

BYLAW NO. 1252-22

**BEING A BYLAW OF
MACKENZIE COUNTY
IN THE PROVINCE OF ALBERTA**

**TO ADOPT THE MACKENZIE COUNTY
AIRPORT VICINITY PROTECTION AREA**

WHEREAS, Mackenzie County has a Municipal Development Plan adopted in 2009, and

WHEREAS, Mackenzie County has adopted the Mackenzie County Land Use Bylaw in 2017, and

WHEREAS, the Council of Mackenzie County, in the Province of Alberta, has deemed it desirable to create the Mackenzie County Airport Vicinity Protection Area to supplement the Land Use Bylaw to manage growth around each of the municipal airports within the County,

NOW THEREFORE, THE COUNCIL OF MACKENZIE COUNTY, IN THE PROVINCE OF ALBERTA, DULY ASSEMBLED, HEREBY ENACTS AS FOLLOWS:

1. That the Mackenzie County Airport Vicinity Protection Area be adopted as attached.
2. This bylaw repeals and replaces Bylaw 954-14.

READ a first time this 2nd day of February, 2022.

PUBLIC HEARING held this 8th day of March, 2022.

READ a second time this 8th day of March, 2022.

READ a third time and finally passed this 8th day of March, 2022.

(Original Signed)

Josh Knelsen
Reeve

(Original Signed)

Byron Peters
Interim Chief Administrative Officer

Mackenzie County Airport Vicinity Protection Area



February 2022

Mackenzie County Airport Vicinity Protection Area

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1. DEFINITIONS

"AIRPORT" means an area of land, water, ice or other surface intended to be used for landing, take-off or servicing aircraft, including all related buildings.

"AIRSTRIP / AIRPORT RUNWAY" means an area of land associated with an airport runway used or intended to be used, for take-off and landing aircraft, excluding related buildings.

"AIRPORT ZONING REFERENCE POINT ELEVATION" means the lowest threshold elevation point of the runway as shown in the Airport Vicinity Protection Area Height Limitation Schedules 4, 10, 15, and 20 for a specific airport.

"APPROVAL AUTHORITY" means for the purposes of an amendment to this Bylaw means the Municipality.

"BASIC STRIP" means a basic strip as described:

High Level - The basic strip associated with this airport runway is an area 304.8 meters in width and 1,645.9 meters in length, the location of which is shown on the map in Schedule 4.

Fort Vermilion - The basic strip associated with this airport existing runway is an area 150.0 meters in width and 1,339.2 metres in length. The basic strip associated with the airport future runway is an area 150.0 metres in width and 1,644.0 meters in length. The location of the existing and future basic strip is shown on the map in Schedule 10.

La Crete - The basic strip associated with this airport existing runway is an area 150.0 meters in width and 1,462.0 metres in length. The basic strip associated with this airport future runway is an area 150.0 metres in width and 1,644.0 meters in length. The location of the airport's existing and future basic strip is shown on the map in Schedule 15.

Rainbow Lake - The basic strip associated with this airport runway is an area 91.4 meters in width and 1,493.5 meters in length, the location of which is shown on the map in Schedule 20.

"DEVELOPMENT" includes all structures but is not limited to anything that is erected, built or constructed or parts joined together with a fixed location on the ground, or attached to something having a fixed location in or on the ground, whether permanent or temporary in nature, including but not limited to a wall parapet, crane, flagpole, antenna, or telecommunications equipment, lighting, signage, construction or maintenance equipment, or any other equipment or installation.

"LAND USE BYLAW" means the Land Use Bylaw for Mackenzie County as amended from time to time.

"MUNICIPAL AIRPORT" means the airport facilities known as the High Level Airport, Fort Vermilion Airport, La Crete Airport and Rainbow Lake Airport.

"MUNICIPALITY" means Mackenzie County.

"NEF CONTOUR" means the Noise Exposure Forecast Contour lines that divide and show the areas having different levels of noise exposure to an airport, as shown on the map in Schedule 2, 8, 13, 18.

"NOISE EXPOSURE FORECAST AREA" or "NEF AREA" means the areas that are enclosed by Noise Exposure Forecast Contour lines, having different levels of noise exposure in an Airport Vicinity Protection Area that:

- 1) Is enclosed by the 40 NEF Contour, or
- 2) Lies between two NEF Contours, or
- 3) Lies between the 25 NEF Contour and the boundary of the Protection Area, as shown on the map in Schedule 2, 8, 13, 18.

"PROTECTION AREA" means the High Level, Fort Vermilion, La Crete and Rainbow Lake Airport Vicinity Protection Areas described in Schedule 1, 7, 12, and 17.

"OUTER SURFACE" means an imaginary surface consisting of a common plane established at a constant elevation of 45 meters above the airport zoning reference point elevation and extending to the outer limits of the Airport Vicinity Protection Area for High Level, Fort Vermilion, La Crete and Rainbow Lake Airports, as described below in **TAKE-OFF/APPROACH SURFACES**, and **TRANSITIONAL SURFACE**.

"TAKE-OFF/APPROACH SURFACES" means an imaginary, inclined plane, associated with each end of the basic strip at:

High Level and Rainbow Lake Airports;

- 1) commences at, and abuts the end of the basic strip,
- 2) rises at a slope ratio of 1:50 measured from the end of the basic strip,
- 3) diverges outward on each side as it rises, at a slope ratio of 1:15 measured from the respective projected lateral limits of the basic strip, and
- 4) ends at its intersection with the outer surface. At High Level Airport, the approach surface then continues beyond the outer surface and ends 15,000 metres from end of the basic strip.

Fort Vermilion and La Crete Airports;

- 1) commences at, and abuts the end of the basic strip,
- 2) rises at a slope ratio of 1:40 measured from the end of the basic strip,
- 3) diverges outward on each side as it rises, at a rate of 15% measured from the respective

- projected lateral limits of the basic strip, and
- 4) ends at its intersection with the outer surface.

"TRANSITIONAL SURFACE" means an imaginary surface consisting of an inclined plane that:

- 1) commences at and abuts the lateral limit of the basic strip,
- 2) rises at a slope ratio of 1:7 measured from the lateral limit of the basic strip, and
- 3) ends at its intersection with the outer surface or take-off/approach surface.

2. MAIN BUILDING PER LOT

More than one main building may be placed on a lot for an airport if the use complies to those uses listed under the subject land use district included in the Mackenzie County Land Use Bylaw.

3. AIRPORT LAND USE DISTRICT

3.1. AIRPORTS DISTRICT

This District is set up to address the developmental issues, standards and regulations of four (4) municipal airports: High Level, Fort Vermilion, La Crete and Rainbow Lake. In addition to the general standards and regulations applicable to all of these airports, specific requirements and restrictions, supported by Schedules 1-21, for the development of land in the vicinity of each individual airport are also stipulated in this section of the Bylaw. This section applies to the development located within the boundary of the Airport Vicinity Protection Areas as shown in Schedules 1-21.

3.2. GENERAL STANDARDS AND REGULATIONS FOR AIRPORTS

- 1) Development situated within the Airport Vicinity Protection Areas shall require a development permit unless otherwise stated below:
 - a) The maintenance or repair of any building without structural alteration or major renovation.
 - b) The completion of a building that was lawfully under construction at the date of the adoption of this Bylaw if:
 - i. The building is completed in accordance with the terms and conditions under which the development permit was issued, and
 - ii. The building, for which whether or not a permit was granted, is completed within 12 months from the first date on which an official notice for this Bylaw is given.
 - c) The use of any building, as referred to in this section, for which the construction was commenced prior to the adoption of this Bylaw.
 - d) The erection or construction of gates, fences, walls or other means of enclosure less than 1.8 meters (6.0 feet) in height, and the maintenance, improvement and other alterations of them.

- e) A temporary building, the sole purpose of which is incidental to the erection or alteration of a permanent building, for which a Permit has been issued under the Land Use Bylaw.
 - f) The maintenance or repair of public works, services, and utilities carried out by or on behalf of federal, provincial, and municipal public authorities on land, which is publicly owned or controlled.
 - g) Construction, excavation, or other operations requisite for the continued agricultural use of a parcel in excess of 4 hectares (10 acres) that may be assessed as farmland and used for Extensive Agricultural Operations as defined in the Land Use Bylaw.
- 2) This Bylaw shall be administered by the Approval Authority and the Subdivision and Development Appeal Board and they shall be deemed to have the same powers as provided within the appropriate Land Use Bylaw and the Municipal Government Act except that the Subdivision and Development Appeal Board shall not delete or alter any condition of approval for land uses identified in Table 1 and this bylaw.
 - 3) The Approval Authority is not precluded by this Bylaw from attaching any other conditions in accordance with the Land Use Bylaw to a development permit.
 - 4) A development permit for a development within the Airport Vicinity Protection Area may only be issued if the proposed development conforms to this Bylaw and the Land Use Bylaw.

3.3. DEVELOPMENT NEAR AIRPORTS

- 1) Development near municipal airports will be required to conform to the Airport Vicinity Protection Areas Bylaw or other established regulation.
- 2) Commercial airport-related development shall not be permitted unless it is located at an approved airstrip site.
- 3) No private airstrips shall be permitted to locate within the legal boundaries of any Hamlet in the County.
- 4) No private airstrips shall locate within any Airport Vicinity Protection Area.
- 5) Heliports shall not locate in any Hamlet unless they are for emergency medical services and/or approved sites.
- 6) All airport related development directly accessing the Town of Rainbow Lake Municipal Airport shall be encouraged to locate within the Town of Rainbow Lake.
- 7) No development shall take place within the Airport Vicinity Protection Area that would unduly affect the lives, amenities and general wellbeing of the surrounding residents, commercial and industrial activities, or those of the airport.
- 8) All applications for developments within the Rainbow Lake Protection Area, as identified in Schedule 17, shall be circulated to the Town of Rainbow Lake for their information.

- 9) All applications for developments within High Level Protection Area shall be approved by the Inter-Municipal Planning Commission, as per the Inter-Municipal Development Plan between Mackenzie County and the Town of High Level.

3.4. ESTABLISHMENT OF PROTECTION AREA

- 1) The part of Alberta described and shown in Schedules 1, 7, 12 and 17 are established as Airport Vicinity Protection Areas under this bylaw.
- 2) If any discrepancy exists between the description of the Protection Areas in Schedule 1, 7, 12 and 17 and the location of the Protection Areas as shown on the map in Schedule's 1-21, the description in Schedules 1, 7, 12 and 17 prevails.

3.5. HEIGHT LIMITATIONS

- 1) A development permit shall not be issued for a development in the Protection Area if the highest point of the development will exceed in elevation at the location of that point any of the following surfaces that project immediately above the surface of the land at that location;
 - a) The take-off/approach surfaces of the runway of the airport;
 - b) The transitional surfaces of the runway of the airport; and
 - c) The outer surface.
- 2) For the purposes of this section;
 - a) If the proposed development is a railway near High Level Airport or Rainbow Lake Airport, the highest point of the development shall be deemed to be 6 metres higher than the actual height of the rails;
 - b) If the proposed development is a railway near Fort Vermilion Airport or La Crete Airport, the highest point of the development shall be deemed to be 7 metres higher than the top of the rails;
 - c) If the proposed development is a highway or roadway near High Level Airport or Rainbow Lake Airport, the highest point of the development shall be deemed to be 4.3 meters higher than the actual height of the highest part of the travelled portion of the highway;
 - d) If the proposed development is a roadway near Fort Vermilion Airport or La Crete Airport, the highest point of the development shall be deemed to be 4.6 metres higher than the crown of the road; and
 - e) If the proposed development is a multi-lane highway near Fort Vermilion Airport or La Crete Airport, the highest point of the development shall be deemed to be 5.2 metres higher than the top of the crown of the multi-lane highway.

3.6. ELECTRONIC FACILITIES

- 1) No objects taller than 1.2m are permitted in the area denoted Area "A" on the Electronic Facilities Protection Map in Schedule 5.

- 2) No metallic objects higher than 1.2m, no non-metallic objects higher than 2.5m are permitted in the area denoted Area "B" on the Electronic Facilities Protection Map in Schedule 5.
- 3) No metal-walled structure should subtend a total vertical angle greater than 0.8°, no structural steel work should subtend a total vertical angle greater than 1.6° and no non-metallic object (including trees) should subtend a total vertical angle greater than 2.4° from the base of the antenna located at the apex of the Area "C" on the Electronic Facilities Protection Map in Schedule 5.
- 4) No metallic fences, power lines, telephones lines, buildings, roads, or railroads permitted in the Areas "D", "E" and "F" on the Electronic Facilities Protection Map in Schedule 5.
- 5) Objects that may cause reflection of communication signals are not permitted in the Area "G" on the Electronic Facilities Protection map in Schedule 5.
- 6) Electrical noise generating sources such as engine ignitions, electric motors, electrical switching gear, high tension line leakage, diathermic and industrial heating generators and many household appliances are not permitted in the Area "H" on the Electronic Facilities Protection Map in Schedule 5.

3.7. LAND USE IN RELATION TO NOISE EXPOSURE FORECAST AREAS

- 1) In this Section:
 - a) "A" to "N" where it appears in one of the NEF Area (Noise Exposure Forecast Area) columns in Table 1 opposite a particular land use means that this particular land use may be acceptable in accordance with the appropriate note and subject to the limitations indicated therein. Refer to Section 3.8 Land Use Conditions for breakdown of explanatory notes.
 - b) "NO" where it appears in one of the NEF columns in Table 1 opposite a particular land use, means that new construction or development of this land use should not be undertaken in that NEF Area.
 - c) "YES" where it appears in one of the NEF columns in Table 1 opposite a particular land use, means that the indicated land use is not considered to be adversely affected by aircraft noise and no special noise insulation should be required for new construction or development of this nature;
 - d) "NEF 25-Area" means the NEF Area that lies between the 25 NEF Contour and the boundary of the Protection Area;
 - e) "NEF 25-30 Area" means the NEF Area that lies between the 25 NEF Contour and the 30 NEF Contour;
 - f) "NEF 30-35 Area" means the NEF Area that lies between the 30 NEF Contour and the 35 NEF Contour;
 - g) "NEF 35-40 Area" means the NEF Area that lies between the 35 NEF Contour and the 40 NEF Contour;

- h) "NEF 40+" Area means the NEF Area enclosed by the 40 NEF Contour;
- 2) Developments existing before the passing of this regulation shall be deemed to comply with the second insulation requirements set out in this Schedule.

Table 1
Land Use in Relation to Noise Exposure Forecast Areas

<u>Land Uses</u>	<u>Residential</u>			
	NEF 40 + Area	NEF 40-35 Area	NEF 35-30 Area	NEF 30+ Area
Detached, Semi-Detached	NO	NO	NO	A
Town Houses, Garden Homes	NO	NO	NO	A
Apartments	NO	NO	NO	A

<u>Land Uses</u>	<u>Recreational – Outdoor</u>			
	NEF 40 + Area	NEF 40-35 Area	NEF 35-30 Area	NEF 30+ Area
Athletic Fields	NO	J	K	YES
Stadiums	NO	NO	K	YES
Theatres - Outdoor	NO	NO	NO	H
Racetracks - Horses	NO	K	K	YES
Racetracks - Autos	YES	YES	YES	YES
Fairgrounds	K	K	YES	YES
Golf Courses	YES	YES	YES	YES
Beaches and Pools	YES	YES	YES	YES
Tennis Courts	NO	K	YES	YES
Playgrounds	K	K	YES	YES
Marinas	YES	YES	YES	YES
Camping Grounds	NO	NO	NO	NO
Park and Picnic Areas	NO	K	YES	YES

<u>Land Uses</u>	<u>Commercial</u>			
	NEF 40 + Area	NEF 40-35 Area	NEF 35-30 Area	NEF 30+ Area
Offices	F	E	D	YES
Retail Sales	F	D	YES	YES
Restaurants	F	D	D	YES
Indoor Theatres	NO	G	D	YES
Hotels and Motels	NO	F	G	YES
Parking Lots	YES	YES	YES	YES
Gasoline Stations	YES	YES	YES	YES
Warehouses	YES	YES	YES	YES
Outdoor Sales	E	K	YES	YES

<u>Land Uses</u>	<u>Public</u>			
	NEF 40 + Area	NEF 40-35 Area	NEF 35-30 Area	NEF 30+ Area
Schools	NO	NO	D	C
Churches	NO	NO	D	C

Hospitals	NO	NO	D	C
Nursing Homes	NO	NO	D	C
Auditoriums	NO	NO	D	C
Libraries	NO	NO	D	C
Community Centre	NO	NO	D	C
Cemeteries	NO	NO	NO	NO

Land Uses

Municipal Utilities

	NEF 40 + Area	NEF 40-35 Area	NEF 35-30 Area	NEF 30+ Area
Electric Generating Plants	YES	YES	YES	YES
Gas & Oil Storage	YES	YES	YES	YES
Garbage Disposal	YES	YES	YES	YES
Sewage Treatment	YES	YES	YES	YES
Water Treatment	YES	YES	YES	YES
Water Storage	YES	YES	YES	YES

Land Uses

Industrial

	NEF 40 + Area	NEF 40-35 Area	NEF 35-30 Area	NEF 30+ Area
Factories	I	I	YES	YES
Machine Shops	I	I	YES	YES
Rail Yards	YES	YES	YES	YES
Ship Yards	YES	YES	YES	YES
Cement Plants	I	I	YES	YES
Quarries	YES	YES	YES	YES
Refineries	I	I	YES	YES
Laboratories	NO	D	YES	YES
Lumber Yards	YES	YES	YES	YES
Saw Mills	I	I	YES	YES

Land Uses

Transportation

	NEF 40 + Area	NEF 40-35 Area	NEF 35-30 Area	NEF 30+ Area
Highways	YES	YES	YES	YES
Railroads	YES	YES	YES	YES
Shipping Terminals	YES	YES	YES	YES
Passenger Terminals	D	YES	YES	YES

Land Uses

Agriculture

	NEF 40 + Area	NEF 40-35 Area	NEF 35-30 Area	NEF 30+ Area
Crop Farms	YES	YES	YES	YES
Market Gardens	YES	YES	YES	YES
Plant Nurseries	YES	YES	YES	YES
Tree Farms	D	YES	YES	YES
Livestock Pastures	M	YES	YES	YES
Poultry Farms	L	L	YES	YES
Stockyards	M	YES	YES	YES

Dairy Farms	M	YES	YES	YES
Feed Lots	M	YES	YES	YES
Fur Farms	K	K	K	K

3.8. LAND USE CONDITIONS

A Annoyance caused by aircraft noise may begin as low as NEF 25. It is recommended that developers be aware of this fact and that they undertake to so inform all prospective tenants or purchasers of residential units. In addition, it is suggested that development should not proceed until the Approval Authority is satisfied that acoustic insulation features, if required, have been considered in the building design.

B This note applies to NEF 30 to 35 Only. New residential construction or development should not be undertaken. If the Approval Authority chooses to proceed contrary to Transport Canada's recommendation, residential construction or development between NEF 30 and 35 should not be permitted to proceed until the Approval Authority is satisfied that:

(1) appropriate acoustic insulation features have been considered in the building and

(2) a noise impact assessment study has been completed and shows that this construction or development is not incompatible with aircraft noise.

Notwithstanding point (2), the developer should still be required to inform all prospective tenants or purchasers of residential units that speech interference and annoyance caused by aircraft noise are, on average, established and growing at NEF 30 and are very significant by NEF 35.

C These facilities should not be located close to the NEF 30 contour unless the restrictions outlined in Note D below are applied.

D These uses should not be approved unless a detailed noise analysis is conducted and the required noise insulation features are considered by the architectural consultant responsible for the building design.

E When associated with a permitted land use, an office may be located in this zone provided that all relevant actors are considered and a detailed noise analysis is conducted to establish the noise reduction features required to provide an indoor environment suited to the specific office function.

F It is recommended that this specific land use should be permitted only if related directly to aviation-oriented activities or services. Conventional construction will generally be inadequate and special noise insulation features should be included in the building design.

G Generally, these facilities should not be permitted in this zone. However, where it can be demonstrated that such land use is highly desirable in a specific instance, construction may be permitted to proceed provided that a detailed noise analysis is conducted and the

required noise insulation features are included in the building design.

- H Facilities of this nature should not be located close to the NEF 30 contour unless a detailed noise analysis has been conducted.
- I Many of these uses would be acceptable in all NEF zones. However, considerations should be given to the internally generated noise levels, and acceptable noise levels in the working area.
- J Undesirable if there is spectator involvement.
- K It is recommended that serious consideration be given to an analysis of peak noise levels and the effects of these levels on the specific land use under consideration.
- L The construction of covered enclosures should be undertaken if this use is to be newly introduced the noise environment. See Note M below.
- M Research has shown that animals condition themselves to high noise levels. However, it is recommended that peak noise levels be assessed before this use is allowed.
- N This appears to be compatible land use in all NEF zones.

3.9. LAND USE IN RELATION TO BIRD HAZARD AREAS

- 1) In this Section and related to High Level and Rainbow Lake Airports:
 - a) Zone 1 means the area defined by a rectangle that fully encloses the runway and extends 3 km beyond the runway threshold in each direction and 2 km on either side of the runway centerline.
 - b) Zone 2 means the area at each end of the runway bounded by a semicircle with its centre on the extended centreline 1 km from the runway threshold and a radius of 8 km, excluding the intersections with Zone 1.
 - c) Zone 3 means the area enclosed by two semicircles, each with its centre on the extended centreline 1 km from opposing runway thresholds and a radius of 12 km, connected at their ends by two lines parallel to the runway centreline, excluding the intersections with Zone 1 and Zone 2.
- 2) In this Section and related to Fort Vermilion and La Crete Airports:
 - a) Primary Hazard Zone means a rectangular area 2 km on each side of, the full length of runway centreline. This area then extends and widens from the rectangular surface to 9 km beyond the runway threshold in each direction and to 4km on either side of the runway centreline.
 - b) Secondary area means an area extending 4 km beyond the edges of the Primary Hazard Zone.

- 3) Developments existing before the passing of this regulation shall be deemed to comply with the requirements set out in this Section.
- 4) No owner or lessee of any lands identified in Zone 1, Zone 2, Zone 3, primary hazard zone and secondary hazard zone, as identified in Schedules 6, 11, 16 and 21 shall modify or improve the lands or any part of them in a manner that increases their attractiveness to birds.
- 5) No new developments of the following types are permitted unless specifically granted, in writing, by the County:
 - a) Sanitary Land Fill
 - b) Food Garbage Disposal
 - c) Abattoir
 - d) Sewage Lagoon
 - i. Open Water Reservoir larger than 2.5 hectares
 - (a) Open water reservoir of less than 2.5 ha, or where water will be held for a period of 48 hours or less, are permitted.

4. HIGH LEVEL AIRPORT VICINITY PROTECTION AREA

Schedule 1

High Level Airport Vicinity Protection Area Regulations

The High Level Airport Vicinity Protection Area consists of the land described below:

In Township 111, Range 19, West of the Fifth Meridian:

Section 4

Section 5

Northeast Quarter, Section 7

Section 8

Northwest Quarter, Section 9

Southwest Quarter, Section 9

Southeast Quarter, Section 9

Section 17

Northeast Quarter, Section 18

Southeast Quarter, Section 18

Northwest Quarter, Section 19

Northeast Quarter, Section 19, lying west of the railway right of way

Southwest Quarter, Section 19

Southeast Quarter, Section 19

Southwest Quarter, Section 20

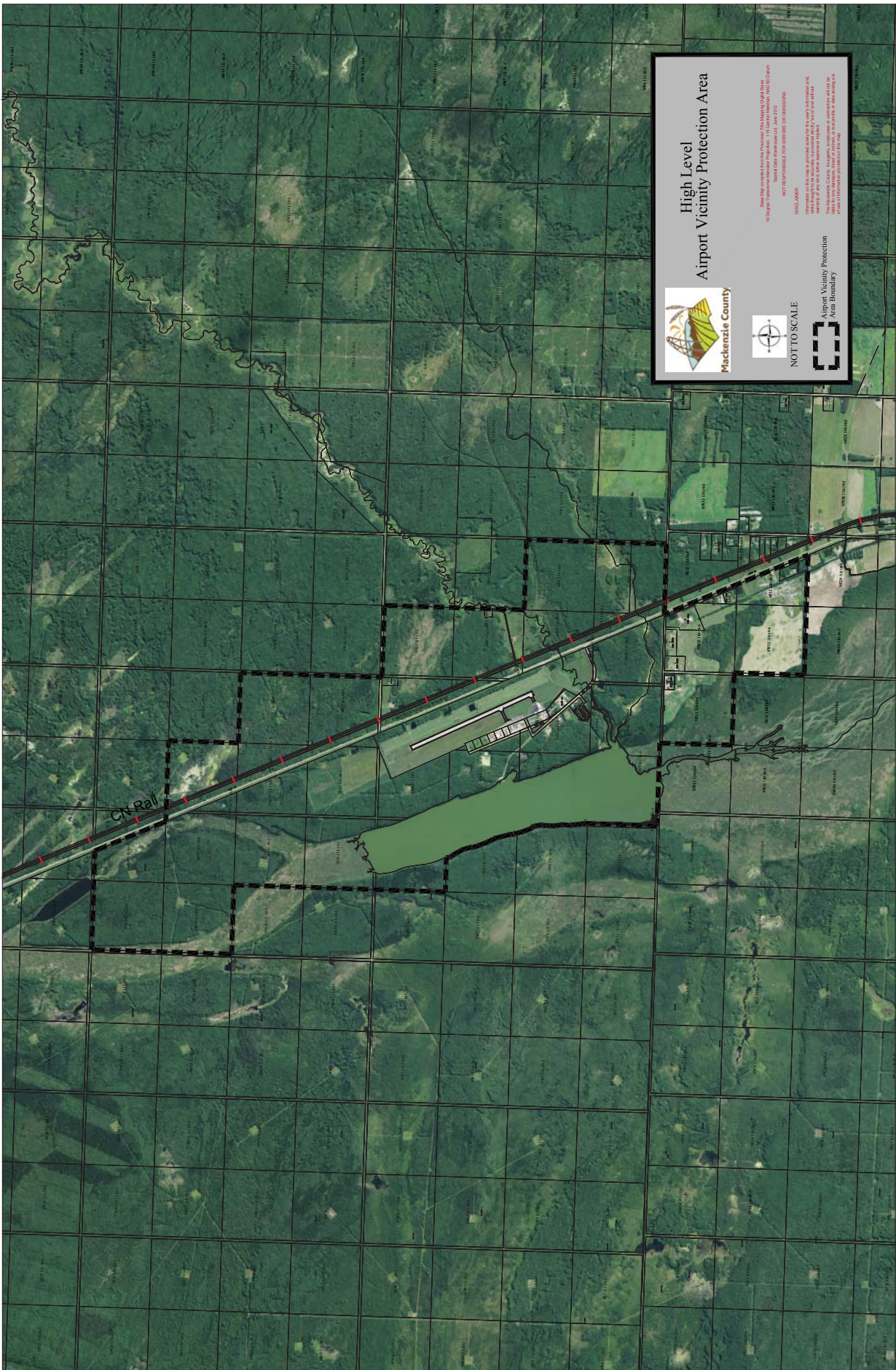
In Township 110, Range 19, West of the Fifth Meridian:

Northeast Quarter, Section 31


Northwest Quarter, Section 32

Southwest Quarter, Section 32

Southeast Quarter, Section 32, lying west of the railway right of way



Mackenzie County





High Level Airport Vicinity Protection Area

This map was compiled from the information provided by the High Level Airport Authority and is not intended to be used for any other purpose. It is not a legal document and should not be used as a basis for any legal action. The High Level Airport Authority is not responsible for errors or omissions.

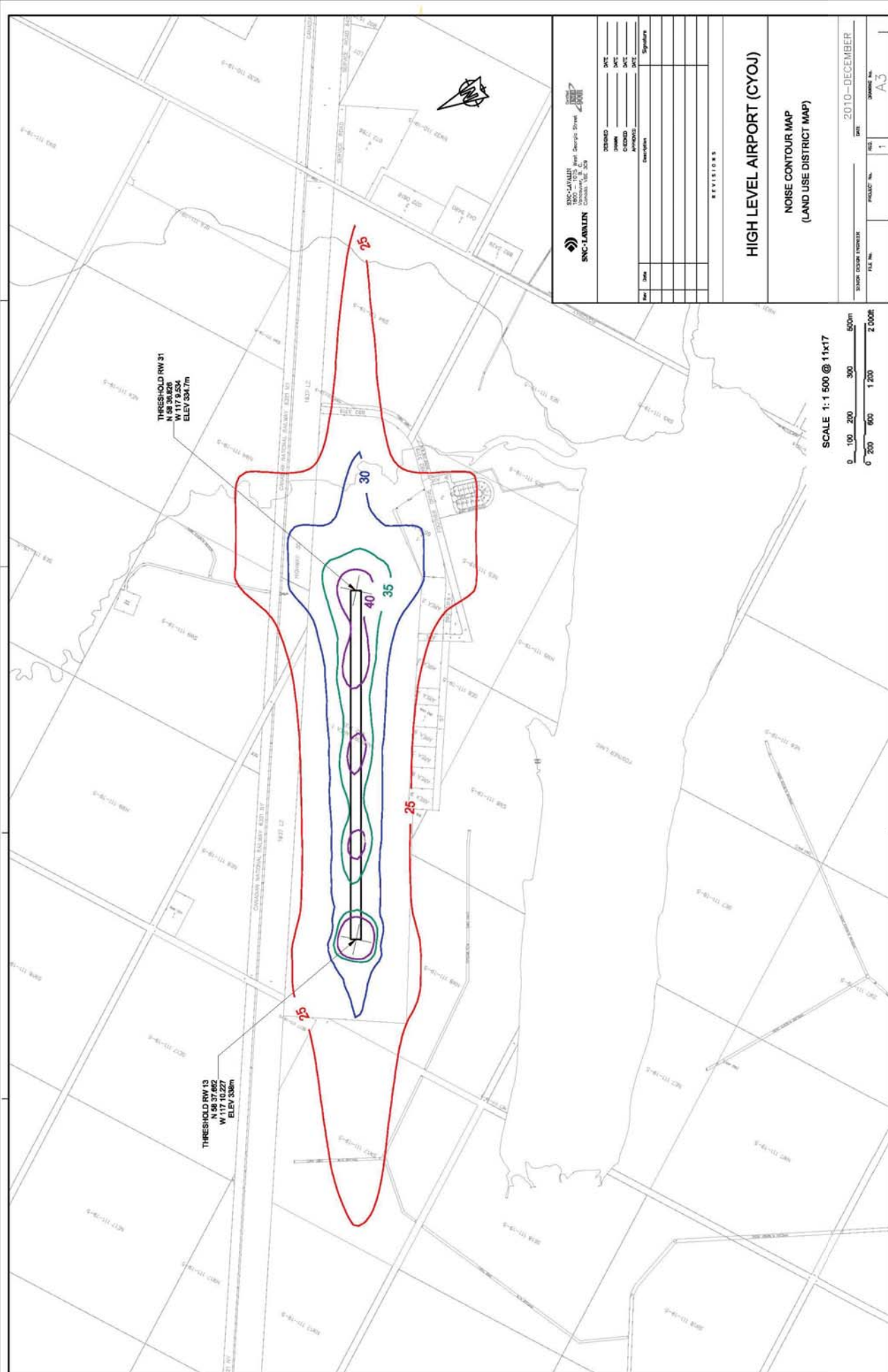
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NOT RESPONSIBLE FOR ERRORS OR OMISSIONS

NOT TO SCALE



Airport Vicinity Protection Area Boundary

Schedule 2
High Level Airport Vicinity Protection Area Regulations
Land Use District (Noise Restrictions) Map



SCALE 1: 1 500 @ 11x17

0 100 200 300 500m
 0 200 600 1 200 2 000ft

SNC-LAVALIN
 SNC-LAVALIN
 1000, Avenue de la Gare, Québec, Québec, Canada H3K 2Y9

REVISED	DATE	BY

HIGH LEVEL AIRPORT (CYOJ)

NOISE CONTOUR MAP
 (LAND USE DISTRICT MAP)

DATE: 2010-DECEMBER

PROJECT NO.: 1 SHEET NO.: A3

Schedule 3

High Level Airport Vicinity Protection Area

Height Limitations

Basic Strip

1. The basic strip associated with the airport runway is an area 304.8 metres in width and 1,645.9 metres in length, the location of which is shown on the map in Schedule 4.

Take-off/Approach Surfaces

2. There are take-off approach surfaces associated with each end of the basic strip and in each case the surface is imaginary and consists of an inclined plane that:
 - a. commences at and abuts the end of the basic strip,
 - b. rises at a slope ratio of 1:50 measured from the end of the basic strip,
 - c. diverges outward on each side as it rises, at a slope ratio of 1:15 measured from the respective projected lateral limits of the basic strip, and
 - d. ends at its intersection with the outer surface then continues beyond the outer surface and ends 15,000 metres from end of the basic strip.

Transitional Surfaces

3. There is a transitional surface associated with each level limit of the basic strip, and in each case the transitional surface is an imaginary surface consisting of an inclined plane that:
 - a. commences at and abuts the lateral limit of the basic strip,
 - b. rises at a slope ratio of 1:7 measured from the lateral limit of the basic strip, and
 - c. ends at its intersection with the outer surface or take-off/approach surface.

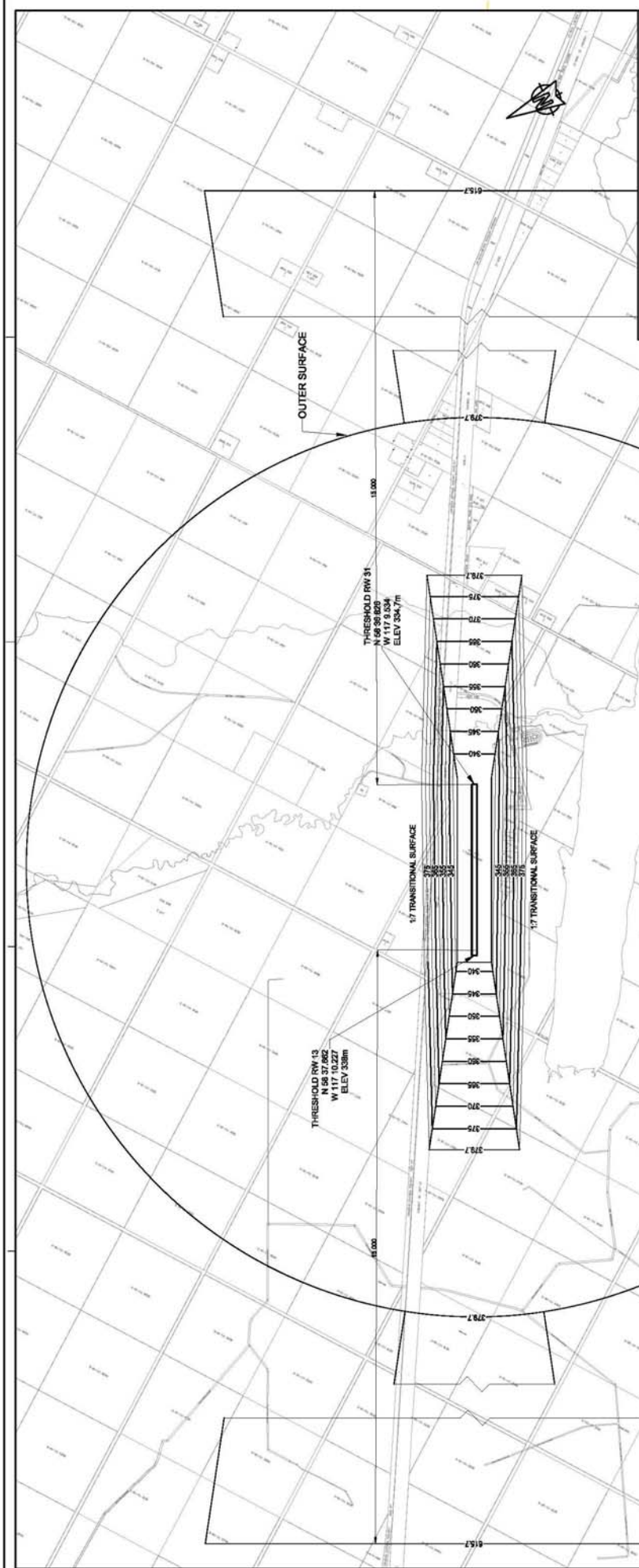
Outer Surface

4. The outer surface of the Protection Area is an imaginary surface consisting of a common plane established at a constant elevation of 45 metres above the airport reference point elevation and extending to the outer limits of the Protection Area.

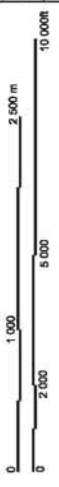
General

5. The area location of the take-off/approach surfaces and transitional surfaces are represented on the map shown in Schedule 4, but, if any discrepancy exists between the description of the take-off/approach surfaces or transitional surfaces in this Schedule and their location on the map in Schedule 4, the description in this Schedule prevails.

Schedule 4
High Level Airport Vicinity Protection Area
Height Limitations Map



SCALE 1:3 500 @ 11x17



SNC-LAVALEN
 1000 Avenue de l'Énergie
 10000 Laval, Québec

SNC-LAVALEN
 1000 Avenue de l'Énergie
 10000 Laval, Québec

REV.	DATE	DESCRIPTION	SIGNATURE

PROJET 2010-DECEMBER

REV. 1

DATE 2010-DECEMBER

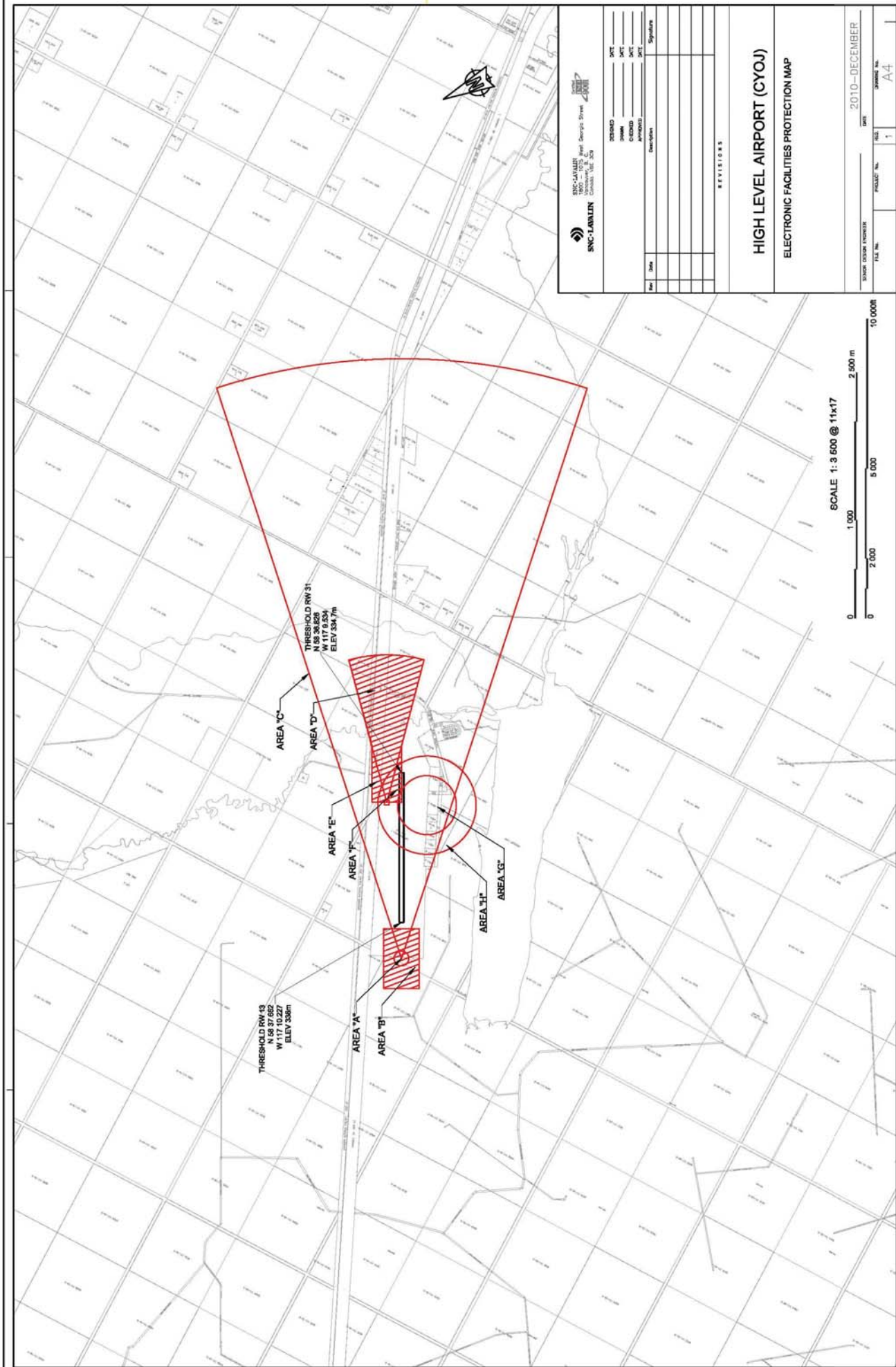
PROJET 2010-DECEMBER

REVISIONS

HIGH LEVEL AIRPORT (CYOJ)

OBSTACLE LIMITATION SURFACE MAP
(HEIGHT RESTRICTION MAP)

Schedule 5
High Level Airport Vicinity Protection Area
Electronic Facilities Protection Map



REV	DATE	DESCRIPTION	DESIGNED	CHECKED	APPROVED	SIGNATURE

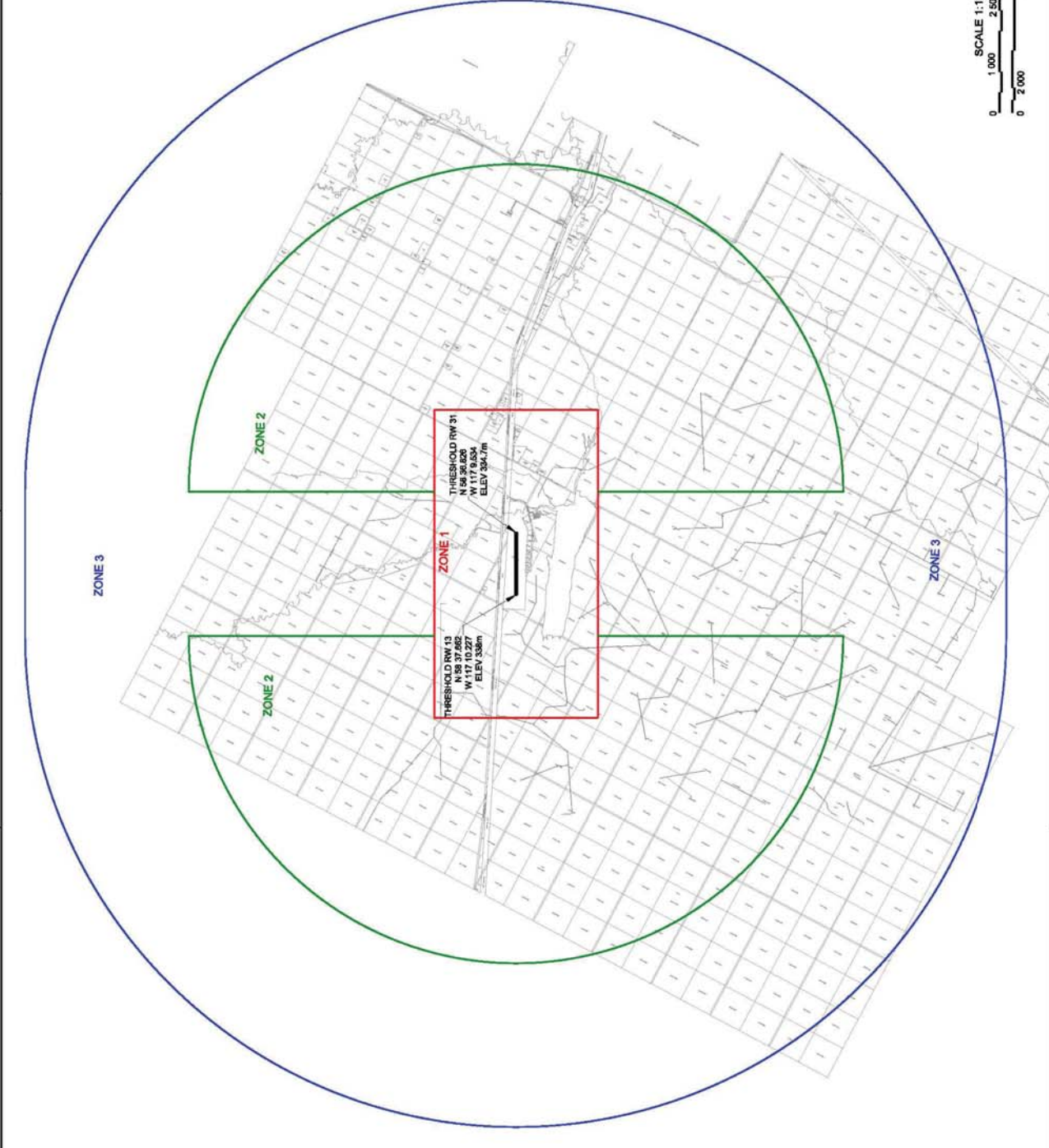
REVISIONS

HIGH LEVEL AIRPORT (CYOJ)
ELECTRONIC FACILITIES PROTECTION MAP

STATE OF ALBERTA PROJECT #	DATE	ISSUE	DATE
FILE #	PROJECT #	SHEET #	SHEET TOTAL
		1	A4

SCALE 1:3 500 @ 11x17
 0 1 000 2 000 5 000 10 000 m

Schedule 6
High Level Airport Vicinity Protection Area
Bird Hazard Zone Map



Note:

Zone 1 means the area defined by a rectangle that fully encloses the runway and extends 3 km beyond the runway threshold in each direction and 2 km on either side of the runway centreline

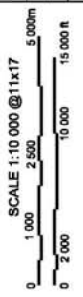
Zone 2 means the area at each end of the runway bounded by a semicircle with its centre on the extended centreline 1 km from the runway threshold and a radius of 8km, excluding the intersections with Zone 1

Zone 3 means the area enclosed by two semicircles, each with its centre on the extended centreline 1 km from opposing runway thresholds and a radius of 12 km, connected at their ends by two lines parallel to the runway centreline, excluding the intersections with Zone 1 and Zone 2.

DESIGNED	DWT	DESIGNED	DWT
DRAWN	DWT	CHECKED	DWT
APPROVED	DWT	APPROVED	DWT
Description		Signature	

HIGH LEVEL AIRPORT (CYOJ)
BIRD HAZARD ZONE MAP
(BIRD ATTRACTION RESTRICTION MAP)

FILE No.	PROJECT No.
DATE	ISSUE No.
2010-DECEMBER	1
SCALE	SHEET No.
1:10 000 @ 11x17	A1



5. FORT VERMILION AIRPORT VICINITY PROTECTION AREA

Schedule 7

Fort Vermilion Airport Vicinity Protection Area Regulations

The Fort Vermilion Airport Vicinity Protection Area consists of the land described below:

In Township 108, Range 12, West of the Fifth Meridian:

Portion of Northeast Quarter, Section 8
Portion of Northeast Quarter, Section 9
Portion of Northwest Quarter, Section 9
Northwest Quarter, Section 14
Northwest Quarter, Section 15
Portion of Northeast Quarter, Section 15
Portion of Southeast Quarter, Section 15
Portion of Southwest Quarter, Section 15
Section 16
Portion of Southeast Quarter, Section 17
Portion of Southwest Quarter, Section 17
Portion of Southeast Quarter, Section 20
East Half, Section 21
Portion of Southwest Quarter, Section 21
Section 22
Portion of Northeast Quarter, Section 23
Portion of Southeast Quarter, Section 23
Portion of Southwest Quarter, Section 23
Northwest Quarter, Section 23
Portion of Northeast Quarter, Section 26
Portion of Southeast Quarter, Section 26
West Half, Section 26
Section 27
North Half, Section 28
Portion of Southeast Quarter, Section 28
Southwest Quarter, Section 28
Portion of Northwest Quarter, Section 29
Portion of Northeast Quarter, Section 29
Portion of Northwest Quarter, Section 30
Portion of Northeast Quarter, Section 30
Portion of Northwest Quarter, Section 31
East Half, Section 31
Portion of Southwest Quarter, Section 31
Section 32
Section 33

Section 34

Portion of Northeast Quarter, Section 35

Portion of Southeast Quarter, Section 35

West Half, Section 35

Fort Vermilion Settlement

Fort Vermilion Indian Reserve 173B

In Township 109, Range 12, West of the Fifth Meridian:

Southwest Quarter, Section 2

South Half, Section 3

Portion of Northeast Quarter, Section 3

Portion of Northwest Quarter, Section 3

South Half, Section 4

Portion of Northeast Quarter, Section 4

Portion of Northwest Quarter, Section 4

South Half, Section 5

Portion of Northeast Quarter, Section 5

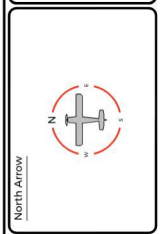
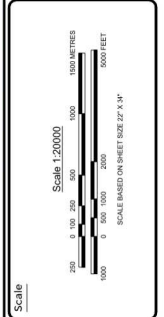
Portion of Northwest Quarter, Section 5

Portion of Southwest Quarter, Section 6

Southeast Quarter, Section 6



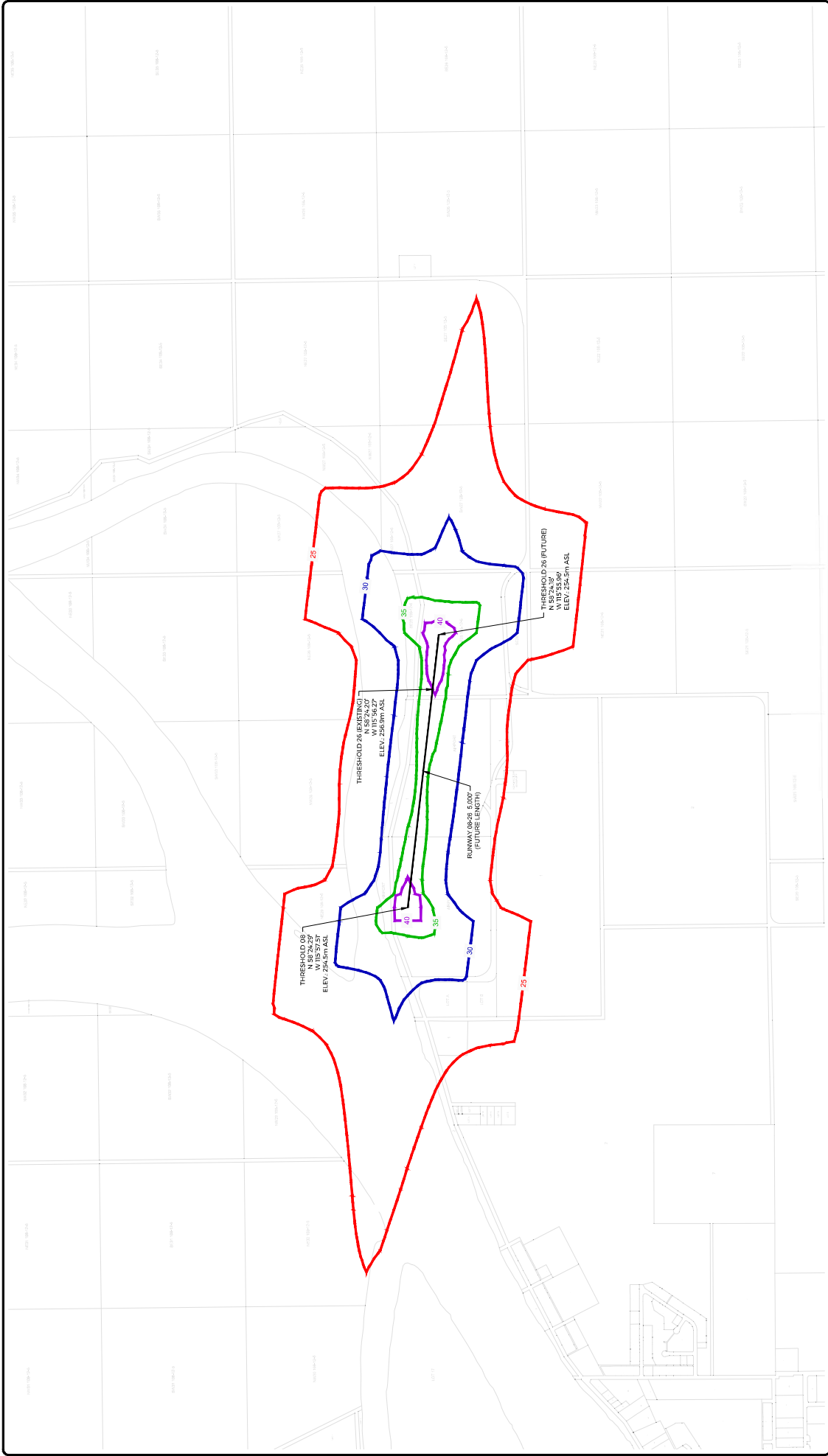
Client	MACKENZIE COUNTY, ALBERTA
Project	MACKENZIE COUNTY AIRPORT VICINITY PROTECTION AREA
Title	FORT VERMILION AIRPORT (CEZA) AIRPORT VICINITY PROTECTION AREA REGULATIONS
Project No.	1811006-01
Schedule	SCHEDULE 7



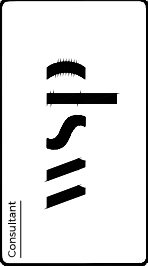
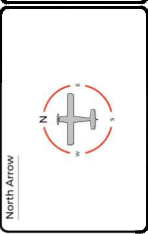
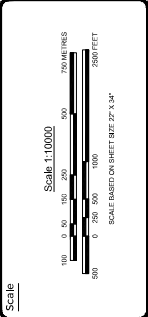
Notes	1. DRAWING IS TO BE USED FOR PLANNING PURPOSES ONLY
Legend	EXISTING AIRPORT PROPERTY BOUNDARY AIRPORT VICINITY PROTECTION AREA BOUNDARY

No.	DATE	REVISION / ISSUE	BY	QC
1	22/04/2021	FINAL	JRM	JH
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Schedule 8
Fort Vermilion Airport Vicinity Protection Area Regulations
Land Use District (Noise Restrictions) Map



PROJECT: MACKENZIE COUNTY, ALBERTA
 WORKS: MACKENZIE COUNTY AIRPORT VICINITY PROTECTION AREA
 TITLE: FORT VERMILION AIRPORT (CEZA) LAND USE DISTRICT (NOISE RESTRICTIONS) MAP
 SHEET NO.: 15-1005-01
 SCHEDULE 8



Notes
 1. DRAWING IS TO BE USED FOR PLANNING PURPOSES ONLY.

Legend

- RUNWAY CENTRELINE
- NOISE 25
- NOISE 30
- NOISE 35
- NOISE 40

No.	DATE	DESCRIPTION	BY	QC

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Schedule 9

Fort Vermilion Airport Vicinity Protection Area

Height Limitations

Basic Strip

6. The basic strip associated with the airport existing runway is an area 150.0 metres in width and 1,339.2 metres in length. The basic strip associated with the airport future runway is an area 150.0 metres in width and 1,644.0 metres in length. The location of the airport existing and future basic strip is shown on the map in Schedule 10.

Take-Off/Approach Surfaces

7. There are take-off approach surfaces associated with each end of the basic strip and in each case the surface is imaginary and consists of an inclined plane that:
 - a. commences at and abuts the end of the basic strip,
 - b. rises at a slope ratio of 1:40 measured from the end of the basic strip,
 - c. diverges outward on each side as it rises, at a rate of 15% measured from the respective projected lateral limits of the basic strip, and
 - d. ends at its intersection with the outer surface.

Transitional Surfaces

8. There is a transitional surface associated with each level limit of the basic strip, and in each case the transitional surface is an imaginary surface consisting of inclined plane that:
 - a. commences at and abuts the lateral limits of the basic strip,
 - b. rises at a slope ratio of 1:7 measured from the lateral limit of the basic strip, and
 - c. ends at its intersection with the outer surface or take-off/approach surface.

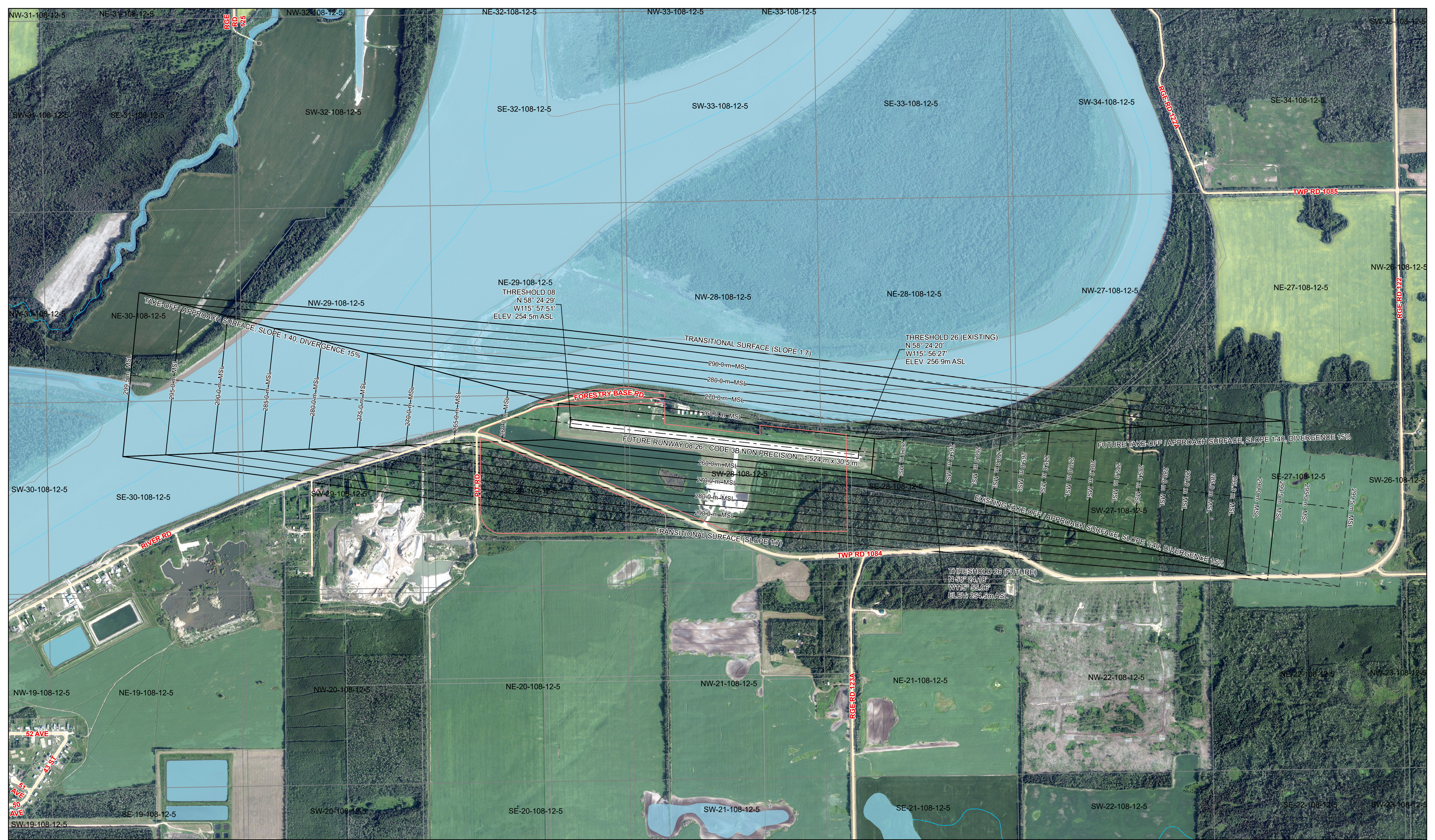
Outer Surface

9. The outer surface of the Protection Area is an imaginary surface consisting of a common plane established at a constant elevation of 45 metres above the airport reference point elevation and extending to the outer limits of the Protection Area.

General

10. The area location of the approach surfaces and transitional surfaces are represented on the map shown in Schedule 10, but, if any discrepancy exists between the description of the approach surfaces or transitional surfaces in this Schedule and their location on the map in Schedule 10, the description in this Schedule prevails.

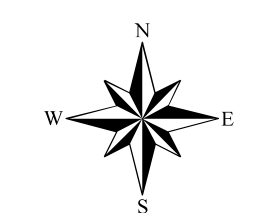
Schedule 10
Fort Vermilion Airport Vicinity Protection Area
Height Limitations Map



MACKENZIE COUNTY
 AIRPORT VICINITY PROTECTION AREA
 FORT VERMILION AIRPORT (CEZ4)
 HEIGHT LIMITATIONS MAP

- LEGEND**
- Roadway
 - Existing Airport Boundary
 - Cadastre
 - OLS for Existing Runway
 - OLS for Future Runway
 - Waterbody
 - Watercourse

SCALE: 1:7,000
 0 50 100 200 300 m
 PAPER: 22 x 34



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Schedule 11
Fort Vermilion Airport Vicinity Protection Area
Bird Hazard Zone Map



Notes:

Primary Bird Hazard Zone means a rectangular area 2 km on each side of the full length of runway centreline. This area then extends and widens from the rectangular surface to 9 km beyond the runway threshold in each direction and to 4km on either side of the runway centreline.

Secondary Bird Hazard Zone means an area extending 4 km beyond the edges of the Primary Hazard Zone.

No.	DATE	DESCRIPTION	BY	QC
1	23/02/2021	FINAL	JRM	JH
0	04/03/2020	DRAFT FOR DISCUSSION	JRM	JH
REVISION / ISSUE				

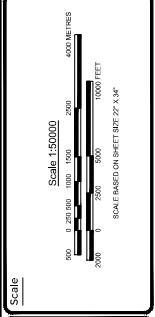
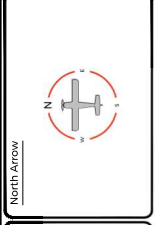
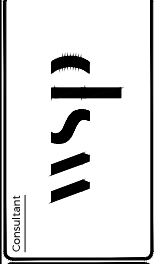
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Notes

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- FOR INFORMATION PURPOSES ONLY. CONSULT LOCAL TRANSPORT CANADA REQUIREMENTS.

Legend

- EXISTING AIRPORT PROPERTY BOUNDARY
- PRIMARY BIRD HAZARD ZONE
- SECONDARY BIRD HAZARD ZONE



PROJECT	MACKENZIE COUNTY, ALBERTA
NO. 1414	MACKENZIE COUNTY AIRPORT VICINITY PROTECTION AREA
TITLE	FORT VERMILION AIRPORT (CEEZ) BIRD HAZARD ZONE MAP
PROJECT NO.	1B-11005-01
SCHEDULE 11	

6. LA CRETE AIRPORT VICINITY PROTECTION AREA

Schedule 12

La Crete Airport Vicinity Protection Area Regulations

The La Crete Airport Vicinity Protection Area consists of the land described below:

In Township 106, Range 15, West of the Fifth Meridian:

Section 1

Section 2

East Half, Section 3

Portion of Northwest Quarter, Section 3

Portion of Southwest Quarter, Section 3

Portion of Northeast Quarter, Section 10

Portion of Northwest Quarter, Section 10

Portion of Southwest Quarter, Section 10

Southeast Quarter, Section 10

Section 11

Section 12

Portion of Northeast Quarter, Section 13

Portion of Northwest Quarter, Section 13

South Half, Section 13

Portion of Southwest Quarter, Section 14

Southeast Quarter, Section 14

Portion of Northeast Quarter, Section 14

Portion of Northwest Quarter, Section 14

Portion of Southeast Quarter, Section 15

In Township 106, Range 14, West of the Fifth Meridian:

Section 5

Section 6

Section 7

Portion of Northeast Quarter, Section 8

West Half, Section 8

Portion of Southeast Quarter, Section 8

Portion of Southwest Quarter, Section 17

Portion of Northeast Quarter, Section 18

Portion of Northwest Quarter, Section 18

Southwest Quarter, Section 18

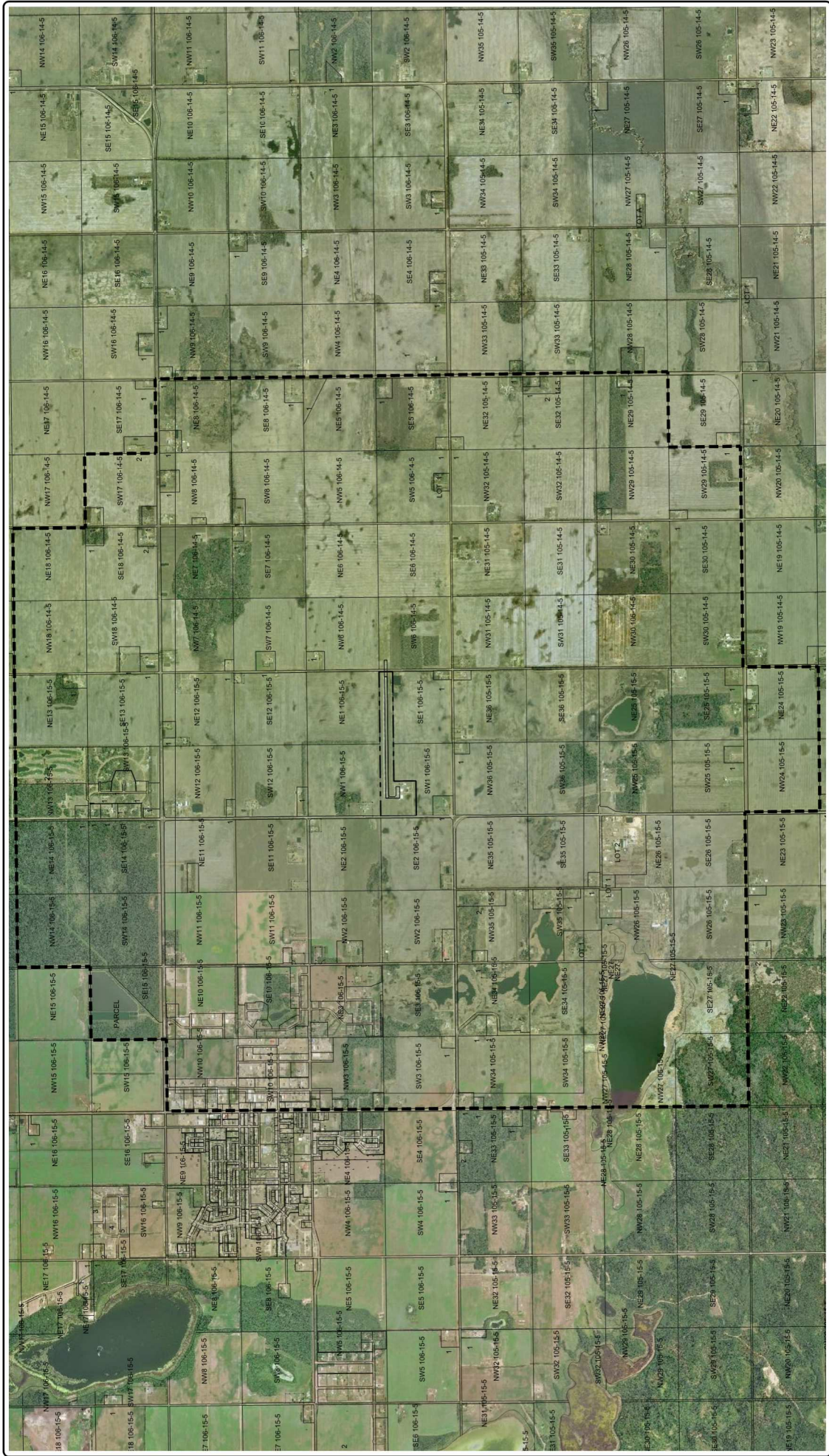
Portion of Southeast Quarter, Section 18

In Township 105, Range 15, West of the Fifth Meridian:

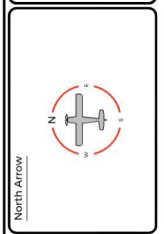
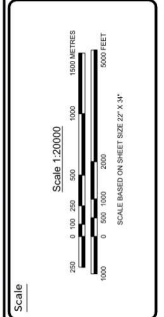
Section 25

North Half, Section 26
Portion of Southwest Quarter, Section 26
Portion of Southeast Quarter, Section 26
Portion of Northeast Quarter, Section 27
Northeast Quarter, Section 34
Portion of Northwest Quarter, Section 34
Portion of Southwest Quarter, Section 34
Southeast Quarter, Section 34
Section 35
Section 36

In Township 105, Range 14, West of the Fifth Meridian:
Northwest Quarter, Section 29
North Half, Section 30
Portion of Southwest Quarter, Section 30
Portion of Southeast Quarter, Section 30
Section 31
Portion of Northeast Quarter, Section 32
West Half, Section 32
Portion of Southeast Quarter, Section 32



Client: MACKENZIE COUNTY, ALBERTA
 Project: MACKENZIE COUNTY AIRPORT VICINITY PROTECTION AREA
 Title: LA CRETE AIRPORT (CFNS) AIRPORT VICINITY PROTECTION AREA REGULATIONS
 Project No.: 18F11006-01
 Schedule: 12



Notes:
 1. DRAWING IS TO BE USED FOR PLANNING PURPOSES ONLY.
 Legend:
 DASHED LINE: EXISTING AIRPORT PROPERTY BOUNDARY
 SOLID LINE: PROPOSED AIRPORT VICINITY PROTECTION AREA BOUNDARY

No.	DATE	REVISION / ISSUE	BY	QC
0	2/20/2020	FINAL	JRM	JH

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Schedule 13

**La Crete Airport Vicinity Protection Area
Land Use District (Noise Restrictions) Map**

Schedule 14

La Crete Airport Vicinity Protection Area

Height Limitations

Basic Strip

- 11.** The basic strip associated with the airport existing runway is an area 150.0 metres in width and 1,462.0 metres in length. The basic strip associated with the airport future runway is an area 150.0 metres in width and 1,644.0 metres in length. The location of the airport existing and future basic strip is shown on the map in Schedule 15.

Take-Off / Approach Surfaces

- 12.** There are take-off / approach surfaces associated with each end of the basic strip and in each case the surface is imaginary and consists of an inclined plane that:
- commences at and abuts the end of the basic strip,
 - rises at a slope ratio of 1:40 measured from the end of the basic strip,
 - diverges outward on each side as it rises, at a rate of 15% measured from the respective projected lateral limits of the basic strip, and
 - ends at its intersection with the outer surface.

Transitional Surfaces

- 13.** There is a transitional surface associated with each level limit of the basic strip, and in each case the transitional surface is an imaginary surface consisting of inclined plane that:
- commences at and abuts the lateral limits of the basic strip,
 - rises at a slope ratio of 1:7 measured from the lateral limit of the basic strip, and
 - ends at its intersection with the outer surface or take-off/approach surface.

Outer Surface

- 14.** The outer surface of the Protection Area is an imaginary surface consisting of a common plane established at a constant elevation of 45 metres above the airport reference point elevation and extending to the outer limits of the Protection Area.

General

- 15.** The area location of the approach surfaces and transitional surfaces are represented on the map shown in Schedule 15, but, if any discrepancy exists between the description of the approach surfaces or transitional surfaces in this Schedule and their location on the map in Schedule 15, the description in this Schedule prevails.

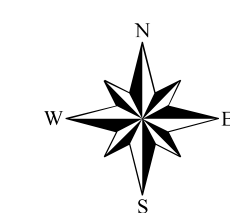
Schedule 15
La Crete Airport Vicinity Protection Area
Height Limitations Map



MACKENZIE COUNTY
 AIRPORT VICINITY PROTECTION AREA
 LA CRETE AIRPORT (CFN5)
 HEIGHT LIMITATIONS MAP

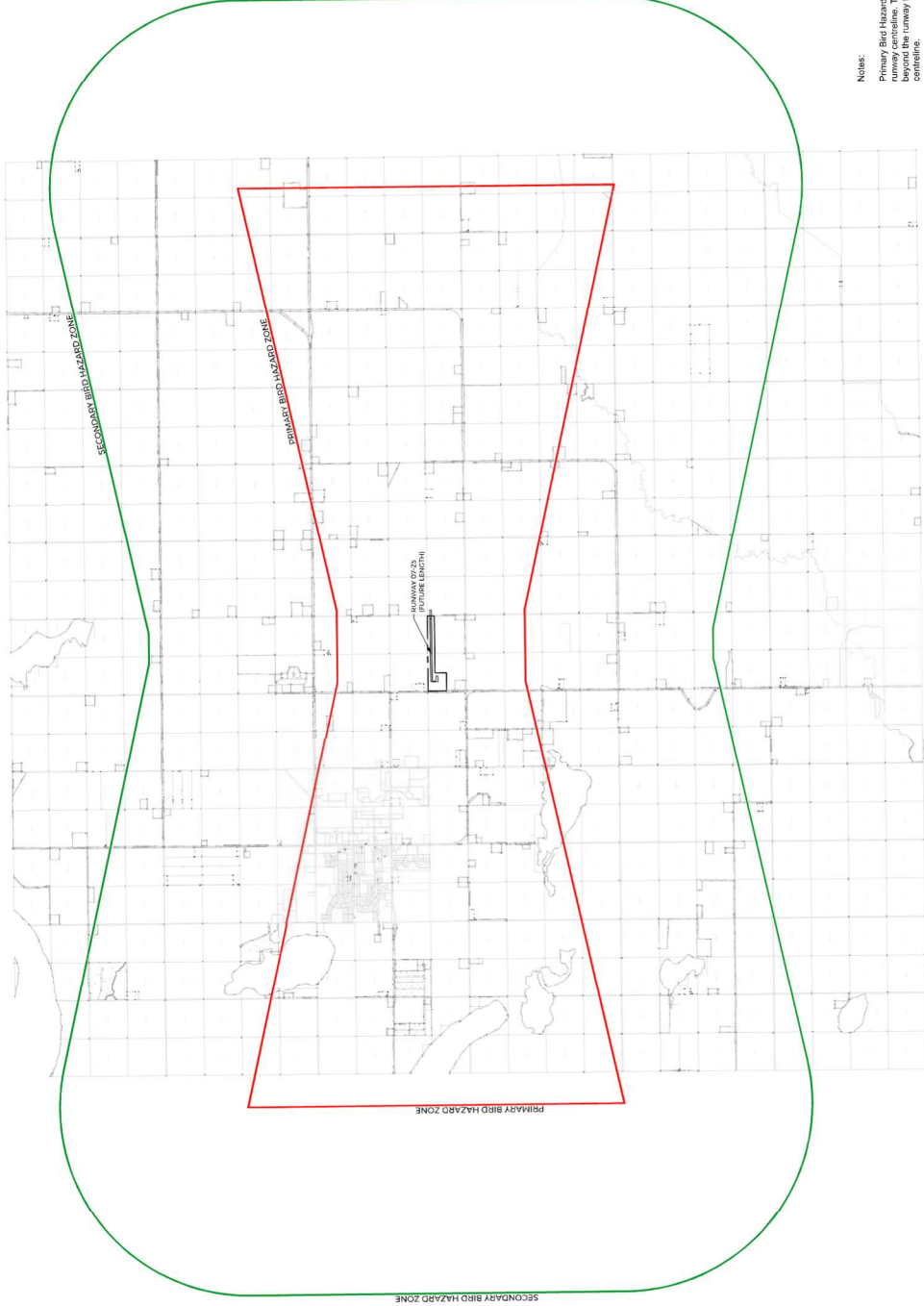
- LEGEND**
- Roadway
 - Existing Airport Boundary
 - Cadastre
 - OLS for Existing Runway
 - OLS for Future Runway
 - Waterbody
 - Watercourse

SCALE: 1:7,000
 0 50 100 200 300
 m
 PAPER: 22 x 34



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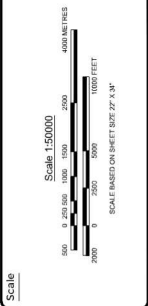
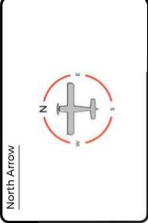
Schedule 16
La Crete Airport Vicinity Protection Area
Bird Hazard Zone Map



Notes:
 Primary Bird Hazard Zone means a rectangular area 2 km on each side of the full length of runway centreline. This area then extends and widens from the rectangular surface to 9 km beyond the runway threshold in each direction and to 4km on either side of the runway centreline.
 Secondary Bird Hazard Zone means an area extending 4 km beyond the edges of the Primary Hazard Zone.

No.	DATE	DESCRIPTION	BY	QC
1	23/02/2023	FINAL	JHM	JH
0	06/03/2020	DRAW FOR DISCUSSION	JHM	JH

NOTES
 1. DRAWING IS TO BE USED FOR PLANNING PURPOSES ONLY
 2. THIS DRAWING IS NOT TO BE USED FOR PERMITS OR TRANSPORT CANADA REQUIREMENTS
 Legend
 - - - - - DISTRICT AIRPORT PROPERTY BOUNDARY
 - - - - - DISTRICT AIRPORT PROPERTY BOUNDARY
 - - - - - PRIMARY BIRD HAZARD ZONE
 - - - - - SECONDARY BIRD HAZARD ZONE



CLIENT	MACKENZIE COUNTY, ALBERTA
PROJECT	MACKENZIE COUNTY AIRPORT VICINITY PROTECTION AREA
TITLE	LA CRETE AIRPORT (CFNS) BIRD HAZARD ZONE MAP
PROJECT NO.	181-11006-01
SHEET NO.	SCHEDULE 16

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7. RAINBOW LAKE AIRPORT VICINITY PROTECTION AREA

Schedule 17

Rainbow Lake Airport Vicinity Protection Area Regulations

The Rainbow Lake Airport Vicinity Protection Area consists of the land described below:

In Township 109, Range 9, West of the Sixth Meridian:

Northeast Quarter, Section 22

North Half, Section 23

Section 24

Southwest Quarter, Section 25

South Half, Section 26

All of Plan 5445 within the Northwest Quarter of Section 26

Section 27

North Half, Section 28

Southeast Quarter, Section 28

Northeast Quarter, Section 29

East Half, Section 31

South Half, Section 32

Northwest Quarter, Section 32

South Half, Section 33

Southwest Quarter, Section 34

In Township 109, Range 8, West of the Sixth Meridian:

Southwest Quarter, Section 19

**Rainbow Lake
Airport Vicinity Protection Area**



NOT TO SCALE



NOT RESPONSIBLE FOR ERRORS OR OMISSIONS

DISCLAIMER

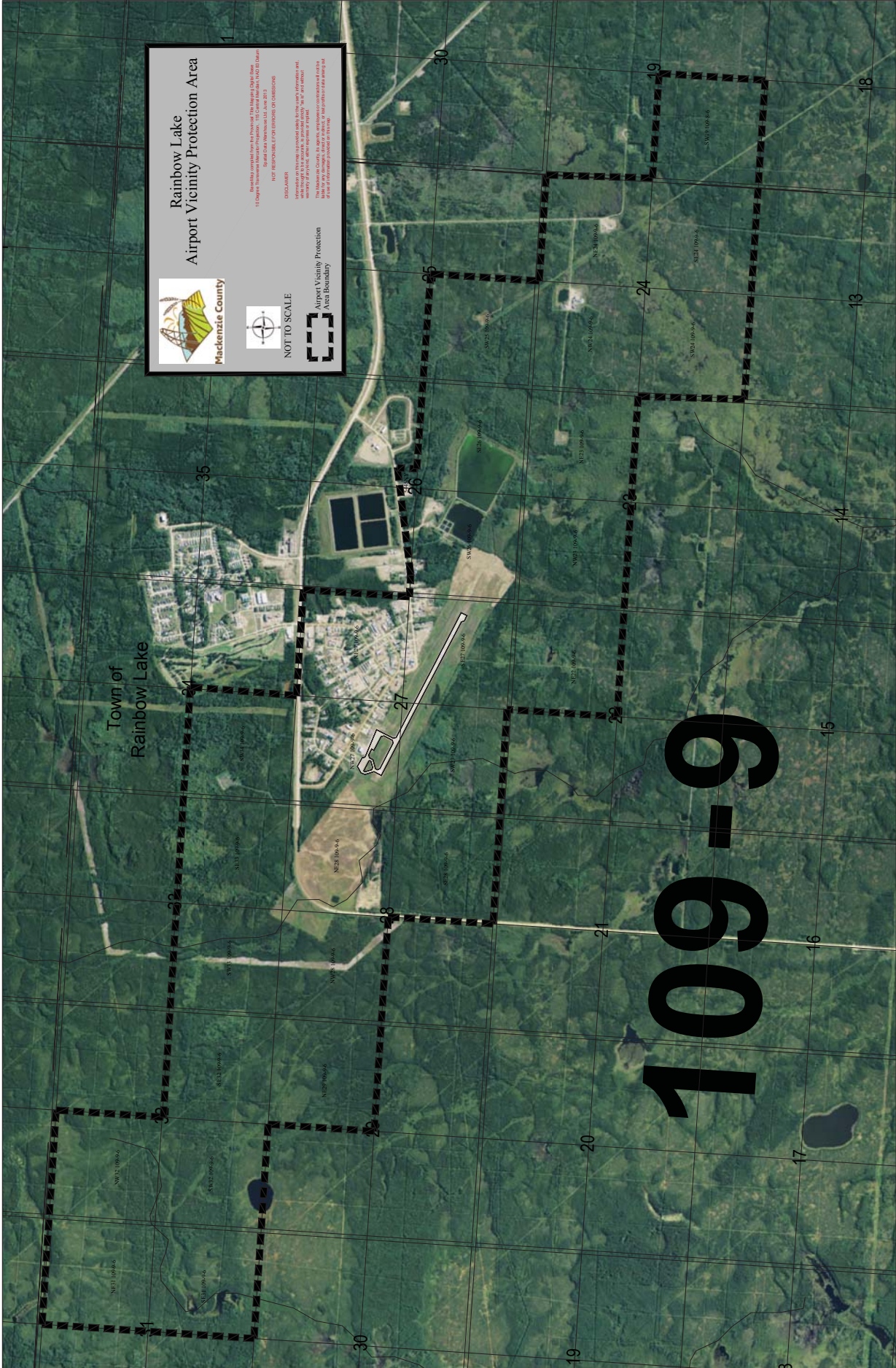
Information compiled from the Provincial Topographic Digital Lines 1:50,000 Scale and the National Topographic Database (NTD) 1:50,000 Scale. The information is provided as a service and is not intended to be used for any purpose other than that for which it was intended. The user assumes all liability for any errors or omissions. The user is advised to verify the information provided in this document with the appropriate authorities before using it for any purpose other than that for which it was intended. The user is also advised to consult the appropriate authorities for any information that may be required for the purpose of this document.

Legend

- Airport Vicinity Protection Area Boundary
- Aerial Boundary

Town of
Rainbow Lake

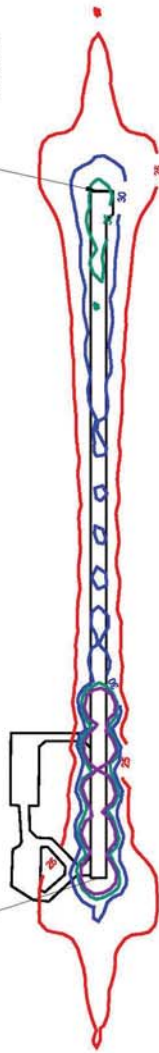
109-9



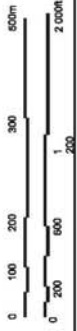
Schedule 18
Rainbow Lake Airport Vicinity Protection Area
Land Use District (Noise Restrictions) Map

THRESHOLD RW 08
 N 58 29.83
 W 118 23.12
 ELEV 535.2m

THRESHOLD RW 27
 N 58 29.33
 W 110 23.52
 ELEV 528.4 m



SCALE 1: 1 000 @ 11x17



SNC-LAWRENCE
 3000 North Georgia Street
 Suite 1000
 Charlotte, NC 28207

REV	DATE	DESCRIPTION	BY	CHKD

REVISIONS

RAINBOW LAKE AIRPORT (CYOP)

NOISE CONTOUR MAP
 (LAND USE DISTRICT MAP)

PROJECT NO. _____ DATE 2010-DECEMBER

SCALE NO. _____ SHEET NO. 1 OF 1 DRAWING NO. A1

Schedule 19

Rainbow Lake Airport Vicinity Protection Area

Height Limitations

Basic Strip

- 16.** The basic strip associated with the airport runway is an area 91.4 metres in width and 1,493.5 metres in length, the location of which is shown on the map in Schedule 20.

Take-off / Approach Surfaces

- 17.** There are take-off / approach surfaces associated with each end of the basic strip and in each case the surface is imaginary and consists of an inclined plane that:
- commences at and abuts the end of the basic strip,
 - rises at a slope ratio of 1:50 measured from the end of the basic strip,
 - diverges outward on each side as it rises, at a slope ratio of 1:15 measured from the respective projected lateral limits of the basic strip, and
 - ends at its intersection with the outer surface.

Transitional Surfaces

- 18.** There is a transitional surface associated with each level limit of the basic strip, and in each case the transitional surface is an imaginary surface consisting of an inclined plane that:
- commences at and abuts the lateral limit of the basic strip,
 - rises at a slope ratio of 1:7 measured from the lateral limit of the basic strip, and
 - ends at its intersection with the outer surface or a take-off/approach surface.

Outer Surface

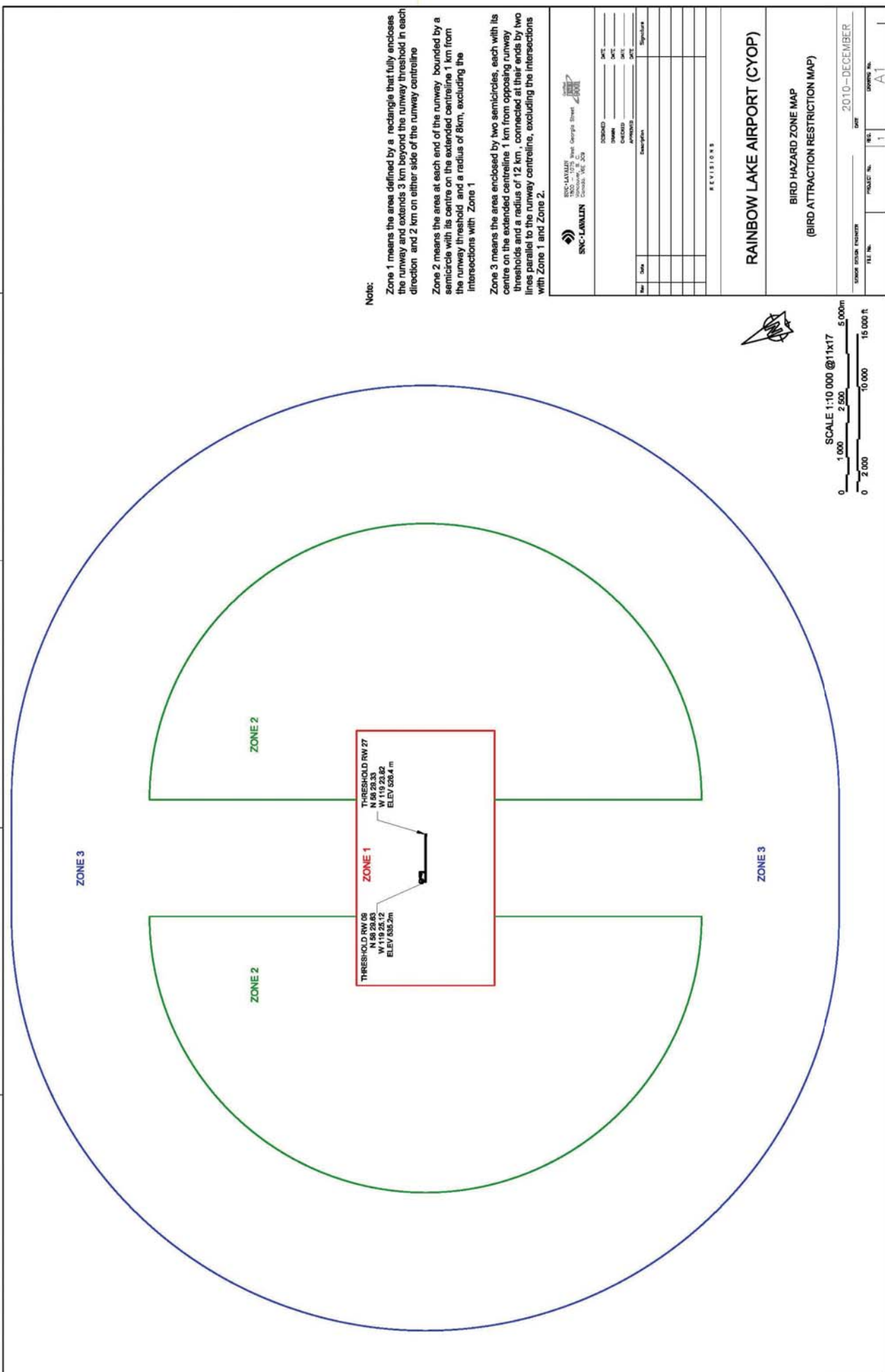
- 19.** The outer surface of the Protection Area is an imaginary surface consisting of a common plane established at a constant elevation of 45 metres above the airport reference point elevation and extending to the outer limits of the Protection Area.

General

- 20.** The area location of the take-off/approach surfaces and transitional surfaces are represented on the map shown in Schedule 20, but, if any discrepancy exists between the description of the take-off/approach surfaces or transitional surfaces in this Schedule and their location on the map in Schedule 20, the description in this Schedule prevails.

Schedule 20
Rainbow Lake Airport Vicinity Protection Area
Height Limitations Map

Schedule 21
Rainbow Lake Airport Vicinity Protection Area
Bird Hazard Zone Map



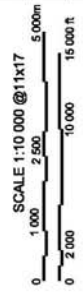
Note:

Zone 1 means the area defined by a rectangle that fully encloses the runway and extends 3 km beyond the runway threshold in each direction and 2 km on either side of the runway centreline

Zone 2 means the area at each end of the runway bounded by a semicircle with its centre on the extended centreline 1 km from the runway threshold and a radius of 8km, excluding the intersections with Zone 1

Zone 3 means the area enclosed by two semicircles, each with its centre on the extended centreline 1 km from opposing runway thresholds and a radius of 12 km, connected at their ends by two lines parallel to the runway centreline, excluding the intersections with Zone 1 and Zone 2.

SNC-LAWALIN 1000, rue de la Loi Québec, QC G1R 5K5		DRAWN BY: _____ CHECKED BY: _____ APPROVED BY: _____ Description: _____ Date: _____ Signature: _____
REVISIONS		



RAINBOW LAKE AIRPORT (CYOP)

BIRD HAZARD ZONE MAP
(BIRD ATTRACTION RESTRICTION MAP)

PROJECT NO.	REV.	DATE
1	A1	2010-DECEMBER
SHEET NO.	TOTAL SHEETS	DATE
1	1	2010-DECEMBER