

ADMINISTRATIVE REPORT

TO:	Planning Committee
FROM:	Administration
DATE:	February 17, 2025
RE:	Zoning Amendment – Airport Approach Light Towers

ISSUE

An application to amend the zoning of City owned Lot 1267, Quad 105D/11, municipally known as 100 Robert Service Way, and approximately 2.24 ha of adjacent Commissioner's land, from PS – Public Service to PSx – Public Service (modified), to allow for the installation of airport approach light towers of up to 60 metres in height.

REFERENCE

- [Zoning Bylaw 2012-20](#)
- [Whitehorse 2040 Official Community Plan](#)
- [Land Use Master Plan Policy 2024-04](#)
- [Federal Canadian Aviation Regulations – SOR/96-433](#)
- [Aerodromes Standards and Recommended Practices - TP 312](#)
- Location Map (Attachment 1)
- Proposed Zoning Amendment Bylaw 2025-16 (Attachment 2)

HISTORY

An application was received on behalf of the Government of Yukon (YG) to rezone 100 Robert Service Way, and a 2.24 ha parcel of adjacent Commissioner's land, from PS – Public Service to PSx – Public Service (modified) to allow for the construction of airport approach light towers, up to 60 metres high, as required under Transport Canada regulations. The zoning of this site currently allows a maximum height of 20 metres and therefore a Zoning Bylaw amendment is required to allow this height.

Background

YG is currently undertaking a major infrastructure renewal project at the Erik Nielsen Whitehorse International Airport (the airport). The project aims to modernize the airport with improved infrastructure, reconstruction of the existing main runway, and electrical infrastructure which are at the end of their life cycles.

As part of the electrical upgrades, the project includes improvements to the airport's southern approach lighting system to meet federal Canadian Aviation Regulations (CAR) – SOR/96-433 and Aerodrome Standards and Recommended Practices – TP312. These regulations determine the towers' location, height, design, and light intensity to ensure safe landings, especially in low visibility and ensure consistency across Canada's public transportation system.

Without these upgrades, the airport's main runway would experience a significantly reduced service level, impacting most jet aircraft. Due to elevation changes between the runway and the subject site, tower heights will vary, with the tallest reaching approximately 57 metres to align the lights with the runway. While some towers fall within the escarpment setback zone, a slope stability assessment has confirmed the area is stable.

The applicant has engaged with the City, Yukon Cross Country Motorcycle Association (YCCMA), Ta'an Kwach'an Council (TKC), and Kwanlin Dün First Nation, with no concerns raised so far. Stakeholder engagement was said to continue throughout the project.

Development Review Committee (DRC) and Master Plan Waiver

The proposed zoning amendment and waiver were jointly reviewed at the February 5, 2025, DRC meeting, with no concerns raised. As 100 Robert Service Way is owned by the City, it was noted at the DRC meeting that land use rights on this lot will be granted through easement agreements following rezoning, which is a common practice to ensure access for infrastructure operation and upkeep. The current lights are located within airport property but the new proposed lights fall within the City's snow storage area. Concerns about the loss of snow storage were raised at DRC as any loss of space will impact current operations. The City and YG are in early discussions on a potential relocation of the snow storage area impacted by the approach lights. Before Administration considers issuing an easement an agreement on the snow storage area will be required.

The 17.7 ha site triggered the master plan requirement under OCP policy 13.22, leading the applicant to request a waiver under section 47 of the Land Use Master Plan Policy. The waiver was reviewed at the DRC meeting and subsequently approved on February 6, 2025 by the Director of Operations and the Director of Development Services as the project aligns with federal aviation regulations and does not introduce new uses or require access from surrounding properties.

Proposed Schedule

The proposed schedule for the Zoning Bylaw amendment is:

Planning Committee:	February 17, 2025
First Reading:	February 24, 2025
Newspaper Ads:	March 7 and 14, 2025
Public Hearing:	March 24, 2025
Report to Committee:	April 22, 2025
Second and Third Reading:	April 28, 2025

ALTERNATIVES

1. Proceed with the amendment under the bylaw process; or
2. Do not proceed with the amendment.

ANALYSIS

Site Context

The site is located between Robert Service Way and the Alaska Highway, south of the airport, bordered to the west by Commissioner's land zoned Environmental Protection and to TKC settlement land zoned Future Planning to the southeast. The site contains an existing municipal snow dump, an access road, existing airport approach light towers, power lines, and a 6.9-hectare area leased by YCCMA, which includes associated recreational amenities. While an escarpment separates the site from the airport parcel, the remaining site is mostly flat and largely cleared of trees. However, some trees may need to be removed from the forested Commissioner's land parcel to accommodate two towers and ensure access. The proposed approach light towers will be positioned on the southwest side of the lot, aligned with the existing towers, which will be removed.

Lighting Impact

The system requires 12 approach light towers placed along the extended runway centerline at 60-metre intervals over 720 metres, to provide adequate visual cues for pilots during approach. These lights consist of a mix of steady-burning and flashing signals, typically activated only when an aircraft is landing. Their intensity has five adjustable settings, which are controlled based on NavCanada operational policies, weather conditions, and pilot requests, to ensure optimal visibility. At maximum intensity these lights are roughly twice as bright as a strong streetlight. Angled upward, the lights minimize direct glare at ground level. However, their brightness and flashing elements may contribute to a brighter night sky and potentially disrupt nocturnal wildlife. Since lighting requirements are set by the Aeronautics Act and CAR, mitigating light pollution (e.g., through shielding) is not an option. However, as the system operates only during landings or maintenance, its overall impact remains intermittent rather than constant.

2040 Official Community Plan (OCP)

The subject site is designated as Public Service in the OCP. The Public Service designation is intended to accommodate publicly operated facilities and institutions and lists aerodromes as one of the compatible uses. The airport is a critical asset for Whitehorse, as recognized in OCP Policy 11.29. To support safe operations and potential future expansions, OCP Policy 15.13.4 commits the City to collaborating with YG to ensure surrounding land uses are compatible with airport activities and ongoing operations.

Zoning Bylaw

The purpose of the PS zone is to provide a zone for public and privately owned facilities of an institutional or community service nature. The proposed approach light towers would fall under the definition of 'public infrastructure' which is a permitted use in all zones. The PS zone specifies a maximum height of 20 metres.

Due to topography, aligning the lights with the runway's line of sight requires installing towers to accommodate elevation differences. To meet regulatory requirements, the tallest tower must be 57 metres high. Therefore, Administration is recommending that a special

modification be added to allow the height limit increase to a maximum of 60 metres but limited to aviation-related public infrastructure.

The special modification to allow this height increase is not expected to cause any more noise, traffic, or light nuisance factors to surrounding properties than the uses already permitted on the subject site under the current PS zone.

ADMINISTRATIVE RECOMMENDATION

THAT Council direct that Bylaw 2025-16, a bylaw to amend the zoning of 100 Robert Service Way, and approximately 2.24 ha of adjacent Commissioner's land, from PS – Public Service to PSx – Public Service (modified), be brought forward for consideration under the bylaw process.



DATE:
2/6/2025 4:53 PM

FILE:
Z-10-2024 - Airport Approach
Light Towers



Subject Site

CITY OF WHITEHORSE - PLANNING AND SUSTAINABILITY SERVICES

Zoning Bylaw Amendment

A proposal to amend the zoning of 100 Robert Service Way as well as 2.24 ha of vacant Commissioner's land from PS - Public Service to PSx(x) - Public Service modified to allow for the installation of airport approach light towers of up to 60 m in height.



CITY OF WHITEHORSE
BYLAW 2025-16

A bylaw to amend Zoning Bylaw 2012-20

WHEREAS section 289 of the *Municipal Act* provides that a zoning bylaw may prohibit, regulate and control the use and development of land and buildings in a municipality; and

WHEREAS section 294 of the *Municipal Act* provides for amendment of the Zoning Bylaw; and

WHEREAS it is deemed desirable that the City of Whitehorse Zoning Bylaw be amended to allow for the development of airport approach light towers of up to 60 m in height at Lot 1267 QUAD 105D/11, Plan 2009-0088 LTO YT, municipally known as 100 Robert Service Way, and 2.24 ha of adjacent Commissioner's land;

NOW THEREFORE the council of the municipality of the City of Whitehorse, in open meeting assembled, hereby ENACTS AS FOLLOWS:

1. Section 12.4.7 of the Zoning Bylaw 2012-20 is hereby amended by adding a new subsection 12.4.7 e), as follows:

“e) Lot 1267 QUAD 105D/11, Plan 2009-0088 LTO YT, and 2.24 ha of adjacent Commissioner's land is designated PSx with the special modification being that the maximum height for aviation related public infrastructure is 60m.”
2. The zoning maps attached to and forming part of Zoning Bylaw 2012-20 are hereby amended by changing the zoning of 100 Robert Service Way from PS – Public Service to PSx(e) – Public Service (Modified) as indicated on Appendix A attached hereto and forming part of this bylaw.
3. This bylaw shall come into force and effect upon the final passing thereof.

FIRST READING:

PUBLIC NOTICE:

PUBLIC HEARING:

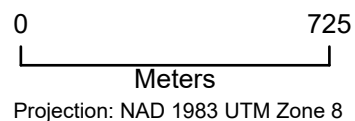
SECOND READING:

THIRD READING and ADOPTION:

Kirk Cameron, Mayor

Corporate Services

AIRPORT, LOBIRD
ROBERT SERVICE WAY



Consolidation date:
September 13, 2024