



Providing 5G Fixed
Wireless Access in
Holland Marsh

Project Problem Statement

A technology solution required to provide a high-resilience and high-performance solution to rural Ontario communities located in a valley making access to residential broadband or high-speed internet access difficult.

Selected Service Provider



Largest Wireless Provider in Canada

By The Numbers

1960	Founded
~25,300	Employees
\$15.1B	Total Revenue
\$39.0B	Total Assets
10.9M	Wireless subscribers
2.6M	Internet subscribers

History of Innovation

- Launch of Rogers Cable TV in 1967
- Introduction of wireless network in 1985
- First to offer Broadband Internet services in Canada in 1995
- Canada's first and only wireless GSM network since 2001
- North America's first HSPA+ Network in 2009
- First LTE wireless network in Canada in 2011
- Launched Gigabit Internet from 2014-15
- We rolled out LTE-M in 2018
- First 5G Network in Canada in 2020

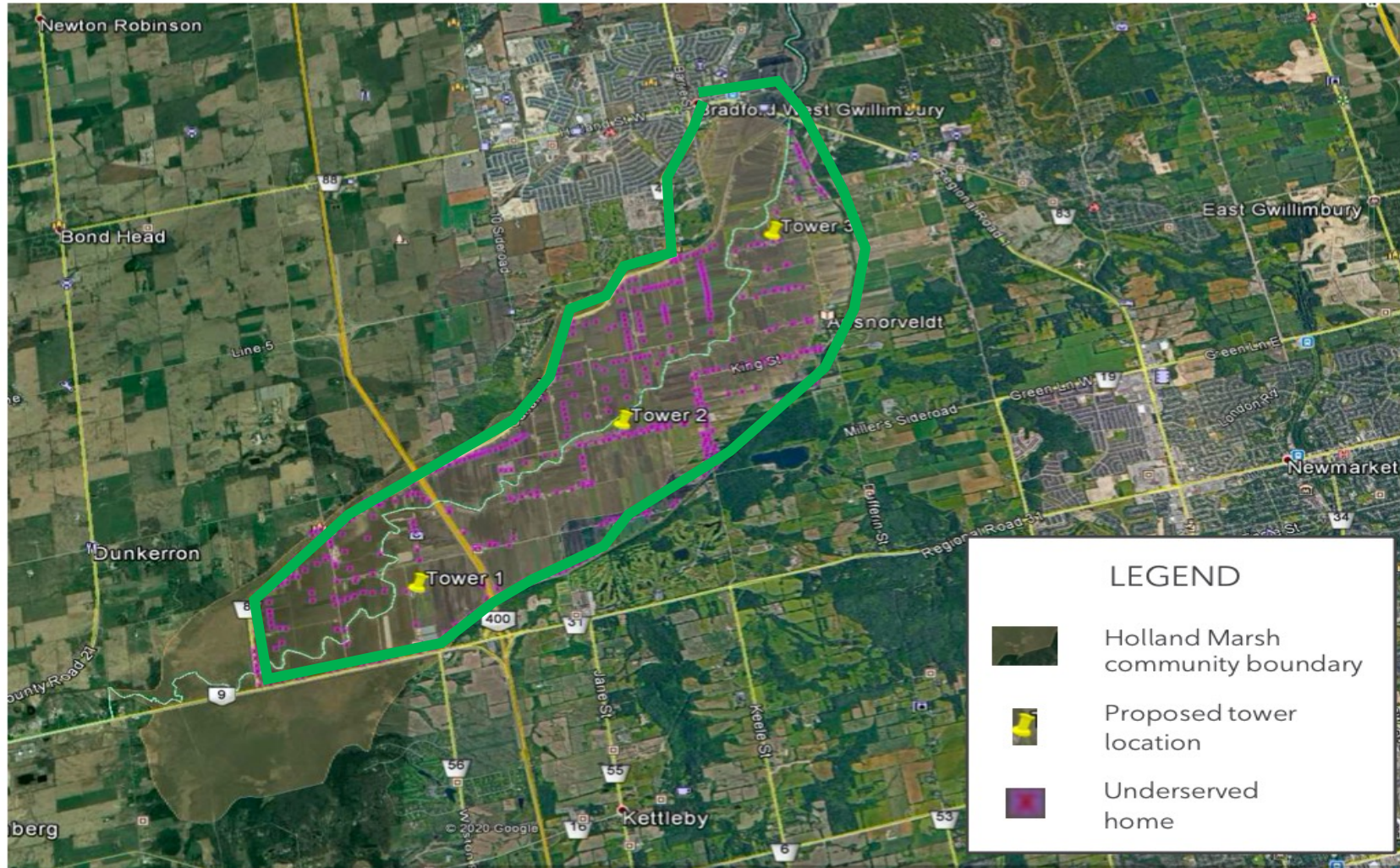
Holland Marsh Area



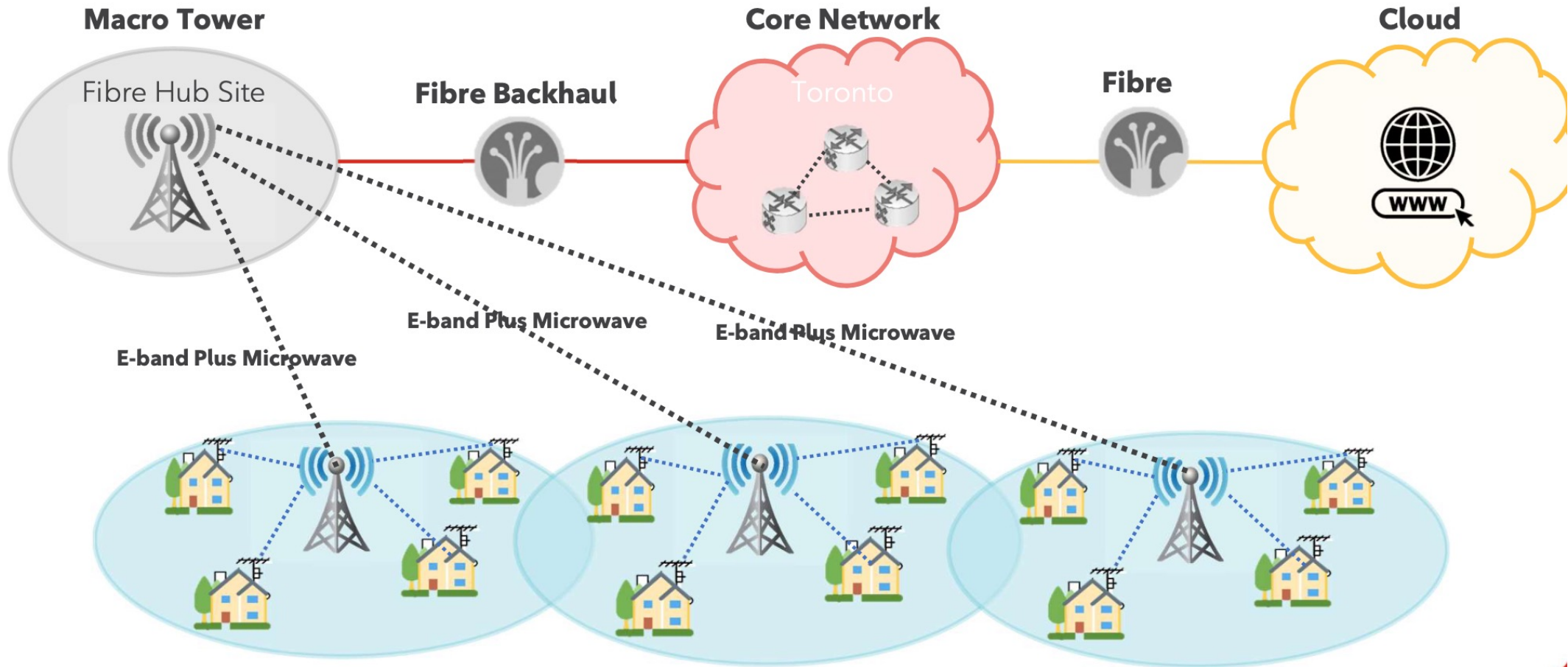
- ✓ Big wide valley
- ✓ Huge drop in elevation from the highway
- ✓ Demographics – farmers, businesses, migrant workers
- ✓ Sparse tree cover – wide open space
- ✓ Properties located on the edge
- ✓ Environmentally-sensitive area - floodplain, soft soils
- ✓ Widely underserved

Problem Statement: Rural Ontario communities that are located in a valley making access to residential broadband or high-speed internet access difficult.

Proposed High Level Network Design

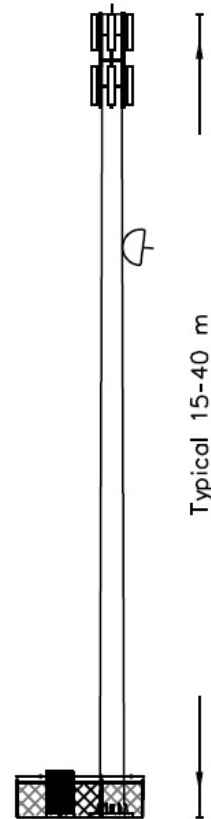


Extending broadband to Holland Marsh



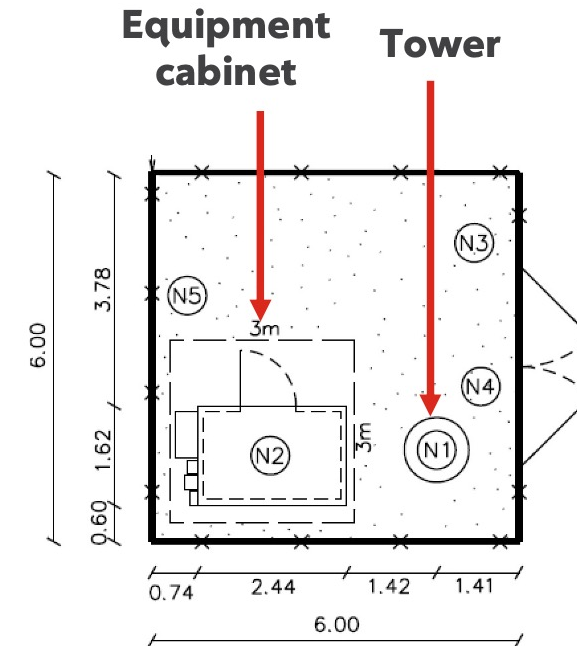
Holland Marsh Area: Three new towers to address ~480 households that will be outfitted with external antennas

Typical Monopole Tower Installation



Typical Compound Size

Range 6 meters x 6 meters
to 10 meters x 10 meters



Technology Innovation

- ✔ E Band Plus combines E Band (multi-Gbps) Microwave with high availability traditional lower band Microwave for backhaul solution (up to 10Gbps backhaul)
- ✔ 5G Fixed Wireless Access proposed for last km solution to rural residents
- ✔ Massive MIMO antennae enable higher spectral efficiency and more capacity
- ✔ 4G cellular services to be added on to address deficit in mobile coverage
- ✔ Small footprint mono-pole tower design to minimize environmental impact

Community Benefits of Project

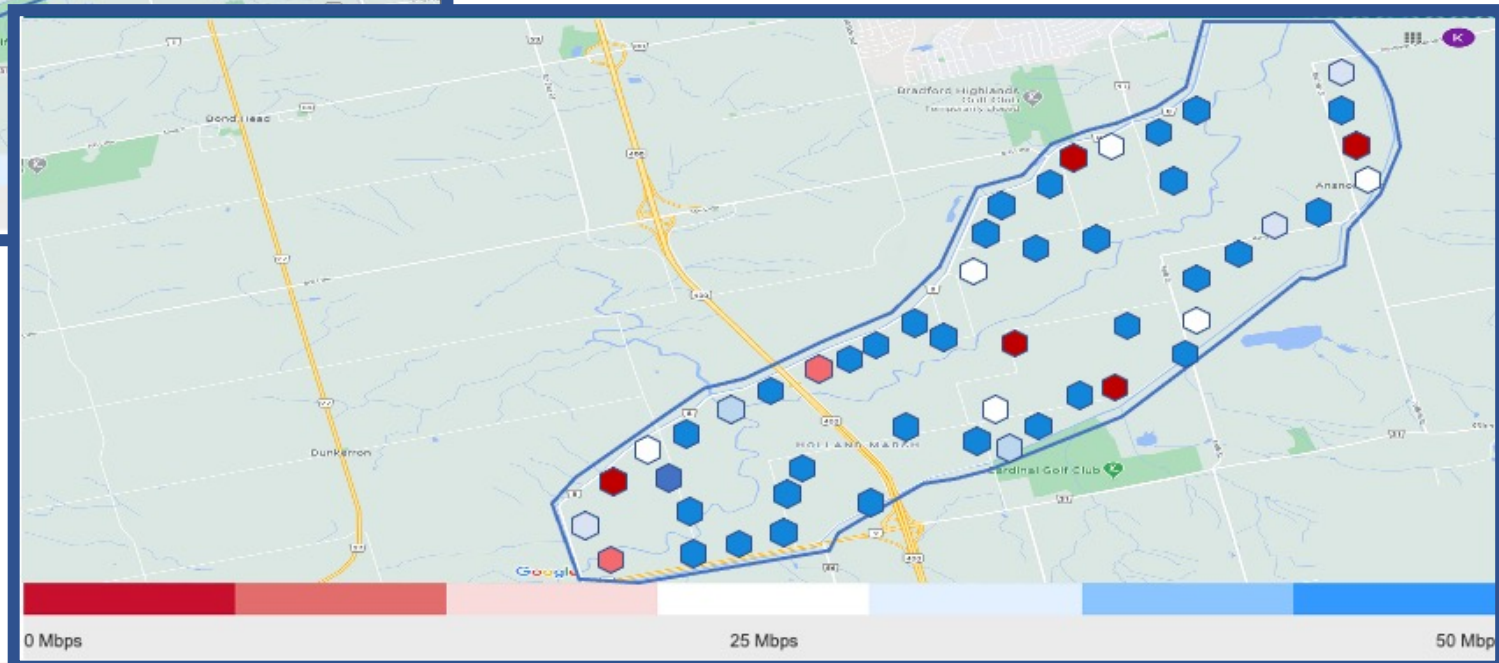
- ✓ Very high backhaul capacity
- ✓ Future-proof 5G Fixed Wireless Access for rural residents
- ✓ Choice of new high performance 25/5 and 50/10 broadband internet access
- ✓ Significantly improved 4G cellular services in the Holland Marsh area
- ✓ High Speed internet access for agri-businesses in the Holland Marsh
- ✓ Access to LTE and LTE-M service for precision farming and IoT devices

Visualizing Proposed Internet Access Performance Improvements

Before



After





THANK YOU!