Municipality of Trent Lakes

Land Use Authority Recommendation Report
For

Bell Mobility, Inc.
Site W5330-"Pine Point Trail"

August 18, 2015

CRINS-SINRC# 1508-1308-1723

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1 Introduction

The purpose of the *Land Use Authority Recommendation Report* is to detail the review process conducted for an application submitted through CRINS-SINRC to a participating Land Use Authority (LUA) for the siting and construction of an antenna system, as well as defining the participating LUA's expectations relating to the location and design of radiocommunications facilities.

This report is a deliverable resulting from the LUA's adoption of the CRINS-SINRC Reference Protocol, Issue 2 (2012) which applies to any proponent planning to install a new or modify an existing radiocommunications facility regardless of the type of installation or service. This includes, but not limited to:

- Personal Communications Services (PCS);
- Cellular operators;
- Fixed wireless operators;
- Broadcasting operators;
- Land-mobile operators;
- License-exempt operators; and,
- Amateur radio operators.

All new radiocommunications facilities are expected to follow this process to obtain either a Notice of Facility Exemption or a Notice of Completion relating to the consultation and the corresponding Land Use Authority (LUA) Recommendations Report.

2 Subject Property

The proposed installation is located at coordinates **44° 45' 33.700" N**, **78° 29' 32.600" W**. on parcel PIN **28335-0478 (LT) .**

Figure 1 - Location Overview

This 100m tower is intended to provide coverage in the Pine Point Trail and Crystal Heights areas.

Figure 2- Example of Knock Down Guyed Tower (Type G)

The Proponent is seeking a Notice of Completion for the installation.

3 Statement on Land Use

The LUA considers all proposals in the context of its existing Land Use Plans, as well as its mandate for ensuring the safety and security of persons and property which may be affected by a proposed development. The proposed radiocommunications site has been reviewed and the following sections represent the LUA's assessment of the proposed site relative to existing land use practices.

3.1 Community Sensitive Locations

A confirmation of exempt facility status by the LUA is required for all sites where the Proponent wishes to proceed without Public Consultation. The LUA will generally recognize a Facility Exemption provided that the site is not located in a ***Community Sensitive Location.***

If a proposed site is located in a *Community Sensitive Location,* the Proponent may be asked to proceed with a Public Consultation due to the sensitive nature of the site, even though it may otherwise qualify for exempt status. The LUA will advise both the Proponent, as well as Industry Canada, as to its concerns in these situations.

If a proposed site is a non-exempt facility and is located in a Community Sensitive Location, public consultation will be required in all cases, and the proponent should expect that a community sensitive location will invoke a "High" degree of visual change under ASDF Criteria.

A ***Community Sensitive Location*** is defined as being:

1) on or near a designated *Heritage Property*;
2) located in an *area of Architectural Significance*;
3) located in *an area of Archeological Significance*; or,
4) in a *Natural Conservation Area*.

The proposed site is **not** located in a ***Community Sensitive Location***.

3.2 Zoning and Compatibility with Existing Plans

The proposed site is located within a **Development (D)** zone. Under Municipality of Trent Lakes Zoning By-laws, the allowable uses are:

"5.1.1 one single detached dwelling
5.1.2 one seasonal (or recreational) dwelling
5.1.3 an abattoir

5.1.4 an assembly hall
5.1.5 an auction bam
5.1.6 a bed and breakfast establishment
5.1.7 a camp, seasonal
5.1.8 a camp, hunt
5.1.9 a camp, recreational bush
5.1.10 a cemetery
5.1.11 a church or place of worship
5.1.12 a conservation use
5.1.13 an agricultural use
5.1.14 a farm produce outlet
5.1.15 a forestry use
5.1.16 a home industry
5.1.17 a home occupation
5.1.18 a kennel
5.1.19 a portable asphalt plant
5.1.20 a public park
5.1.21 a recreational use
5.1.22 a ridiog school/boarding stable
5.1.23 a veterinary clinic
5.1.24 a wayside pit or wayside quarry "

Radiocommunications facilities are considered to be generally **acceptable** within a **Rural (RU)** Zone.

3.3 Fire Routing and Access

Access is via a road allowance which has been closed by By-Law 83-61, Inst. R418794. The proponent will be required to maintain the road allowance and it's access route at its own expense.

The proposed site **does not** adversely affect the existing fire service routing or access to either the subject property or any of the adjacent properties.

3.4 Environmental Review

3.4.1 Safety Code 6

The Proponent's representative, **Emma Wang**, on behalf of **Bell Mobility, Inc.** has attested that the proposed site shall be constructed and operated within the limits specified in the Health Canada guidelines for electromagnetic radiation emissions – Safety Code 6 - which has been adopted by Industry Canada for use with all radiocommunications facilities.

Emma Wang is representing **Bell Mobility, Inc.** , as an agent and is not licensed to practice engineering in the Province of **Ontario.** A Professional Engineer licensed in the Province of **Ontario** will be required to audit and confirm the site's compliance at the time of commissioning [see note] [1].

3.5 Structural Review

Radiocommunications facilities are constructed under the authority of the *Minister of Industry*. As such, these structures are deemed a *federal undertaking*, requiring Proponents to uphold the standards which apply to the construction of buildings and other infrastructure as if it were being constructed on behalf of the Government of Canada.

As such, the *Minister of Labour* has adopted the *National Building Code (NBC)* amongst many other federal standards in relation to any structure built under enabling federal legislation.

Part II of the *Canada Labour Code (* http://laws-lois.justice.gc.ca/eng/acts/L-2/) and the regulations made there under, set out the rules that apply to all federal undertakings, or workers enabled as a result of their work on such undertakings, including, but not limited to broadcasters and telecommunication carriers.

The obligations include ensuring that all permanent and temporary buildings and structures meet the prescribed standards in the *Canada Occupational Health and Safety Regulations* which apply to any federal undertaking. Section 2.2 (1) of the aforementioned regulations, reference the *National Building Code* as the applicable code to be used as the reference.

Also included is the requirement for broadcasters and telecommunication carriers, when constructing towers, to follow the *Canada Occupational Health and Safety Regulations, Division II, Section 2.19*, which refers to the Canadian Standards Association (CSA) Standard CAN/CSA-S37-94, entitled "*Antennas, Towers, and Antenna-Supporting Structures*".

Legislation under *HRSDC (Human Resources and Skills Development Canada)* enforced by the *Minister of Labour* (who is one of the Ministers under the HRSDC portfolio) is responsible to enforce the provisions of the NBC and the CSA Standard, along with provincial legislation relating to the practice of professional engineering in each province.

Kurt Penfold, P.Eng., (Ontario # 36172013), on behalf of **Bell Mobility, Inc.** has attested ***that the proposed site design is in compliance with the above standards and regulations*** *and* has accepted responsibility to inspect the facility once constructed to ensure that the methods and materials conform to the proposed design in all manners material to compliance with the above.

The Land Use Authority (LUA) recognizes the above party as a **Professional Engineer** in good standing to practice engineering in the **Province of Ontario.**

4 Antenna Siting Design Framework (ASDF) Review

The Antenna Siting Design Framework (ASDF) is a quantitative scoring mechanism which assesses proposed installations by considering their design relative to the surrounding visual landscape.

This results in 3 specific metrics:

- A **Visibility Score** which provides a measurement of how visible the site is within the surrounding landscape (scored out of a possible 24 points).
- A **Design Compatibility percentage** which scores the proposed site design in terms of its visual elements (structure type, antenna mounts, equipment shelters, antennas and cables) relative to the surrounding landscape.
- A **Degree of Visual Change** calculation which assesses the visual effect of the site on the surrounding landscape.

The Degree of Visual Change is utilized to assess the level of public consultation required for Non-Exempt facilities.

For Exempt facilities, the Degree of Visual Change along with the design recommendations of the ASDF tool are provided to assist the Proponent to consider design choices which will improve the site's compatibility with the surrounding landscape and uses.

The following score has been assigned to this site design:

Degree of Visual Change

Design Compatibility/ Site Visibility	1 to 5	6 to 10	11 to 15	16 to 19	20 to 24
76 - 100%	**Low**	**Low**	**Low**	**Medium**	**Medium**
51 - 75%	**Low**	**Low**	**Medium**	**Medium**	**High**
26 - 50%	**Low**	**Low**	**Medium**	**High**	**High**
0 - 25%	**Low**	**Medium**	**High**	**High**	**High**

Visibility	**14**	
Compatibility (%)	**93.8**	**Low**

The visibility due to the height of the tower is offset by its setback from residential properties are relatively remote location. Tower lighting remains the greatest visual impact at night.

4.1 Design Targets

The following table outlines the relevant design targets for the proposed site. Key design targets are highlighted below:

	Poles and Towers	Antenna Mounts	Equipment Cabins	Antennas and Cables
Land Use				
Natural	Select poles with a uniform vertical profile. Limit visual contrast by eliminating horizontal elements.	Respond to pole design as required. Avoid head frames or complex configurations.	Located in close proximity to pole to reduce the impact and development footprint on the surrounding landscape.	Maintain uniform antenna panels positions. Conceal all cables.
Topography				
Undulating	Locate poles and towers in areas where the greatest topographic variations occur. Use topographic variations to offset height of pole relative to surrounding landscape.	Develop simple support structures that respond to the landscape character.	Avoid elevated areas. Locate units on level low lying ground ensuring that the foundation pad design is level with minimal stepping.	Maintain regular antennas and cables positions.
Built form				
Small scale / Low density	Select narrow profile poles and avoid lattice towers to limit the vertical visual effect. Pole or tower height should respond to single storey built form (10 to 15m) or a ratio of 1:1.3-1.5.	Use simple support structures and avoid complex cross bracing support configurations. Mounts and panels should be flush mounted or shrouded to achieve a uniform profile.	Capitalise on the existing utility areas and service lanes for cabin locations. Ensure that concrete foundation pads respond to the small-scale built form (avoid steps in the pad in excess of 150 to 200mm).	Antennas should be proportional to the built form, not exceeding a ratio of 1: 1.3 of the building height. Increase set back of antenna to allow for increased antenna height. Cable trays should be located to the rear or side facades.

Sky lining				
Uniform	Reduce the vertical profile of poles and towers to reduce the impact on the skyline. Select monopoles and avoid lattice towers with tension cables to limit both the vertical and horizontal effects.	Develop a consistent rectangular antenna mount and headframe design. Avoided angled cross bracing. Maintain uniform structural member sizes, connections and positions that do not constrast the uniform skyline.	Locate cabins with adequate setbacks to avoid any skylining in relation to prominent facades and viewpoints. Consider co-locations with more visible rooftop equipment or develop ground based site.	Uniformly position antennas to reduce the visual impact and establish a consistent alignment and height. Avoid significant vertical projections. Ensure a consistent alignment for cables, connections and cable trays.

Containment				
Enclosed	Develop a uniform profile for the pole or tower in response to contained visual character. Avoid visual clutter or contrast with surrounding containment. Minimise visual complexity of the pole or tower.	Develop simple support structures and avoid cross bracing or complex support configurations. Antennas should be flush mounted or shrouded to minimise the visual effect on surrounding enclosure.	Design and locate equipment cabins that respond to the existing containment. Develop a compatible form, scale and materiality in relation to the surrounding enclosure.	Avoid impact of cables on the surrounding containment. Locate with other service runs and ensure that cables do not project over the edge of the containment and/or building parapet.

Vegetation				
Woodlands and Forests	Limit vertical projections in excess of 1:1.2 - 1.3 above the woodland canopy (consider increasing the setback of the pole or tower from the woodland edge to enable greater height while maintaining tree screening potential).	Select locations that capitalise on tree screening.	Locate within the woodland to provide maximum screening from publicly accessible areas. Avoid direct impact on adjacent trees, branches and root plates.	Locate antennas, cables cable runs to capitalise on screening potential of surrounding trees.

Existing Telcom-equipment (adjacent to site)				
None	Respond to the recommendations of the CPC 2-0-17 (no requirement to complete 'Design Respond')	Respond to the recommendations of the CPC 2-0-17 (no requirement to complete 'Design Respond')	Respond to the recommendations of the CPC 2-0-17 (no requirement to complete 'Design Respond')	Respond to the recommendations of the CPC 2-0-17 (no requirement to complete 'Design Respond')
Colour				
Mixed (complimentary)	Identify prominent colours, colour match or select neutral colours to minimise of visual effect.	Identify prominent colours of roofscape or surrounding area and colour match or select neutral colours to maintain consistency in relation surrounding built form.	Colour match through applied paint finishes all surfaces in response to dominant colours of adjacent land use.	Colour match to surrounding landscape and built form. Select neutral colours if antennas or cables are elevated or sky lining.

4.2 Recommendations

Based on the design targets outlined above, **Municipality of Trent Lakes** requests that **Bell Mobility, Inc.** consider the following design recommendations prior to construction:

Recommend the installation of an Obstacle Collision Avoidance System (OCAS) to remove the need for "always on" lighting while still preserving aviation safety. This will reduce night time lighting impacts on residents.

5 Compliance with General Design

Notwithstanding the site specific design recommendations described in the previous section, the proposed design is **compliant** with the General Design Recommendations of the General Design Recommendations of the CRINS-SINRC Antenna Siting Protocol.

6 Siting of Facility Relative to Existing Use

The following requirements apply to radiocommunications facilities:

The placement of any parking space or any component of a radiocommunications facility shall not create or cause a situation of non-compliance with any LUA Zoning By-law for any other use, building, or structure on the same lot.

The proposed site **does not** create or cause a situation of non-compliance with any Zoning By-law, as proposed.

7 Statement of Concurrence

The **Municipality of Trent Lakes** requests that the Proponent – **Bell Mobility, Inc.** – comply with the design targets where possible as presented in Section 4.

No further Development or Planning approvals are required however the Proponent is required to comply with any and all conditions outlined in Section 9 as a requirement of obtaining concurrence from the Land Use Authority. Failure to comply with the conditions as outlined in Section 9 shall render concurrence with the proposal null and void.

Where an undertaking from the proponent is required as part of the concurrence conditions, no work on the structure shall begin until the undertaking is received by CRINS-SINRC and the LUA.

The **Municipality of Trent Lakes conditionally concurs** with the proposed site subject to the conditions as outlined in Section 9.

8 Public Consultation

The proposed site is a Non-Exempt Facility and the Proponent is required to submit to a Public Consultation as part of this application.

CRINS-SINRC shall confirm completion of the Public Consultation according to the Protocol.

9 Recommendation and Approval

We hereby advise **CRINS-SINRC** that the attached report accurately reflects the position of the **Municipality of Trent Lakes** with respect to the radiocommunications facility proposed by **Bell Mobility, Inc.**, designated **W5330-"Pine Point Trail" (CRINS-SINRC # 1508-1308-1723).**

We further advise that the proposed site has been evaluated as a non-exempt facility and the Land Use Authority **conditionally approves** the construction of the site subject to the following:

1) *Confirmation by CRINS-SINRC that the Proponent has addressed all relevant concerns of the public according to the Protocol and that the above conditions have been met such that a Notice of Completion is warranted.*
2) *Application made for, and receipt of, all necessary permits prior to construction of the foundation of the tower and building to house proponent's equipment.*
3) *Submission of "as-built" drawings to CRINS-SINRC no later than 30 days after the completion of construction.*
4) *Receipt of the Safety Code 6 report by a Professional Engineer licensed in the Province which confirms compliance with Safety Code 6 prior to the commissioning of the tower.*

DATED this _____ day of _____**, 2015**

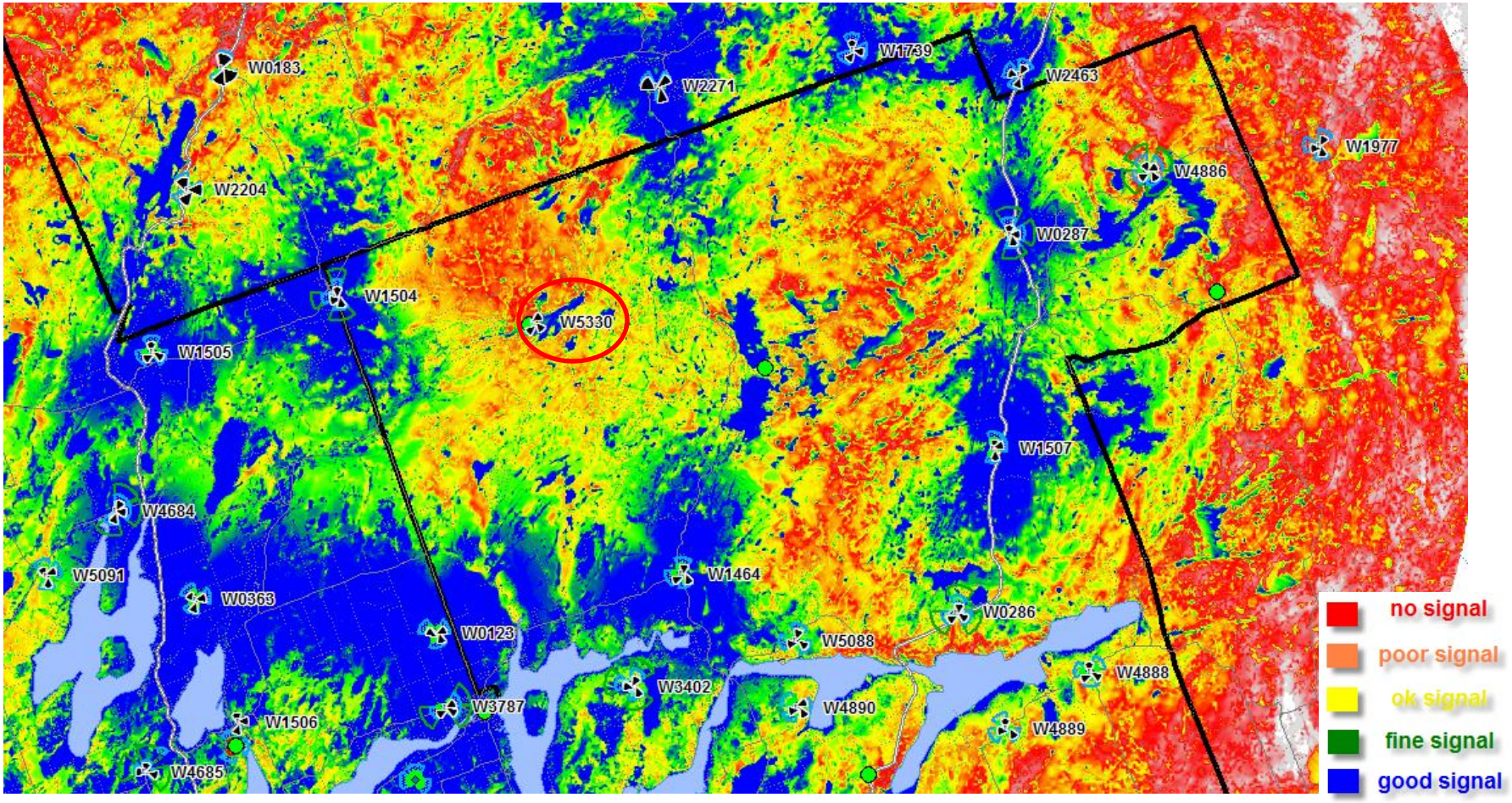
_____	_____
Keri Stevenson	**Lois O'Neill-Jackson**
Planning Technician	Chief Administrative Officer
Municipality of Trent Lakes	Municipality of Trent Lakes

W5330 Coverage Report

2015-2-23

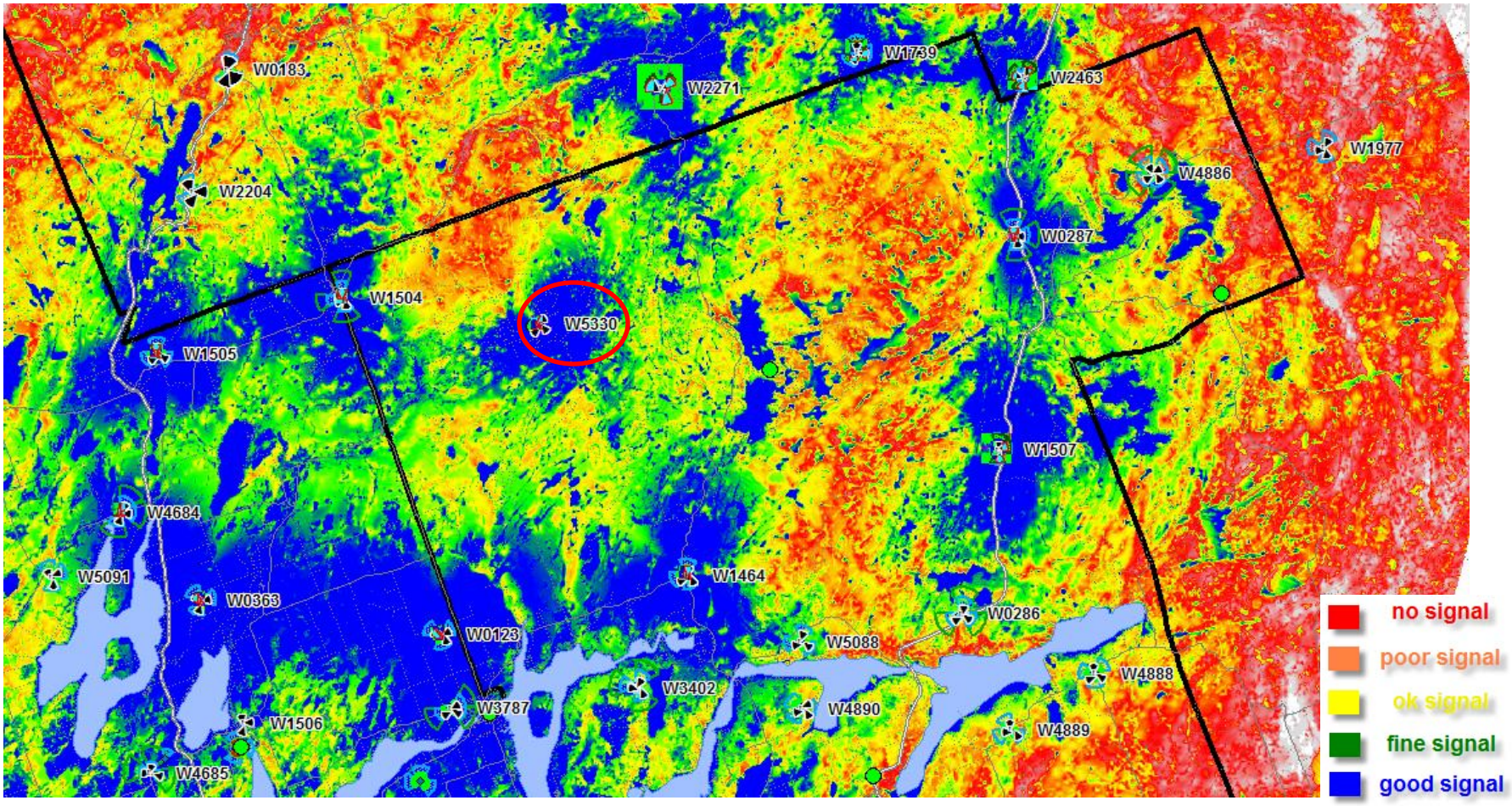
Before

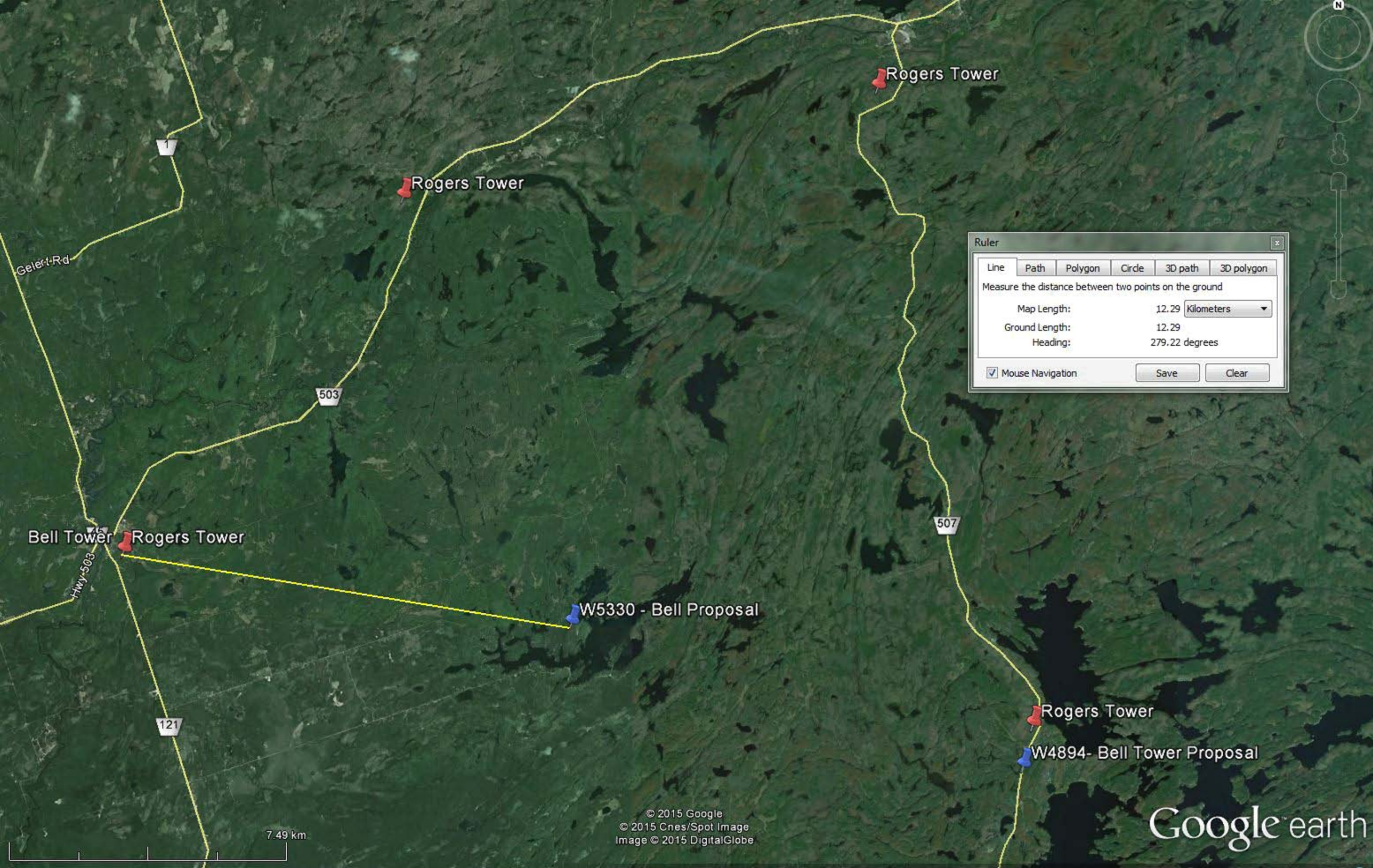
(HSPA coverage without W5330)



After

(HSPA coverage with the new site W5330)




Rogers Tower
Rogers Tower
Geiert Rd
503
Bell Tower
Rogers Tower
Hwy 503
W5330 - Bell Proposal
121
7.49 km
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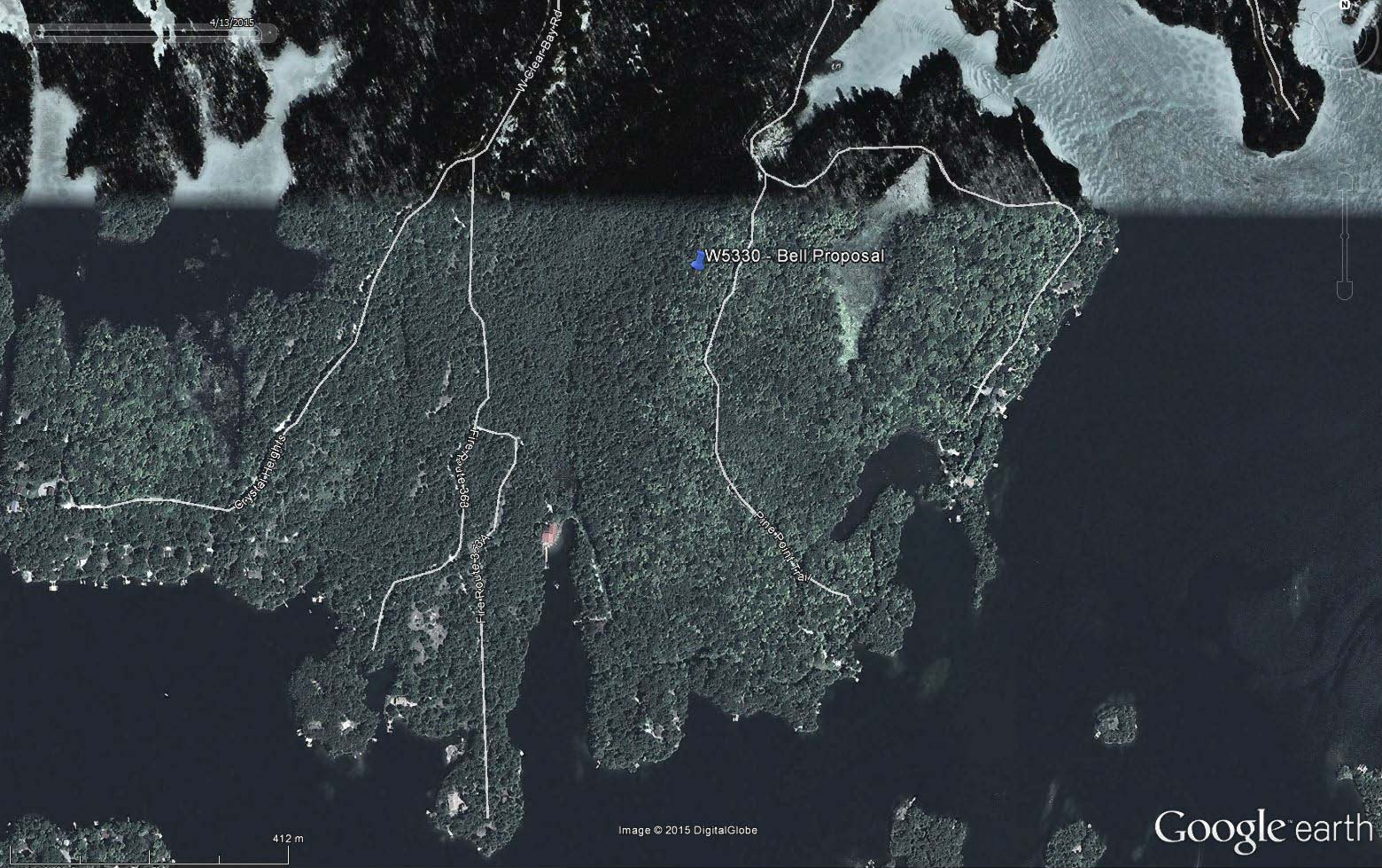
507
Rogers Tower
W4894- Bell Tower Proposal
Ruler
Line
Path
Polygon
Circle
3D path
3D polygon
Measure the distance between two points on the ground
Map Length: 12.29 Kilometers
Ground Length: 12.29
Heading: 279.22 degrees
Mouse Navigation
Save
Clear
Google earth


4/13/2015
W-Clear-Bay-Rd
W5330 - Bell Proposal
Crystal-Heights
Fire-Route-363
Fire-Route-363A
Pine-Point-Trail
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