



Site Selection and Justification Report
Telecommunications Antenna System Proposal

Union Tower Site

89 Centennial Road, Leeds and the Thousand Islands ON, K0E 1L0



Location Coordinates: 44.4504662, -75.9906085

Tower Height: 46 metres

Structure Type: Freestanding Telecommunications Tower

Purpose: Wireless Broadband Infrastructure Deployment

Submitted by:

Kingston Online Services

303 Bagot St., Suite 16A, Kingston ON, K7K 5W7

planning@kos.net | 613-549-8667



1. Introduction

This report provides a justification for the proposed installation of a 46 metre self-supporting telecommunications tower at 89 Centennial Road in the Township of Leeds and the Thousand Islands. The facility, proposed by Kingston Online Services (KOS), is intended to expand high-speed fixed wireless internet service delivering speeds of up to 250 Mbps to local residences while also providing critical backhaul connectivity to other sites within the Township of Leeds and the Thousand Islands and the Township of Front of Yonge.

The report demonstrates that alternative sites and co-location opportunities have been considered, and that the proposed site minimizes environmental, visual, and land use impacts while meeting the technical requirements of the network.

2. Site Selection Process

- **Alternative Sites Considered**

A search ring was defined based on topography and existing service gaps. Several alternative parcels within this ring were reviewed; however, they were either heavily treed, lacked suitable access, or contained environmental constraints.

- **Co-location Opportunities**

A review of the ISED database and municipal records confirmed there are no existing towers within the required coverage area. Nearby structures are either too low or geographically offset to address the identified service gap.

- **Justification for Proposed Site**

The property at 89 Centennial Road is centrally located within the identified coverage gap, has reliable access from Centennial Road, and sits on cleared land that avoids sensitive features. The landowner has consented to host the facility, making this the most technically and practically viable option with minimal environmental impact.

3. Existing Conditions

- **Vegetation and Screening Features**

The tower site is located on cleared land with surrounding forest edges. These trees provide natural screening for the base while allowing the tower to achieve necessary line-of-sight.

- **Address & Access**

Direct access is available from Centennial Road, a municipal roadway with safe, low-volume traffic suitable for construction and maintenance.

- **Natural Heritage Features**

A review using Township GIS and provincial mapping indicates no regulated wetlands, ANSIs, or



significant woodlots directly affected by the proposal. This has been confirmed by the Cataraqui Region Conservation Authority.

- **Natural Hazard Features**
No floodplains, steep slopes, or erosion hazards are present at the tower location.
- **Proximity of Public Roadways**
Existing vegetation provides partial screening, reducing visibility from Centennial Road.

4. Design and Technical Rationale

- **Proposed Height**
The proposed 46 metre tower height is necessary to clear the local tree canopy (averaging 20 metres to 25 metres) and rolling terrain. A shorter structure would not provide reliable line-of-sight coverage or effective backhaul connectivity.
- **Structure Design and Colouration**
The facility will be a self-supporting lattice tower, finished in natural galvanized steel to blend with the sky. Unlike larger cellular installations, no compound is required. A small network cabinet will be installed at the base, and the tower will be equipped with anti-climb protection for safety.
- **Lighting**
Under Transport Canada Standard 621, structures under 90 metres in height are normally not required to have obstruction lighting unless identified as a concern through NAV CANADA's aeronautical assessment.

For this proposal, Kingston Online Services has submitted applications to NAV CANADA and Transport Canada and is awaiting a determination. Should lighting be required, shielded red obstruction lighting will be installed to minimize visual impact

5. Potential Impacts and Mitigation

- **Residential Uses**
The nearest residence is located over 120 metres from the proposed site. With vegetation screening and the slim profile of the lattice tower, visual impacts will be minimal. No noise, vibration, or emissions beyond federal standards are anticipated.
- **Viewscales**
The slim lattice profile minimizes visual impact. While visible from some vantage points, surrounding trees reduce prominence.



- **Institutional and Recreational Uses**

There are no schools, parks, or community facilities in close proximity to the site. No adverse impacts on recreational activities are anticipated.

- **Land Use**

The proposed facility footprint is approximately 6 square metres (including the tower and small equipment cabinet). This is a negligible impact on the productive use of the surrounding land.

- **Other Impacts**

The installation will comply with all applicable regulations, including ISED's CPC-2-0-03 and Health Canada's Safety Code 6, ensuring no risk to public health or safety. Access will use an existing farm entrance, avoiding new disturbance.

6. Conclusion

The proposed telecommunications tower 89 Centennial Road represents the most appropriate location to address the significant coverage gap in the Union, Tilly and Rapid Valley area while also providing downstream backhaul for towers in the Fronte of Yonge. Alternative parcels and co-location opportunities were evaluated but found unsuitable.

This site offers:

- Optimal technical performance at 46 metre height
- Minimal impact on environmental and cultural features
- Compatibility with surrounding agricultural and rural land uses
- Safe, efficient access from an existing public road

Based on these considerations, the site is justified as the preferred and most viable location for the proposed facility.

Roll: 081281204012004

6 m
84.1 m

89

Legend

-  Proposed 46 m Tower
-  Tower Pad (2.1 m × 2.1 m)
-  Existing Road Access
-  30 m Setback
-  Setback Distances
-  Parcel Boundary
-  Civic Address

Proposed 46 m Self-Support Telecommunications Tower 89 Centennial Road, Leeds and the Thousand Islands

Prepared by: Kingston Online Services
Date: 2025-09-03
Scale: 1:1500

Latitude: 44.4504662°N
Longitude: 75.9906085 °W



0 37.5 75 150 Metres



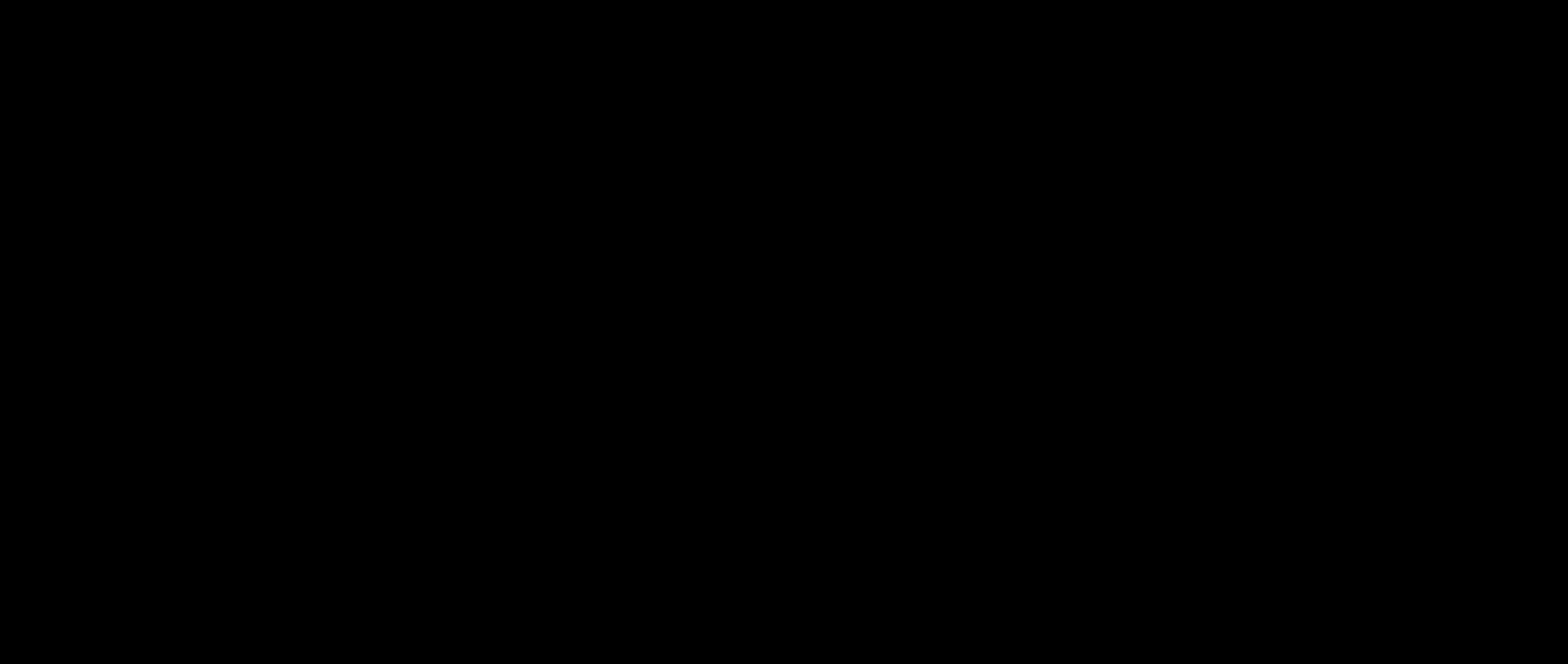
LAND
REGISTRY
OFFICE #28

44224-0084 (LT)

PAGE 1 OF 1
PREPARED FOR KOS
ON 2025/10/01 AT 09:57:57

ONLAND

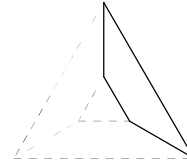
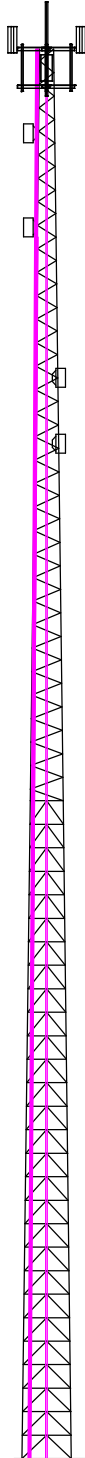
PROPERTY DESCRIPTION: PT LT 23 CON 5 LANSDOWNE PT 1 28R7756; LEEDS/THOUSAND ISLANDS



NOTE: ADJOINING PROPERTIES SHOULD BE INVESTIGATED TO ASCERTAIN DESCRIPTIVE INCONSISTENCIES, IF ANY, WITH DESCRIPTION REPRESENTED FOR THIS PROPERTY.
NOTE: ENSURE THAT YOUR PRINTOUT STATES THE TOTAL NUMBER OF PAGES AND THAT YOU HAVE PICKED THEM ALL UP.

Leg	50 KSI	SR 2-3/4" Ø	SR 2-1/2" Ø	SR 2-1/4" Ø	SR 2" Ø	A	B	C	D	E	
Diagonal	44 KSI	SR 1" Ø			SR 7/8" Ø		SR 3/4" Ø				F
Horizontal	44 KSI	SR 1-1/4" Ø	SR 1-1/8" Ø	SR 1" Ø	(3) -5/8						1.5'
Brace Bolts	A325										
Face Width	5.3'										
Panel Height # Panels	28 @ 2.5'			64 @ 1.3'							

150.0'
140.0'
130.0'
120.0'
110.0'
100.0'
80.0'
70.0'
60.0'
50.0'
30.0'
0.0'



NOTES:

1. Limit State Design
2. FACTORED LOADING
3. TYPICAL DESIGN NOT FOR CONSTRUCTION
4. Max T/T=<1.65Deg at Yr10 wind for HP2

ANTENNA LIST

NO	ELEV	ANTENNA	TX-LINE
1-2	150.9'	(2) Tarana BN	(4)-Fiber
3	141.1'	(1) GX-80 2' Dish	(2)-Fiber
4	131.2'	(1) ePMP4600	(1)-Fiber
5	114.8'	(1) GX-80 2' Dish	(2)-Fiber
6	108.3'	(1) ePMP4600	(1)-Fiber

MATERIAL LIST

NO	TYPE
A	SR 1-3/4" Ø
B	SR 1-5/8" Ø
C	SR 1-1/2" Ø
D	SR 1-3/8" Ø
E	SR 1-1/4" Ø
F	SR 5/8" Ø

TOTAL FOUNDATION LOADS

H=9.00 k
V=29.77 k
M=751.15 k-ft
T=-3.64 k-ft

INDIVIDUAL FOOTING LOADS

H=5.23 k
V=174.47 k
U=-141.65 k



Allan Pipe Fab Inc.

65 Barnes Rd., Cambridge, ON, Canada N3H 4R7

Phone: (519) 650-5858

Fax: (519) 650-5088

Client: ONtower

Job No: Q-10314D1

Date: 26 sep 2025

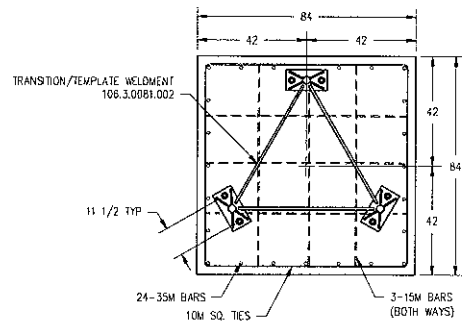
Location: Gananoque River, ON

Total Height: 151.00'

Tower Height: 150.00'

Standard: CSA S37 2024

Design Wind & Ice: Qe=470Pa wind, 30mm ice



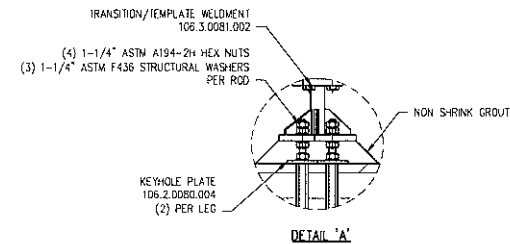
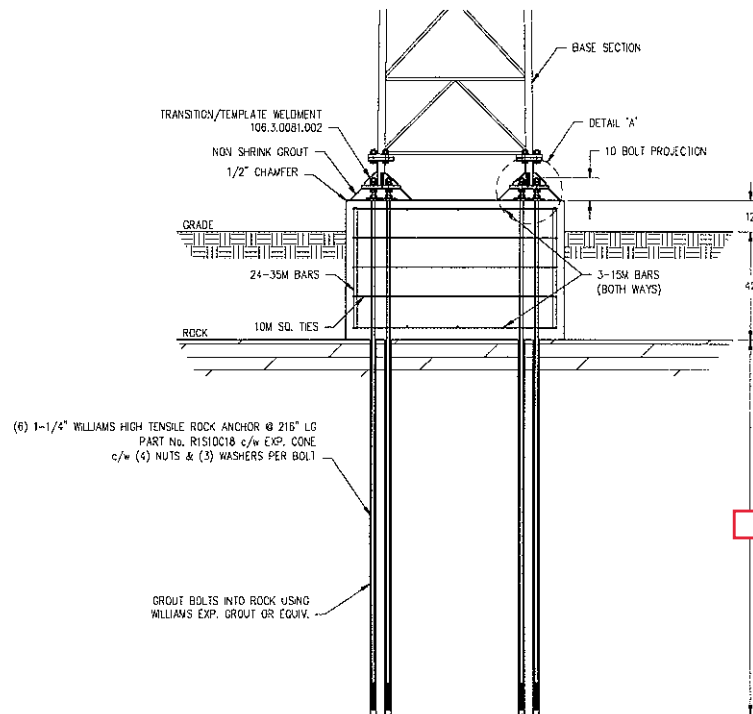
FOUNDATION NOTES:

1. CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS BEFORE PROCEEDING WITH WORK.
2. FOUNDATION DESIGNED BASED ON GEOTECHNICAL REPORT BY:
 - 2.1. INSPEC-SDI INC.
 - 2.2. DATED: MARCH 7, 2008
 - 2.3. REF# T020429-A1
 - 2.4. ASSUMED VALUES:
 - 2.4.1. ROCK DENSITY = 2400 Kg/m³
 - 2.4.2. ANGLE OF DOME = 35°
 - 2.4.3. WATER TABLE = 5.0m OR GREATER DEPTH
3. FOUNDATION BASE SHALL BE PLACED AGAINST CLEAN ROCK SURFACE.
4. NON SHRINK GROUT WITH A MINIMUM OF 48 MPa AT 28 DAYS SHALL BE USED AT BASE OF TOWER.
5. FOUNDATION DESIGNED IN ACCORDANCE TO CAN/CSA S37-01
6. CONCRETE WORK IN ACCORDANCE TO CAN/CSA-A23.1-04 & CAN/CSA-A23.2-04
7. REINFORCEMENT FOR CONCRETE IN ACCORDANCE WITH CAN/CSA-A23.3-04

WILLIAMS HIGH TENSILE ROCK BOLTS:

PART No. R1510C18
 BOLT DIAMETRE = 1-1/4"
 REQUIRED HOLE DIAMETRE IN ROCK = 2-1/4"
 TORQUE TO SET SHELL = 750 ft lbs
 PRE-TENSION = 51 kips

150ft 63" AWSST - Gananoque River and lake, ON



REINFORCING BAR CHART				
QTY	SIZE	DIM 'A'	SPACED	DESCRIPTION
24	35M	48"	12-1/2" c/c	
6	15M	78"	18" c/c	
5	10M	78"	11-1/2" c/c	

Rev.	Rev'd By	App'd By	Rev. Description	Date	Rev.	Rev'd By	App'd By	Rev. Description	Date
A	MD		ISSUE FOR CONSTRUCTION	08 MAR 17					

Notes: 1. ALL DIMENSIONS ARE IN INCHES

Good Dry Rock
 Typical Not for Construction

AP **ALLAN PIPE FAB INC.**
 386 DORRINE DRIVE
 CAMBRIDGE, ON CANADA
 P: (519) 822-0019 F: (519) 822-7002

Drawn By: [Signature] Checked By: [Signature] Date: 08 MAR 17 Scale: 1:30
 Cu: [Signature] Job No: 3429
 Drawing No: 3429.960.106-1
 FOUNDATION DETAILS





THIS LEASE made this first day of October 2025, between:

MIKE AND CATHERINE FERGUSON

Hereinafter called the "Landlord"

and

1085459 ONTARIO LTD., carrying on business as

KINGSTON ONLINE SERVICES

hereinafter called the "Tenant"

WHEREAS:

1. The Landlord is the owner of the property located at 89 Centennial Road (the "Land"), legally described as:

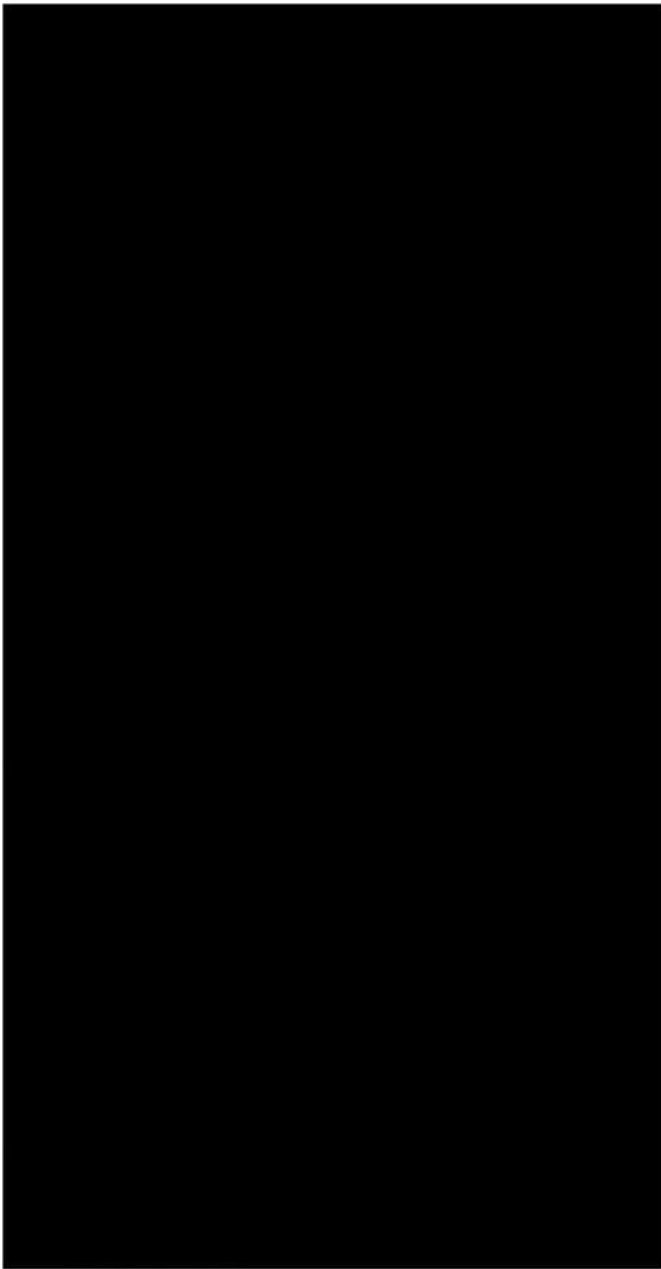
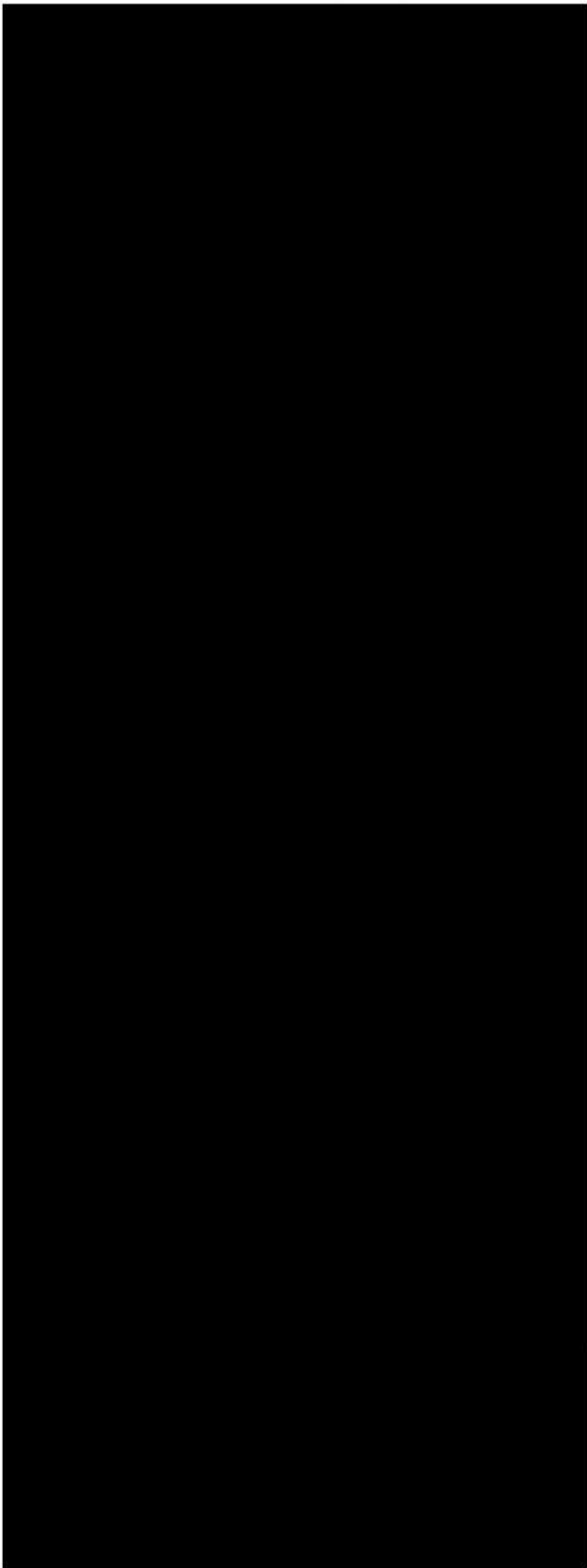
89 Centennial Road
Leeds and the Thousand Islands, ON
K0E 1L0

2. The Landlord has agreed to grant the Tenant the right to place wireless internet equipment on part of the Land, including to construct and install:

A 150-foot self-support tower with an 8-foot by 8-foot base for the purpose of providing wireless internet services to the surrounding area

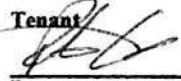
NOW THEREFORE WITNESS that in consideration of the mutual rights and obligations herein expressed and for other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged), the parties agree as follows:





The Landlord warrants that he/she/it is the only person/entity with an ownership interest in Land (save and except for any mortgage interests) and agrees to compensate the Tenant for any damages arising from another owner/co-owner who makes any claim or causes any disruption or interference with the license granted herein.

IN WITNESS WHEREOF the parties have executed this Lease on the date thereafter written.

Tenant


Per:
Authorized signing officer

Landlord


Per:
Authorized signing officer

Subject: RE: Permit Inquiry Form #10553-206 - 89 Centennial Rd, LTI
From: Development <Development@crca.ca>
Date: 2025-09-16, 3:56 p.m.
To: "dfenato@kos.net" <dfenato@kos.net>

Dominic

Staff have reviewed your development proposal (drawing attached) and have concluded that the proposed location for the development is not within an area that is subject to Ontario Regulation 41/24. Therefore, a Cataraqui Conservation permit is not required for this development. We would also encourage you to contact the municipalities planning and building department to inquire about any limitations or restrictions that may also apply from a municipal zoning and building perspective.

Regards

Rhonda Roantree
Resource Planning Clerk



2069 Battersea Rd, Glenburnie ON, K0H 1S0
Phone: (613) 546-4228 ext. 220
Toll-Free: 1-877-956-2722
Fax: (613) 547-6474
Web: www.CataraquiConservation.ca

Please note individuals should schedule an appointment with Cataraqui Conservation staff for any in-person inquiries relating to planning and permitting matters. Contact me or visit <https://cataraquiconservation.ca/pages/appointment> to do so.

Cataraqui Conservation sits on the traditional lands of the Haudenosaunee & Anishinabek peoples, and we want to thank the Indigenous people for their continued care and protection of All of Our Relations on this shared land.

From: postmaster@email.pifyapp.com <postmaster@email.pifyapp.com>
Sent: September 15, 2025 2:48 PM
To: Development <Development@crca.ca>
Cc: Krista Fazackerley <KFazackerley@crca.ca>
Subject: Permit Inquiry Form #10553-206

Permit Inquiry Form

- First Name : Dominic
- Last Name : Fenato
- Email : dfenato@kos.net
- Phone : [REDACTED]
- Civic Address of Property (if you don't know/have a civic address, please add the street name or closest civic address to the property) : 89 Centennial Road
- Municipality : Leeds And The 1000 Islands
- Lot : 23
- Concession : 5
- Ward :
- Waterbody :
- Coordinates (Latitude/Longitude) : 44.4504662, 75.9906085
- Select from the following list :
 - New Building/Structure
- Other :
- Does the project require any of the following? : Site Plan Approval
- Has a previous application been filed for this property? : Unknown
- Brief Description of Work (2-3 sentences to give us a general understanding) :

Building a 46 m tall tower that has a 2.4 m x 2.4 m concrete base.
- Upload a sketch/drawing indicating location of development on the property. : [Image](#)

—bnpdWL2025091602480689CentennialRoadsketch.png—



Sample Public Notification Letter



Dear Resident,

Kingston Online Services (KOS) is proposing to install a 46 metre freestanding telecommunications tower at 89 Centennial Road, in the Township of Leeds and the Thousand Islands. This facility would be capable of delivering next generation high-speed wireless broadband service up to 250 Mbps to underserved homes in the Union, Tilly and Rapid Valley area.

About the Proposed Facility

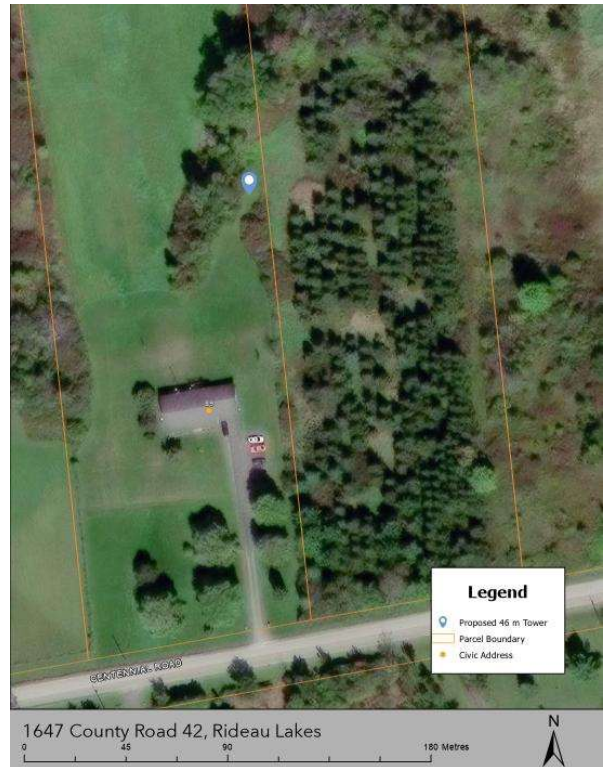
- **Height & Design:** A 46 metre self-supporting lattice tower with a natural galvanized steel finish. The structure will be anchored on a reinforced concrete foundation measuring 2.1 metres by 2.1 metres. This tower will not require guy wires, further reducing the tower footprint.
- **Compound:** A small equipment cabinet at the base; no large compound or building required.
- **Lighting:** Under Transport Canada Standard 621, structures under 90 metres in height are normally not required to have obstruction lighting unless identified as a concern through NAV CANADA's aeronautical assessment. Kingston Online Services has submitted applications to NAV CANADA and Transport Canada and is awaiting a determination. Should lighting be required, shielded red obstruction lighting will be installed to minimize visual impact.
- **Safety Compliance:** The facility will meet all applicable federal requirements, including ISED CPC-2-0-03 and Health Canada's Safety Code 6. An anti-climb system will be installed on the lower sections of the tower to enhance public safety and security.

Why This Location?

- Centrally located within the identified broadband coverage gap.
- Provides reliable line-of-sight over local tree canopy and terrain.
- Avoids sensitive environmental features such as wetlands and significant woodlots.
- Supported by the landowner, with direct access from Centennial Road.

Potential Impacts

- **Residential:** The nearest residence is more than 120 metres away; visual impacts will be minimal due to tree screening and slim tower profile.
- **Land Use:** The facility footprint is approximately 6 square metres, with negligible effect on the current use of the property and no interference with surrounding rural or residential activities.
- **Environmental:** The proposed site is located outside regulated wetlands and hazard lands, as confirmed through consultation with the Township of Leeds and the Thousand Islands and the Cataraqui Region Conservation Authority. It is situated on open land with existing access, eliminating the need to disturb trees or vegetation and thereby minimizing environmental impacts.



Public Consultation

In accordance with Innovation, Science and Economic Development Canada (ISED) requirements, Kingston Online Services is notifying the public and inviting comments.

- **Comment Period:** Written comments will be accepted for 30 days from the date of this notice.
- **How to Submit:**
 - **Mail:** Kingston Online Services, 303 Bagot Street, Suite 16A, Kingston ON, K7K 5W7
 - **Email:** planning@kos.net
- A community information session will be held _____

KOS is committed to working with residents, the Township of Leeds and the Thousand Islands, and federal regulators to ensure this facility is designed and operated responsibly. If you have any questions or feedback, you can reach out to us at planning@kos.net.

Sincerely,

Kingston Online Services

303 Bagot Street, Suite 16A, Kingston ON, K7K 5W7

planning@kos.net | www.kos.net