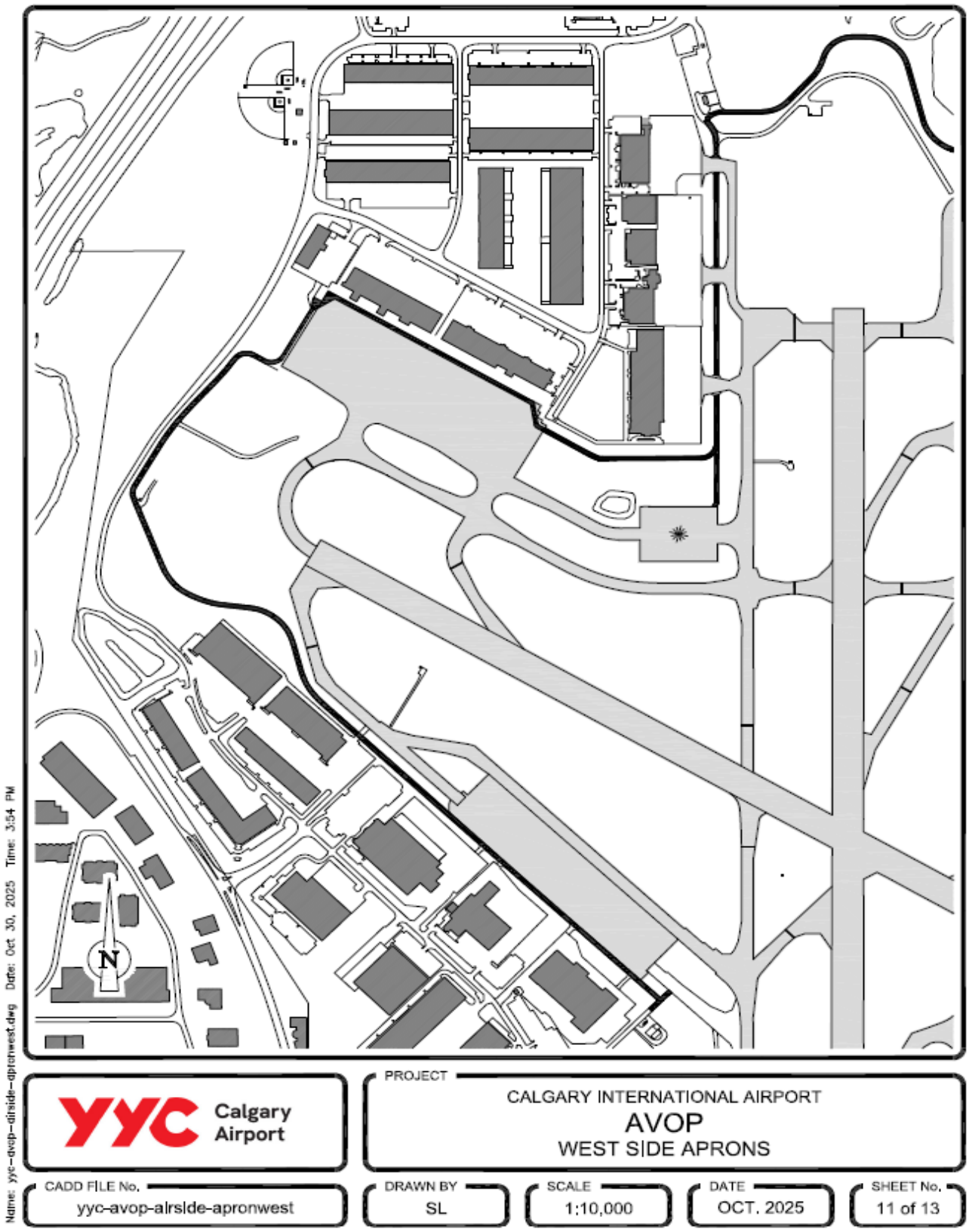
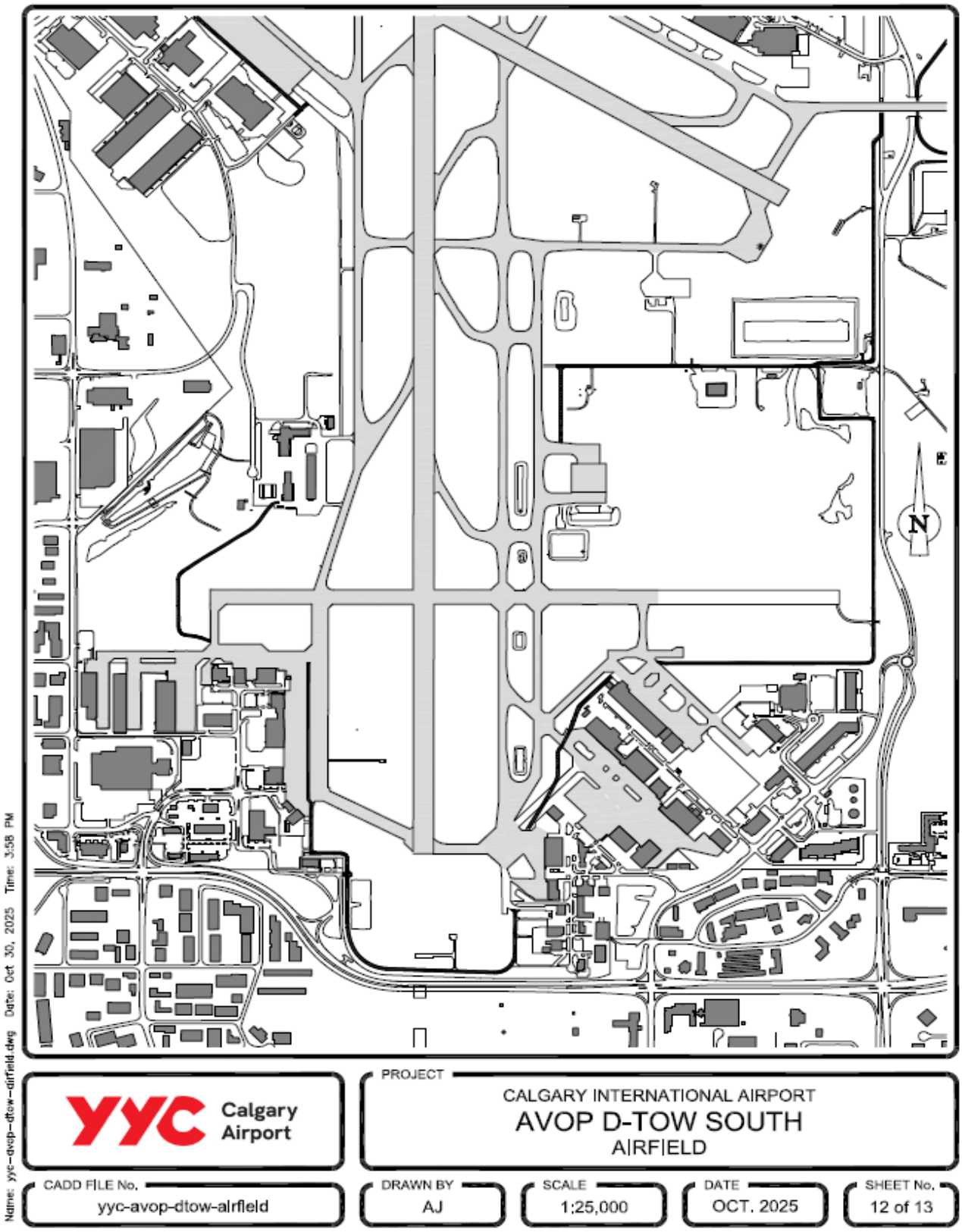
9.6.1 West Aprons – UNMARKED



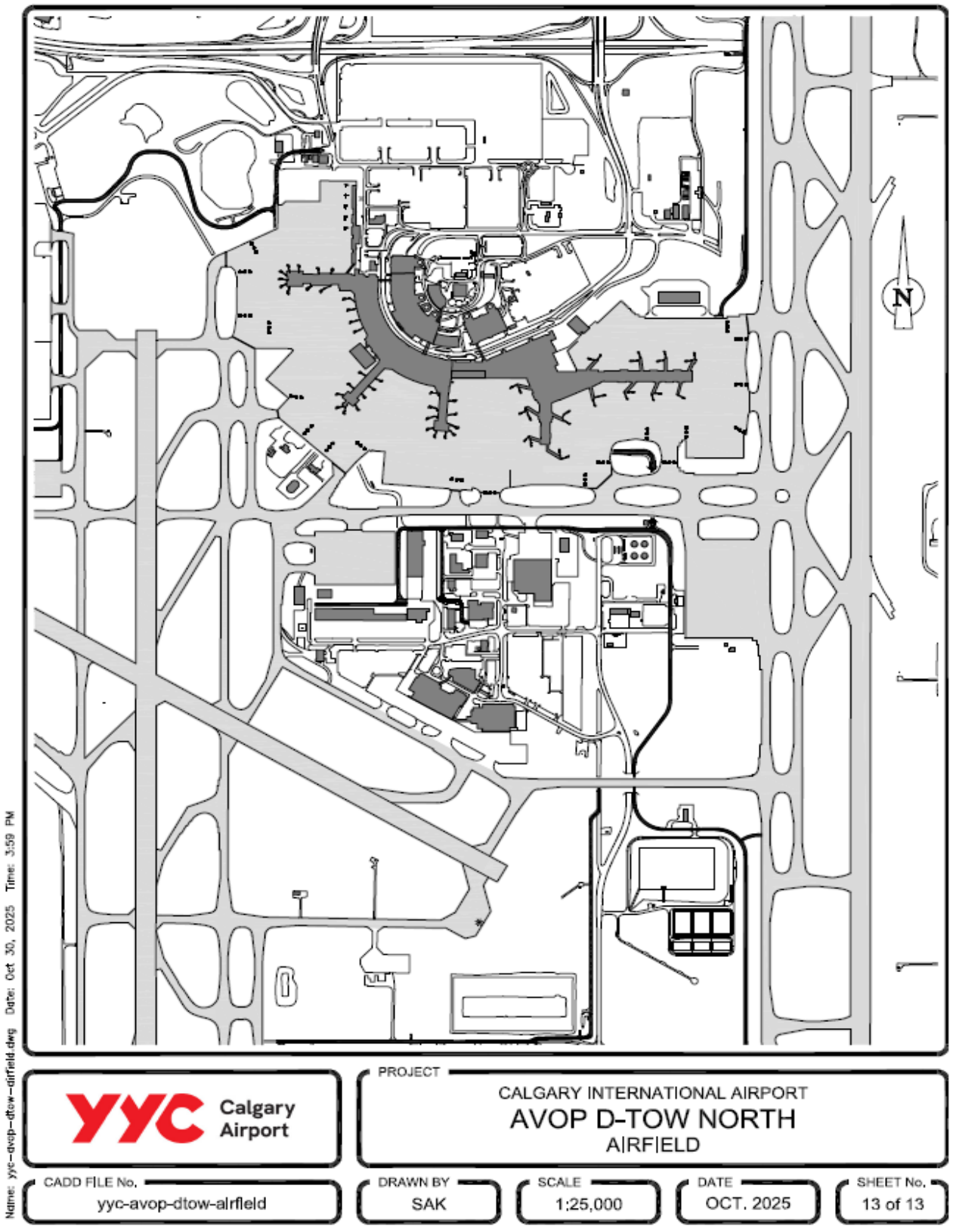
Calgary Airport

9.7 South Airfield – UNMARKED



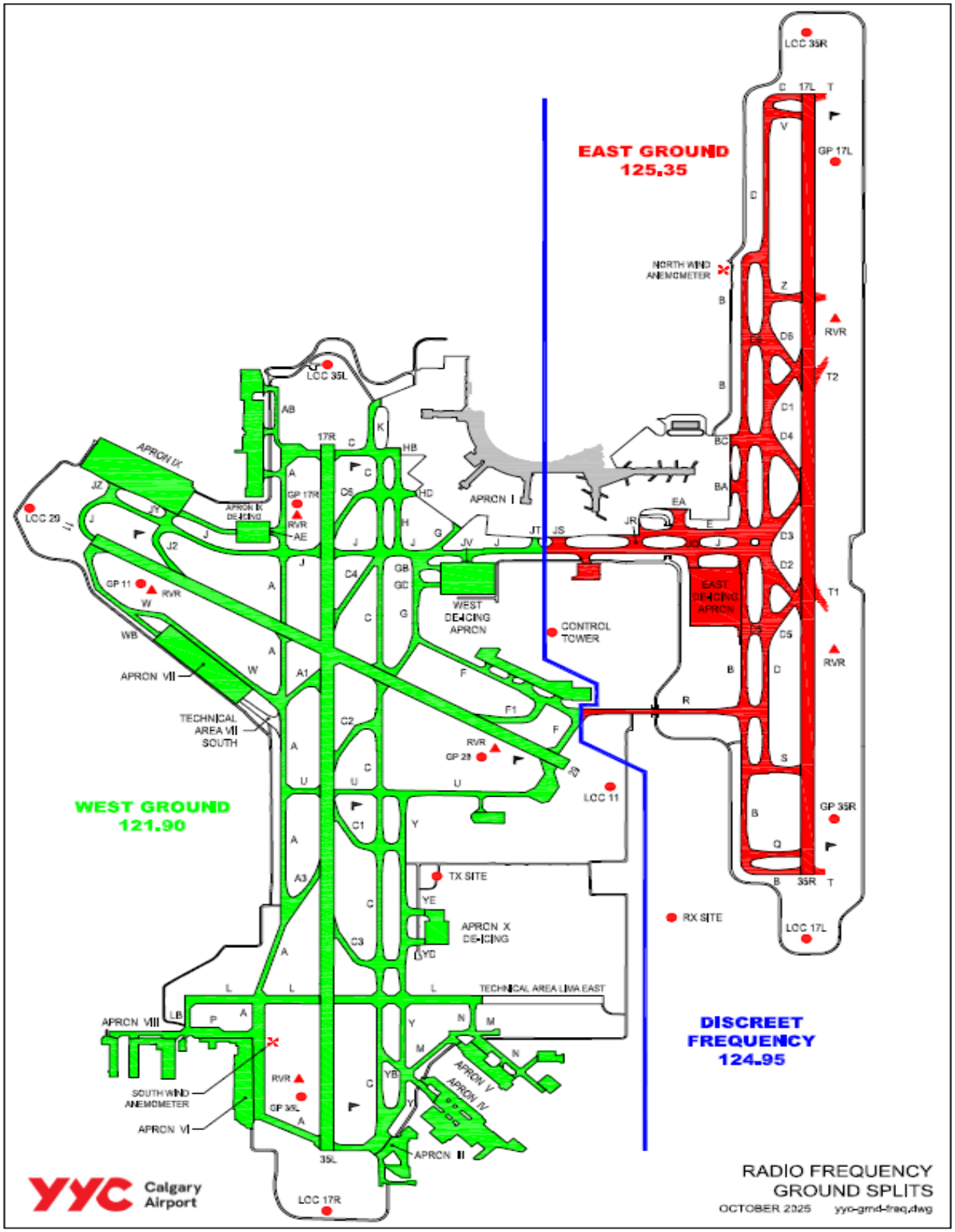
Calgary Airport

9.8 North Airfield – UNMARKED



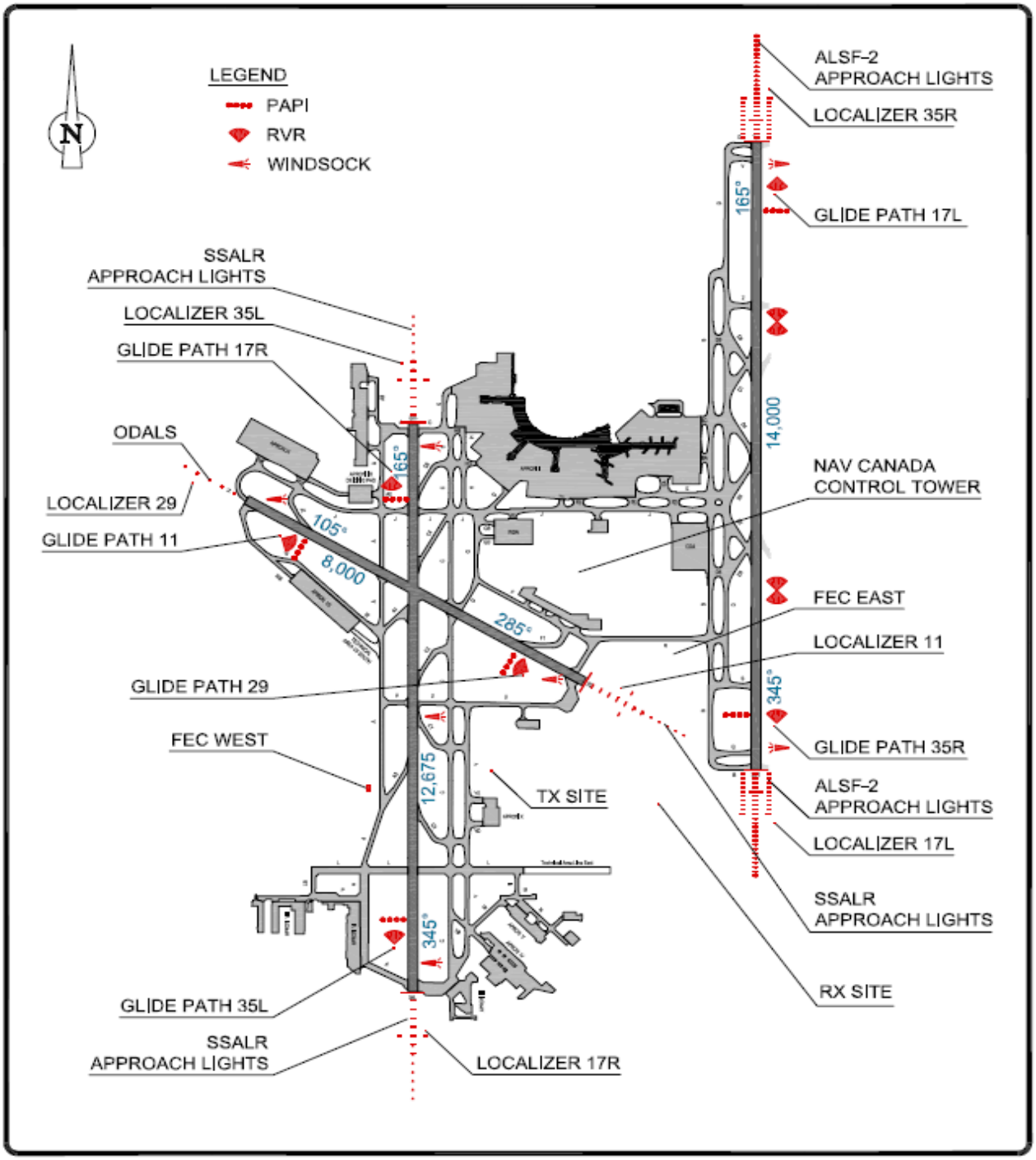
Calgary Airport

9.9 Dual Control Frequency



yyc Calgary Airport

9.10 Navigational Aid



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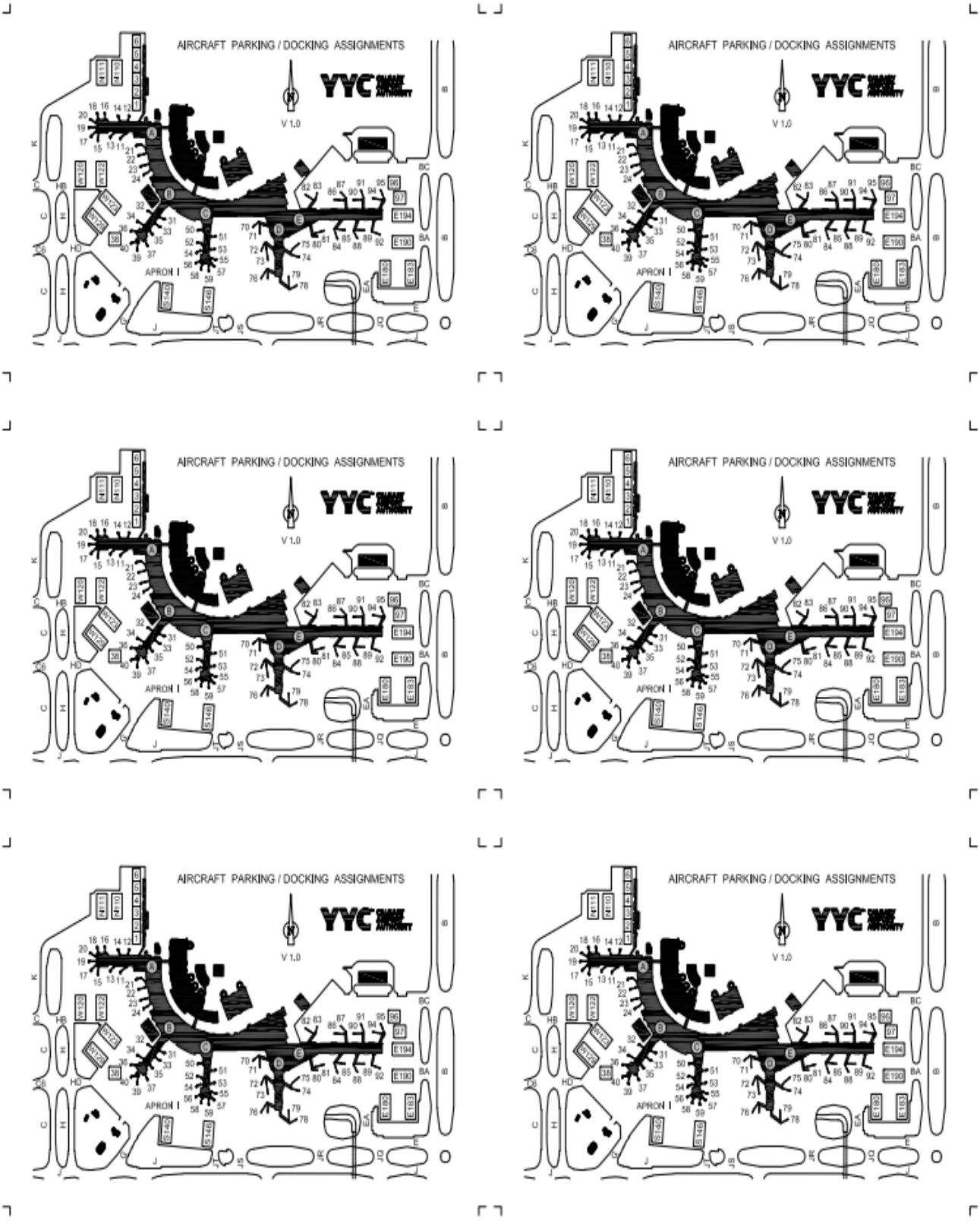
YYC CALGARY AIRPORT AUTHORITY

PROJECT
CALGARY INTERNATIONAL AIRPORT
AERODROME PHYSICAL ASSETS
NAVIGATIONAL AIDS

CADD FILE No.	DRAWN BY	SCALE	DATE	SHEET No.
yyc-locn-navalds	S.D.S.	N.T.S.	MAY 2025	1 of 1

9.11 Apron I Pocket Cards



9.12 Airfield Pocket Cards