FORBES BROS
TELECOMMUNICATIONS | CONSTRUCTION

Planning Justification Report

Rogers Communications Telecommunication Site: C7415

Sean Ogilvie, Real Estate & Government Affairs

6/21/2021

Rogers Communications Inc. justification for a proposal to erect a 30.0m tall monopole style telecommunications support structure and related equipment at 128 Penetang Street, Barrie, ON

482 South Service Road E, Unit 130
Oakville, ON Canada L6J 2X6
T: 647-224-4399
F: 888-622-4939

Contents

482 South Service Road E, Unit 130
Oakville, ON Canada L6J 2X6
T: 647-224-4399
F: 888-622-4939

1.0 Introduction

Like many areas of the province, your community is experiencing a growing demand for wireless services. As people rely more on wireless devices such as smartphones, tablets and laptops for business and personal use, network improvements are required to ensure high quality voice and data services are available.

This document outlines the site selection process Forbes Bros Ltd Telecommunications Services has undertaken on behalf of Rogers Communications Inc. ("Rogers") for a proposal to build a new freestanding telecommunications base station facility on the lands at 128 Penetang Street in Barrie, Ontario.

The purpose of this report is to provide analysis and justification in support of the proposed facility and to assist the land-use authority in providing comments on the proposed development.

2.0 Background

A continual growth in demand for wireless products and their associated services has created a need for increased wireless network infrastructure. Mobile phones and other wireless devices cannot operate without the necessary infrastructure, which is made up of transmitting and receiving antenna sites, often located on support structures, commonly referred to as "cell towers".

Wireless network connectivity is influenced by many factors, including proximity to a cell site, physical obstacles and signal interference caused by circuit components or natural disturbances that can distort communications. Network capacity and architecture can also affect access for users.

New cell towers improve connectivity by creating coverage in areas previously not reached by the network and/or filling gaps in areas current network infrastructure does not reach. New cell towers also improve network capacity as additional infrastructure increases the number of calls or amount of data that can be transferred at one time.

Locations for new infrastructure are determined by monitoring the wireless network and identifying areas with weak or insufficient coverage. Rogers network planners isolate the areas requiring improvements and conduct coverage studies to determine the ideal co-ordinates for a new antenna base station. Real estate investigations determine feasible locations for new sites. New locations include existing towers (colocation), tall buildings or other feasible structures and of course new free standing support structures.

3.0 Proposal

Rogers has proposed a new free standing 30.0m tall slimline monopole type telecommunication facility (C7415) to be located at 128 Penetang Street in Barrie, Ontario. The proposal supports enhanced wireless voice & data coverage and capacity for the area surrounding St. Vincent Street, Duckworth Street, Grove Street E and HWY 400.

3.1 Location

Rogers proposed location is on property described as Part of Lot 25 Registered Plan 108 and has the municipal address 128 Penetang Street, Barrie, ON. The proposed facility would be located approximately 50m northwest from the St. Vincent Street and Penetang Street intersection (Figure 1).

482 South Service Road E, Unit 130
Oakville, ON Canada L6J 2X6
T: 647-224-4399
F: 888-622-4939

The tower is proposed to be located in the northeastern corner of the subject property. The tower site and compound will be setback approximately 27m (north) from the access point at Penetang Street (Figure 2) and has the geographic coordinates:

Latitude (NAD83) N 44° 23' 56.4"
Longitude (NAD83) W 79° 40' 43.2"

The proposed facility is 50m away from the nearest residential property.

Figure 1 – Location Map

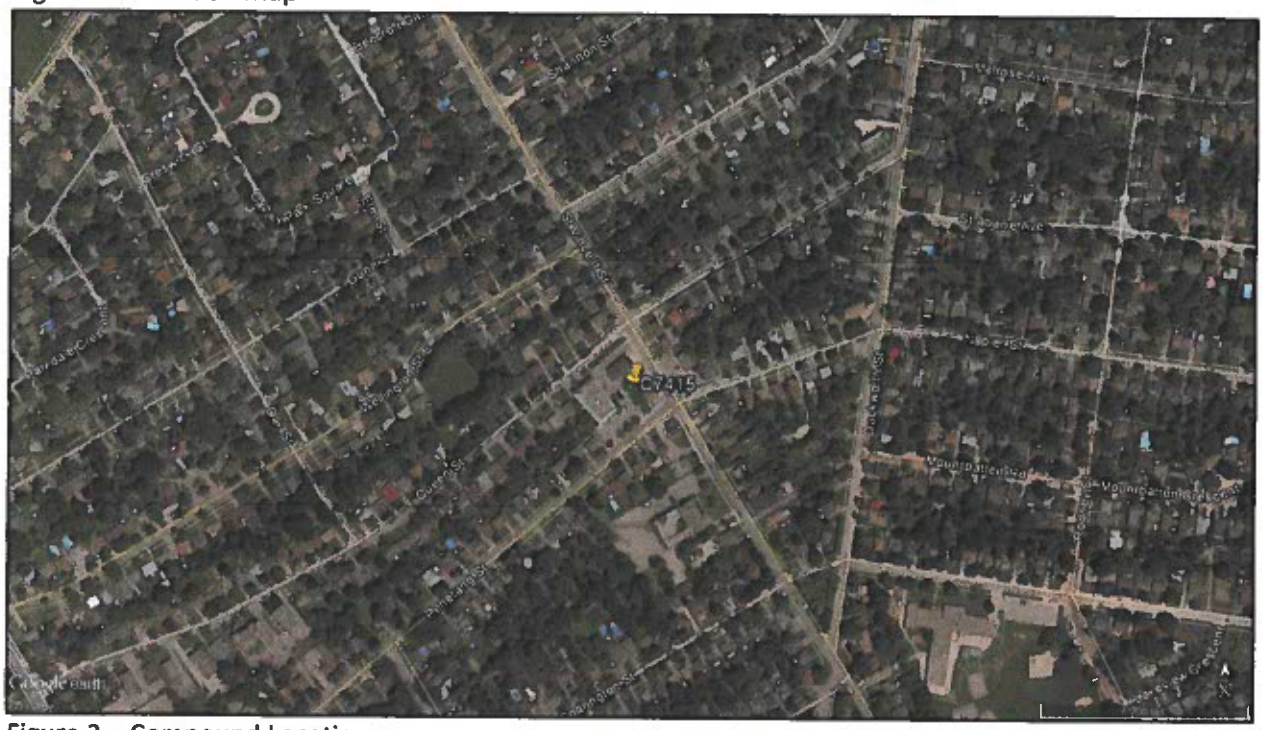
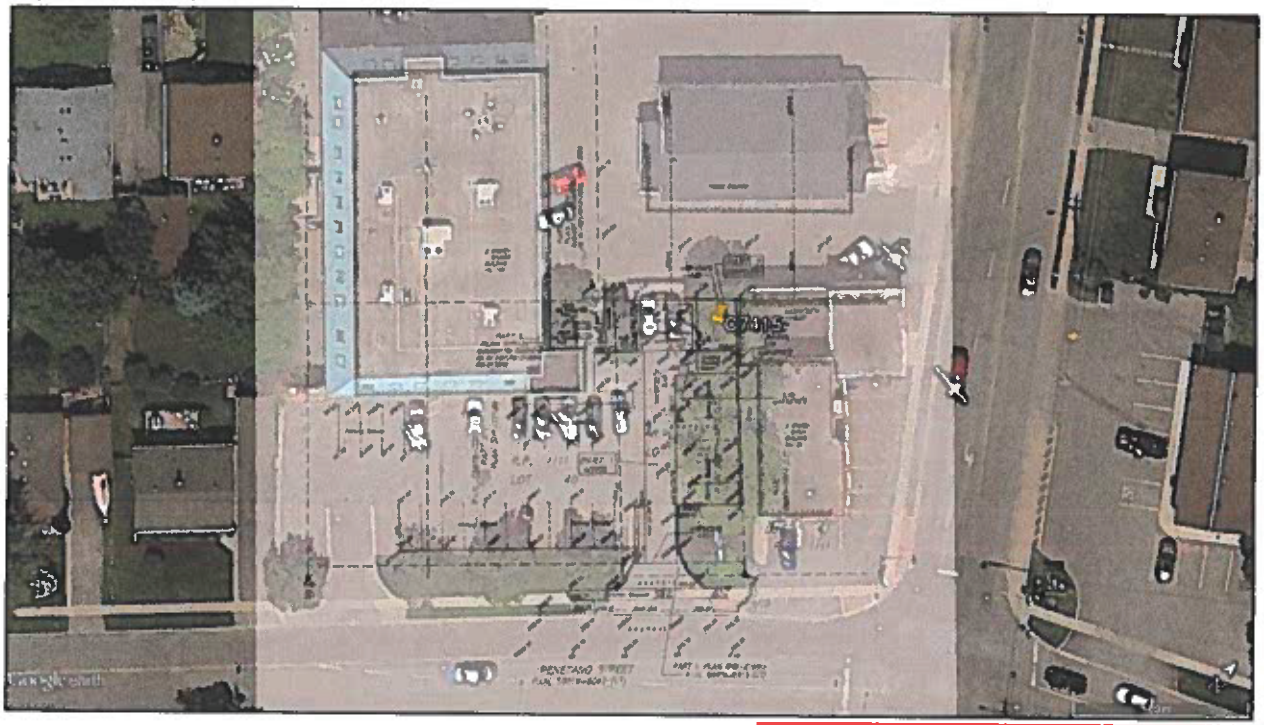


Figure 2 – Compound Location



482 South Service Road E, Unit 130
Oakville, ON Canada L6J 2X6
T: 647-224-4399
F: 888-622-4939

3.2 Design

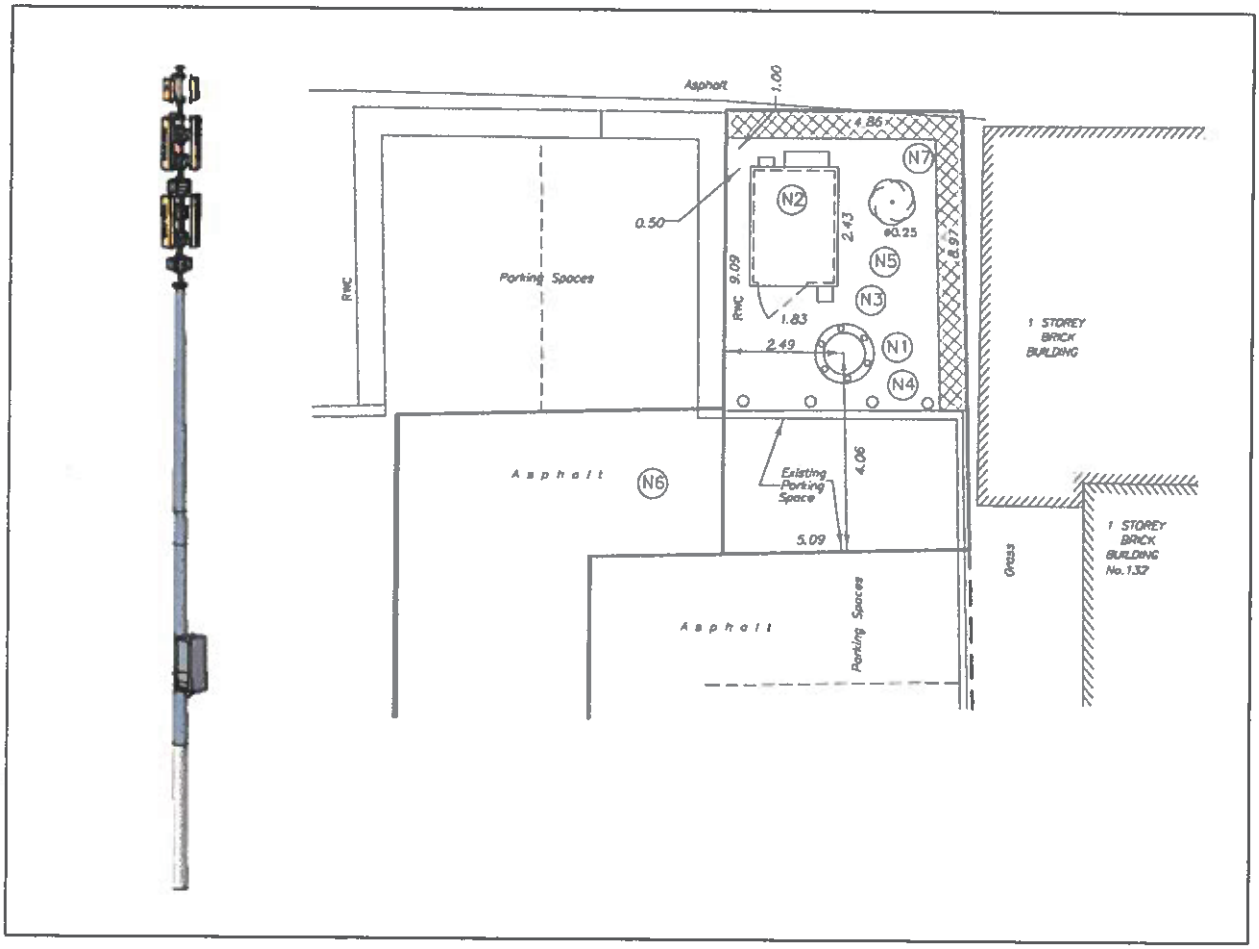
Rogers has proposed a 30.0m tall slimline monopole style support structure, transmitting and receiving antennas and radio equipment secured in a fenced compound.

The proposed facility will occupy a 5.0m x 9.0m compound area with steel bollard protection. The compound will contain the support structure and walk-in equipment cabinet ("WIC") (Figure 3). The equipment cabinet houses the radio equipment, backup battery power, maintenance tools, manuals and a first aid kit. The equipment cabinet is located on a reinforced concrete slab with the approximate dimensions of 2.43m x 1.83m and is about 2.0m in height.

The support structure is a steel tube frame with transmitting and receiving antennas mounted to the upper half of the structure. The tower height allows the antenna equipment to propagate wireless signals over top of obstacles (trees, buildings, varying topography) and maintain line of sight connections to other Rogers facilities in the network.

The proposed installation provides an opportunity to accommodate future technologies as well as potential co-location with other licensed carriers, thus limiting the number of new tower structures required in the area.

Figure 3 – Proposed Compound Layout Plan & Tower Elevation Plan



482 South Service Road E, Unit 130
Oakville, ON Canada L6J 2X6
T: 647-224-4399
F: 888-622-4939

4.0 Rationale

The selection of a wireless communications site works similarly to fitting a piece into a puzzle. In this case, the puzzle is a complex radio network. Client demand, radio frequency engineering principles, local topography and land use opportunities working in concert with one another direct the geography of Rogers sites.

In identifying a potential tower location and design, Rogers examined the local area, assessed the visibility of the structure and considered possible tower designs. Rogers evaluated the best location for a new facility using the following criteria;

4.1 Technical Requirements

The performance of a wireless network is dependent on the geographical location of its equipment, height of its antennas, line of sight requirements, the demand customers place on the network, as well as proximity to the network users. In expanding its wireless network, Rogers is seeking to improve service for the areas surrounding St. Vincent Street, Duckworth Street, Grove Street E and HWY 400.

Rogers is able to achieve enhanced coverage and capacity with the proposed facility C7415 at 128 Penetang Street.

4.2 Evaluation of Existing Structures

Co-location and rooftop deployment are the first locations considered in achieving new coverage objectives. In order for site sharing to be considered technically feasible, existing telecommunication sites and other tall structures must be located within the search area prescribed by Rogers network planners and engineers. These locations must also provide adequate deployment height and structural capacity to hold additional equipment.

Site sharing investigations revealed that there are no existing tower facilities within 1.0km of Rogers proposed location. The closest existing telecommunications facilities are rooftop mounted deployments at 108 Collier Street and 181 Collier Street (Rogers and Freedom Mobile respectively). These existing rooftop sites are not feasible alternatives to Rogers proposed tower as they already have Rogers services in place.

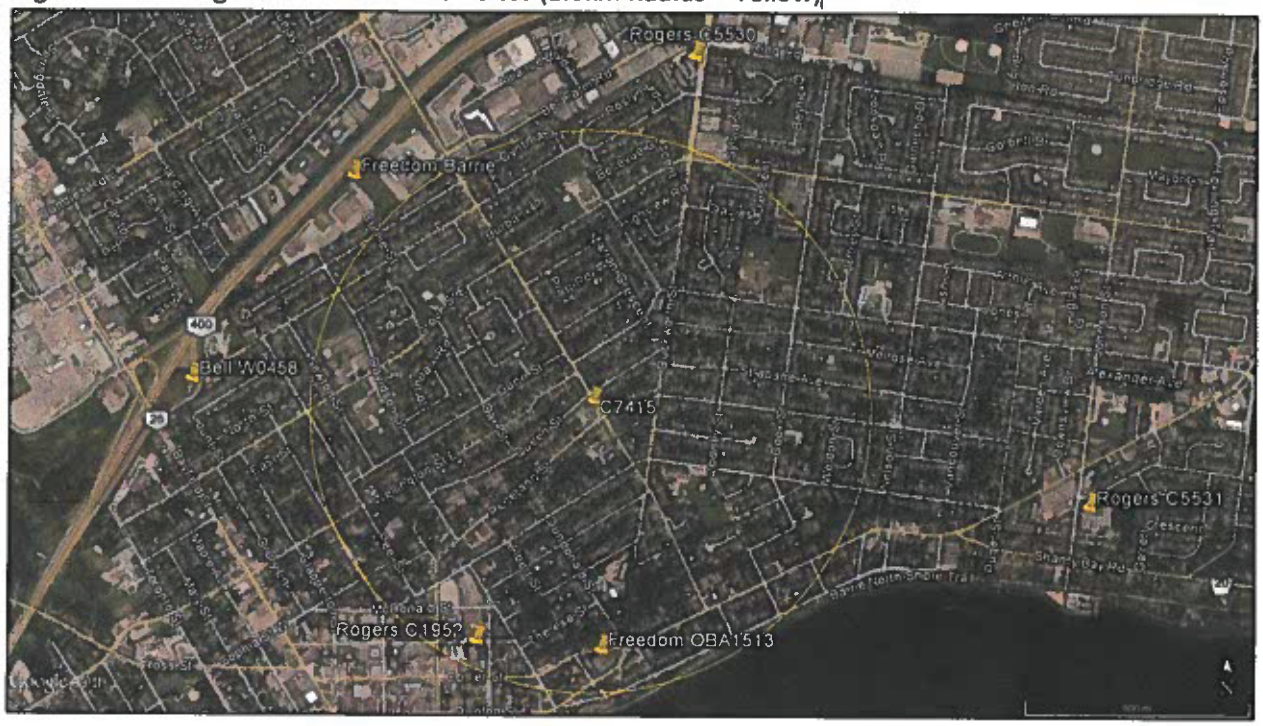
Other existing sites are located too far outside Rogers target coverage area or located in areas already covered by existing Rogers sites.

Please see Figure 4 and the chart below for a list of the closest existing mobile base stations.

Site Code	Carrier	Height	Distance	Location
C1952	Rogers	60m	940m	108 Collier Street (rooftop)
OBA1513	Freedom Mobile	45m	880m	181 Collier Street (rooftop)
W0458	Bell Mobility	50m	1.48km	10 Rose Street
N/a	Freedom Mobile	30m	1.17km	28 Currie Street
C5530	Rogers	30m	1.28km	380 Duckworth Street (rooftop)
C5531	Rogers	35m	1.82km	37 Johnson Street (rooftop)

482 South Service Road E, Unit 130
Oakville, ON Canada L6J 2X6
T: 647-224-4399
F: 888-622-4939

Figure 4 – Existing Telecommunication Sites (1.0km Radius – Yellow)



4.3 Land-use Consideration

The site is located on property designated as C4 (General Commercial zone) per the City of Barrie Zoning Bylaw 2009-141 (North Section). The subject property is abutted by further C4 zones to the north, east and west. The property is abutted by R2 (Residential) zones to the south.

Given the coverage objectives of this site and the challenges of the search area we feel it is the best possible location. The proposed facility is able to enhance coverage for the surrounding residential and commercial areas as well as to travellers along the roadways while maintaining some setback to these residential uses. The proposed facility takes advantage of some screening from adjacent buildings and trees to remain as unobtrusive as possible at street level.

5.0 Review of Development Plan

5.1 Municipal Consultation Process

Rogers is regulated and licensed by Industry Canada to provide inter-provincial wireless voice and data services. As a federal undertaking, Rogers is required by Industry Canada to consult with land-use authorities in siting new mobile base station locations.

The consultation process established under Industry Canada's authority is intended to provide the local land-use authorities an opportunity to address land-use concerns while respecting the federal government's exclusive jurisdiction in the siting and operation of wireless voice and data systems.

As the provisions of the Ontario Planning Act and other municipal by-laws and regulations do not apply to federal undertakings, wireless communication facilities are not required to obtain municipal permits

482 South Service Road E. Unit 130
Oakville, ON Canada L6J 2X6
T: 647-224-4399
F: 888-622-4939

of any kind. Rogers is required to follow established and documented telecommunication protocols or processes set forth by land-use authorities.

5.2 Public Consultation

In accordance with Industry Canada procedures, public consultation is required for most new telecommunication facility proposals. Per Industry Canada's guidelines default public consultation is conducted via written notification to property owners within three times (3x) the height of the tower measured from the base or outer most point of the tower. Depending on the height of the proposed facility a public notice in a locally circulated newspaper may also be warranted.

Both forms of notice must contain basic information about the proposal (location, design etc.) as well as contact information for the proponent and a thirty (30) day window to submit comments or questions to the proponent.

Public consultation requirements may vary where an established local policy or protocol is in effect.

5.3 Federal Requirements

In addition to the requirements for consultation with municipal authorities and the public, Rogers must also fulfill other important obligations including the following:

Canadian Environmental Assessment Act

Industry Canada requires that the installation and modification of antenna systems be completed in a manner that complies with appropriate environmental legislation. This includes the Canadian Environmental Assessment Act, 2012 (CEAA 2012), where the antenna system is incidental to a physical activity or project designated under CEAA 2012, or is proposed to be located on federal lands.

Rogers attests that the antenna system proposed will be installed and operated in a manner that respects the local environment and complies with all statutory requirements.

Transport Canada's Aeronautical Obstruction Marking Requirements

Aerodrome safety is under the exclusive jurisdiction of NAV Canada and Transport Canada. An important obligation of wireless proponents is to comply with Transport Canada / NAV Canada aeronautical safety requirements. Transport Canada performs an assessment of the proposal with respect to the potential hazard to air navigation and notifies Rogers of any painting and/or lighting requirements for the antenna system. Rogers does not anticipate that the proposed installation will require any painting or lighting and will submit the necessary applications to the appropriate parties to obtain the required approvals.

For additional information, please see the Transport Canada website at:
http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part6-standards-standards621-3808.htm

Health Canada's Safety Code 6 Compliance

Health Canada is responsible for research and investigation to determine and promulgate health protection limits for exposure to radio-frequency (RF) electromagnetic energy. Accordingly, Health Canada has developed a guideline entitled "Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3Khz to 300Ghz – Safety Code 6".
The exposure limits specified in Safety Code 6 are established by reviewing all peer-reviewed scientific research in the area of human health and RF exposure. Included in this review are hundreds of studies conducted over the past 50 years.

482 South Service Road E, Unit 130
Oakville, ON Canada L6J 2X6
T: 647-224-4399
F: 888-622-4939

Radiocommunication, including technical aspects related to broadcasting, is under the responsibility of the Ministry of Industry (Industry Canada) which has the power to establish standards, rules, policies and procedures. Industry Canada, under this authority has adopted Safety Code 6 for the protection of the general public. With this adoption, Industry Canada requires all proponents and operators to ensure that their installations comply with Safety Code 6 at all times, including any changes to the code and including any combined effects from other installations in the nearby radio environment.

Rogers attests that the radio antenna system described will comply with Health Canada's Safety Code 6 limits, as may be amended from time to time, for the protection of the general public including any combined effects of additional carrier co-locations and nearby installations within the local radio environment.

Engineering Practices

Rogers attests that the radio antenna system as proposed for this site will be constructed in compliance with the National Building Code and the Canadian Standards Association and comply with good engineering practices including structural adequacy.

6.0 Summary and Conclusion

As communities continue to grow to depend on wireless products and their services, it will be necessary to improve network coverage and quality. Improving network coverage and quality is achieved by increasing mobile base station infrastructure to fill coverage gaps and increase capacity for current and future wireless users.

In response to the demand for high quality wireless services in Ontario and specifically in Barrie, Rogers has proposed a telecommunications site that achieves the technical requirements of the network while maintaining a significant setback to any residential land uses.

I look forward to working with the City in providing enhanced wireless services to the community. Should you require any further information please do not hesitate to contact me at 647-224-4399 or by email at sogilvie@forbesbrosltd.ca

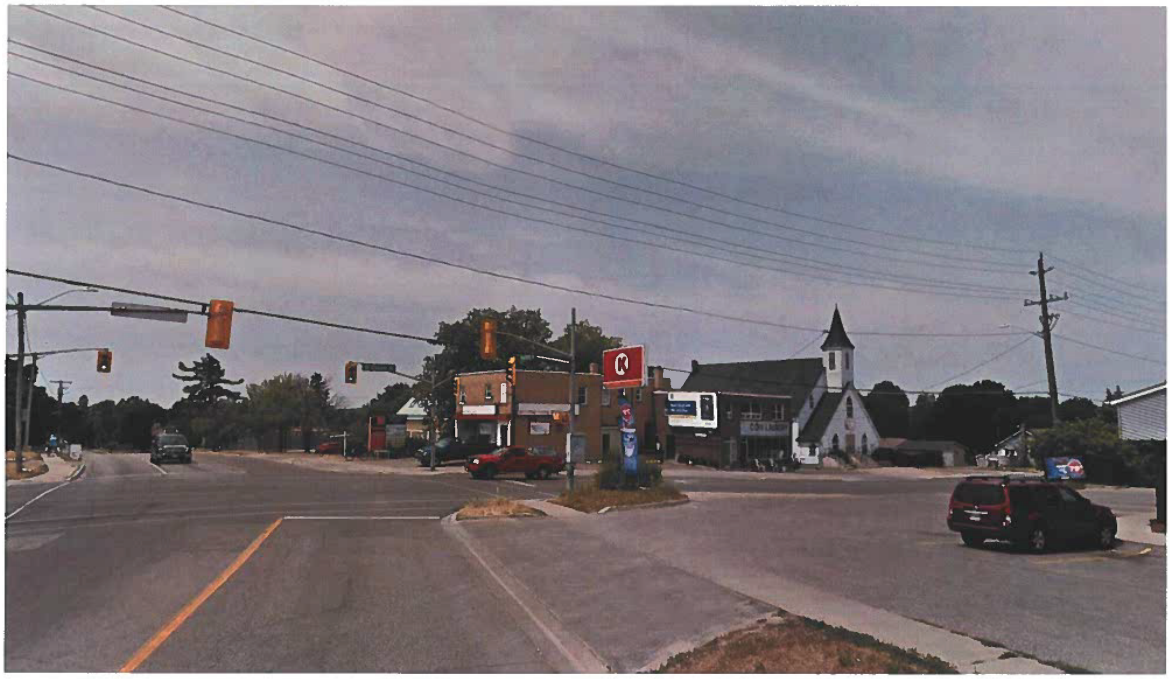
Sincerely,

Sean Ogilvie, Real Estate & Government Affairs
Forbes Bros Ltd. Telecommunication Services
482 South Service Road East, Unit 130
Oakville, ON L6J 2X6

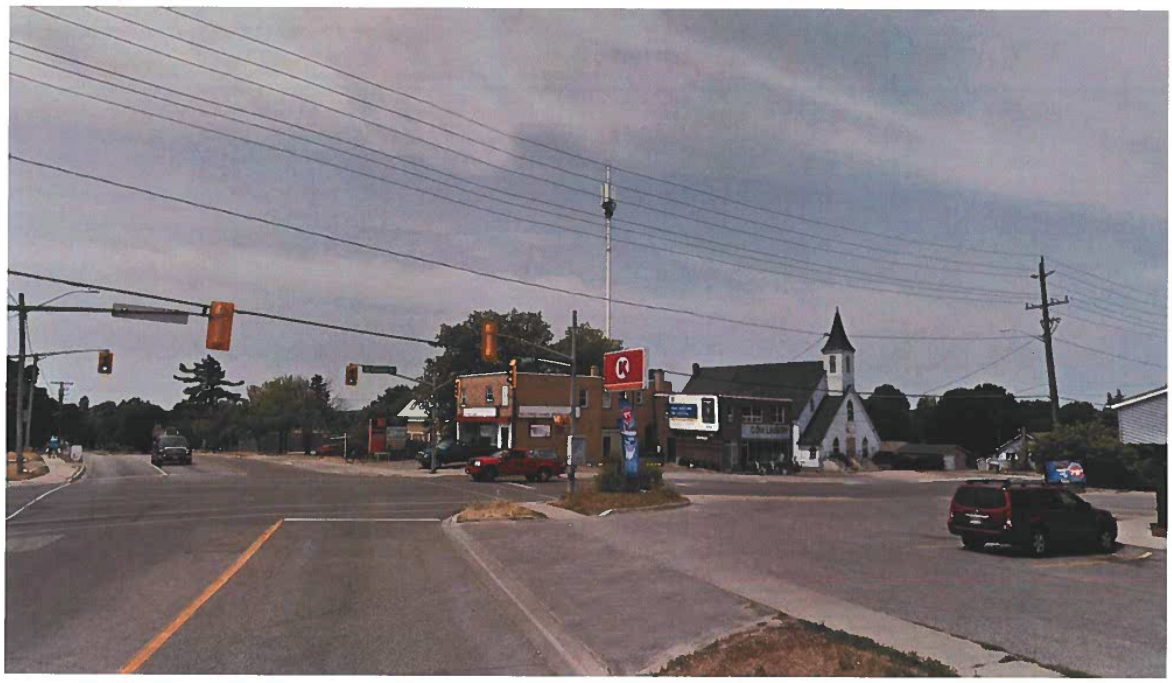
ROGERS

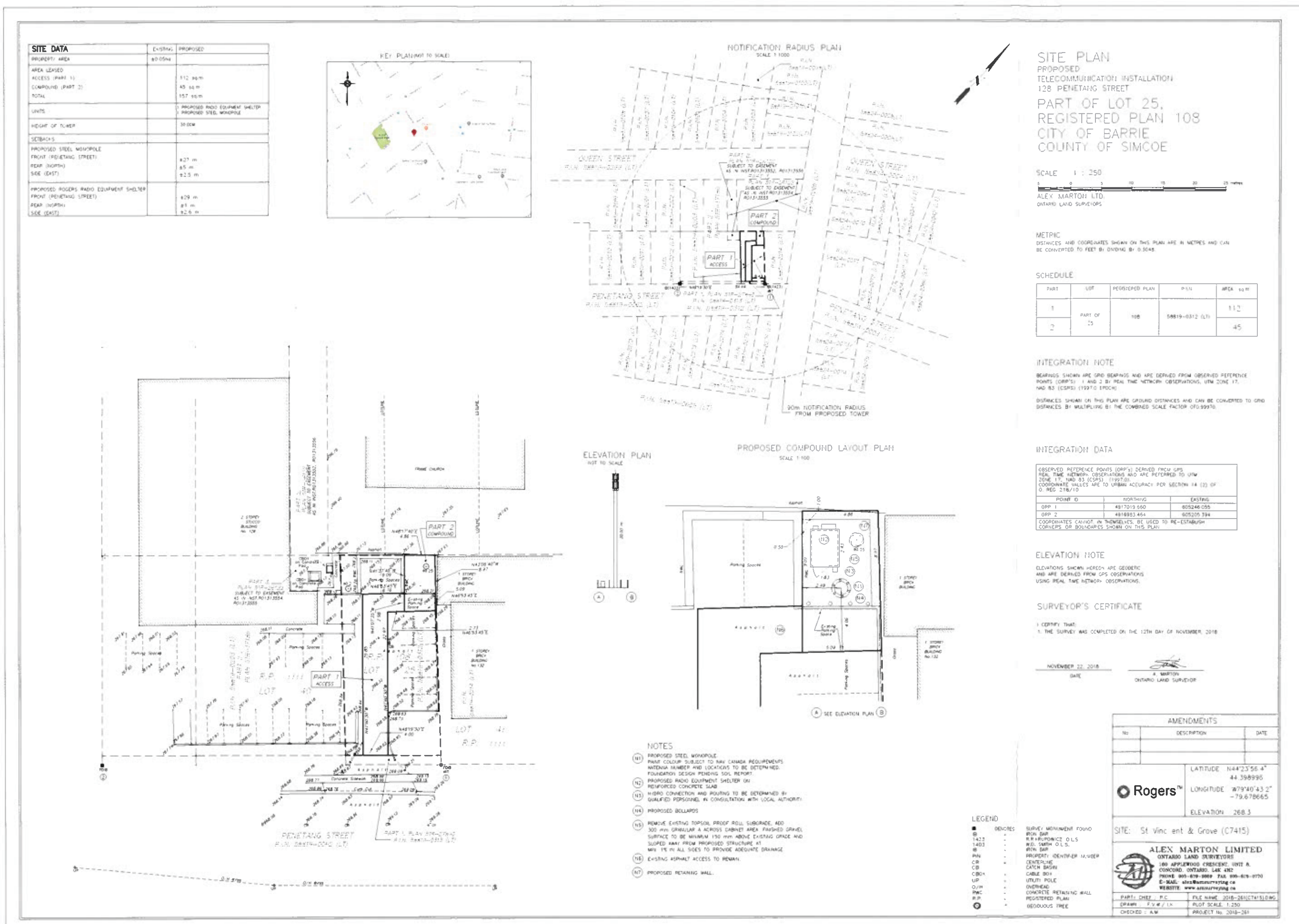
Aerial reference of subject property

Street view facing west from Penetang Street



Street view facing west from Penetang Street with tower in place




SITE DATA
EXISTING
PROPOSED
PROPERTY AREA ±0.05Ha
AREA LEASED
ACCESS (PART 1) 112 sq m
COMPOUND (PART 2) 45 sq m
TOTAL 157 sq m
UNITS
PROPOSED RADIO EQUIPMENT SHELTER
PROPOSED STEEL MONOPOLE
HEIGHT OF TOWER 30.00M
SETBACKS
PROPOSED STEEL MONOPOLE
FRONT (PENETANG STREET) ±27 m
REAR (NORTH) ±5 m
SIDE (EAST) ±2.5 m
PROPOSED ROGERS RADIO EQUIPMENT SHELTER
FRONT (PENETANG STREET) ±29 m
REAR (NORTH) ±1 m
SIDE (EAST) ±2.6 m
KEY PLAN (NOT TO SCALE)
NOTIFICATION RADIUS PLAN
SCALE 1:1000
QUEEN STREET
PENETANG STREET
PART 1
ACCESS
PART 2
COMPOUND
30m NOTIFICATION RADIUS FROM PROPOSED TOWER
SITE PLAN
PROPOSED
TELECOMMUNICATION INSTALLATION
128 PENETANG STREET
PART OF LOT 25,
REGISTERED PLAN 108
CITY OF BARRIE
COUNTY OF SIMCOE
SCALE 1 : 250
ALEX MARTON LTD.
ONTARIO LAND SURVEYORS
METRIC
DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.
SCHEDULE
PART | LOT | REGISTERED PLAN | PIN | AREA sq m
1 | PART OF 25 | 108 | 58819-0312 (LT) | 112
2 | | | | 45
INTEGRATION NOTE
BEARINGS SHOWN ARE GRID BEARINGS AND ARE DERIVED FROM OBSERVED REFERENCE POINTS (ORP'S) 1 AND 2 BY REAL TIME NETWORK OBSERVATIONS, UTM ZONE 17, NAD 83 (CSRS) (1997.0 EPOCH)
DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.99970.
INTEGRATION DATA
OBSERVED REFERENCE POINTS (ORP's) DERIVED FROM GPS REAL TIME NETWORK OBSERVATIONS AND ARE REFERRED TO UTM ZONE 17, NAD 83 (CSRS) (1997.0).
COORDINATE VALUES ARE TO URBAN ACCURACY PER SECTION 14 (2) OF O. REG 216/10
POINT ID | NORTHING | EASTING
ORP 1 | 4917019.660 | 605246.055
ORP 2 | 4916983.464 | 605205.394
COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN
ELEVATION NOTE
ELEVATIONS SHOWN HEREON ARE GEODETIC AND ARE DERIVED FROM GPS OBSERVATIONS USING REAL TIME NETWORK OBSERVATIONS.
SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THE SURVEY WAS COMPLETED ON THE 12TH DAY OF NOVEMBER, 2018
NOVEMBER 22, 2018
DATE
A. MARTON
ONTARIO LAND SURVEYOR
ELEVATION PLAN
NOT TO SCALE
PROPOSED COMPOUND LAYOUT PLAN
SCALE 1:100
SEE ELEVATION PLAN
NOTES
N1 PROPOSED STEEL MONOPOLE. PAINT COLOUR SUBJECT TO NAV CANADA REQUIREMENTS. ANTENNA NUMBER AND LOCATIONS TO BE DETERMINED. FOUNDATION DESIGN PENDING SOIL REPORT.
N2 PROPOSED RADIO EQUIPMENT SHELTER ON REINFORCED CONCRETE SLAB
N3 HYDRO CONNECTION AND ROUTING TO BE DETERMINED BY QUALIFIED PERSONNEL IN CONSULTATION WITH LOCAL AUTHORITY
N4 PROPOSED BOLLARDS
N5 REMOVE EXISTING TOPSOIL, PROOF ROLL SUBGRADE, ADD 300 mm GRANULAR A ACROSS CABINET AREA. FINISHED GRAVEL SURFACE TO BE MINIMUM 150 mm ABOVE EXISTING GRADE AND SLOPED AWAY FROM PROPOSED STRUCTURE AT MIN. 1% IN ALL SIDES TO PROVIDE ADEQUATE DRAINAGE
N6 EXISTING ASPHALT ACCESS TO REMAIN.
N7 PROPOSED RETAINING WALL.
LEGEND
DENOTES
SURVEY MONUMENT FOUND
IRON BAR
R.R. KRUPOWICZ O.L.S.
W.D. SMITH O.L.S.
IRON BAR
PROPERTY IDENTIFIER NUMBER
CENTERLINE
CATCH BASIN
CABLE BOX
UTILITY POLE
OVERHEAD
CONCRETE RETAINING WALL
REGISTERED PLAN
DECIDUOUS TREE
AMENDMENTS
No. | DESCRIPTION | DATE
Rogers™
LATITUDE N44°23'56.4" 44.398996
LONGITUDE W79°40'43.2" -79.678665
ELEVATION 268.3
SITE: St Vincent & Grove (C7415)
ALEX MARTON LIMITED
ONTARIO LAND SURVEYORS
PARTY CHIEF : P.C.
DRAWN : F.V.M / I.K.
CHECKED : A.M.
FILE NAME: 2018-261(C7415).DWG
PLOT SCALE: 1:250
PROJECT No. 2018-261