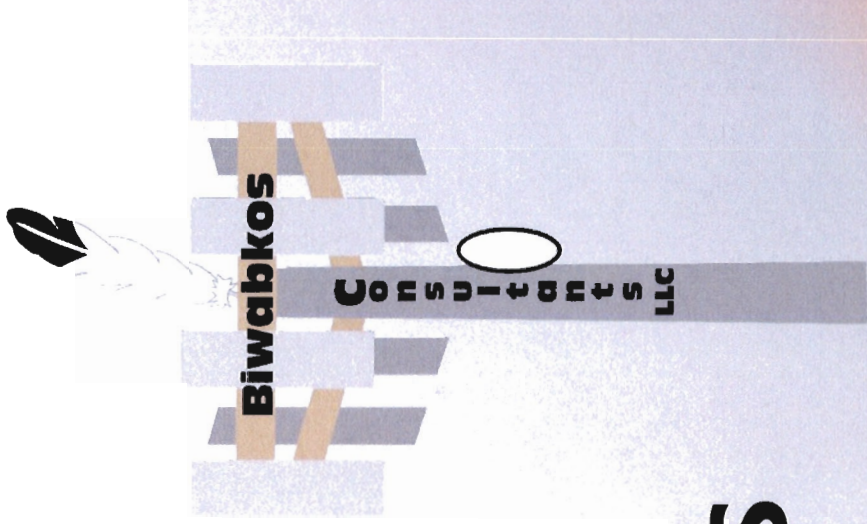


WIRELESS NETWORK CONSULTING

Crown Site# 876352
Richard Wall Site



RF DESIGN ANALYSIS

2019

Current/Proposed Site

† Existing 117' Monopole Tower

- 194 East Hight Street East Hampton, CT 06424
- Latitude: 41 35 14.2 (NAD83)
- Longitude: -72 29 19.6 (NAD83)
- 688' AMSL Ground Elevation
- Sprint 117', Verizon 105', AT&T 91',

† Proposed 250' Monopole Tower

- 8 ½ Lakeview Street East Hampton, CT 06424
- Latitude: 41 34 56.92 (NAD83)
- Longitude: -72 29 35.29 (NAD83)
- 523' Ground Elevation
- Sprint 246', Verizon 234', AT&T 222', T-Mobile 210'

Sites



Google Earth

2019

Objective of new site

- † Replace existing coverage for (3) carriers that provide service to Hwy 16, Hwy 66, Hwy 196 and East Hampton
- † Site would also continue to provide services to users on Pocotopaug Lake
- † Since ground elevation differs between locations by 165' a taller structure is needed for the proposed location to duplicate existing coverage

Antenna Height Requirements

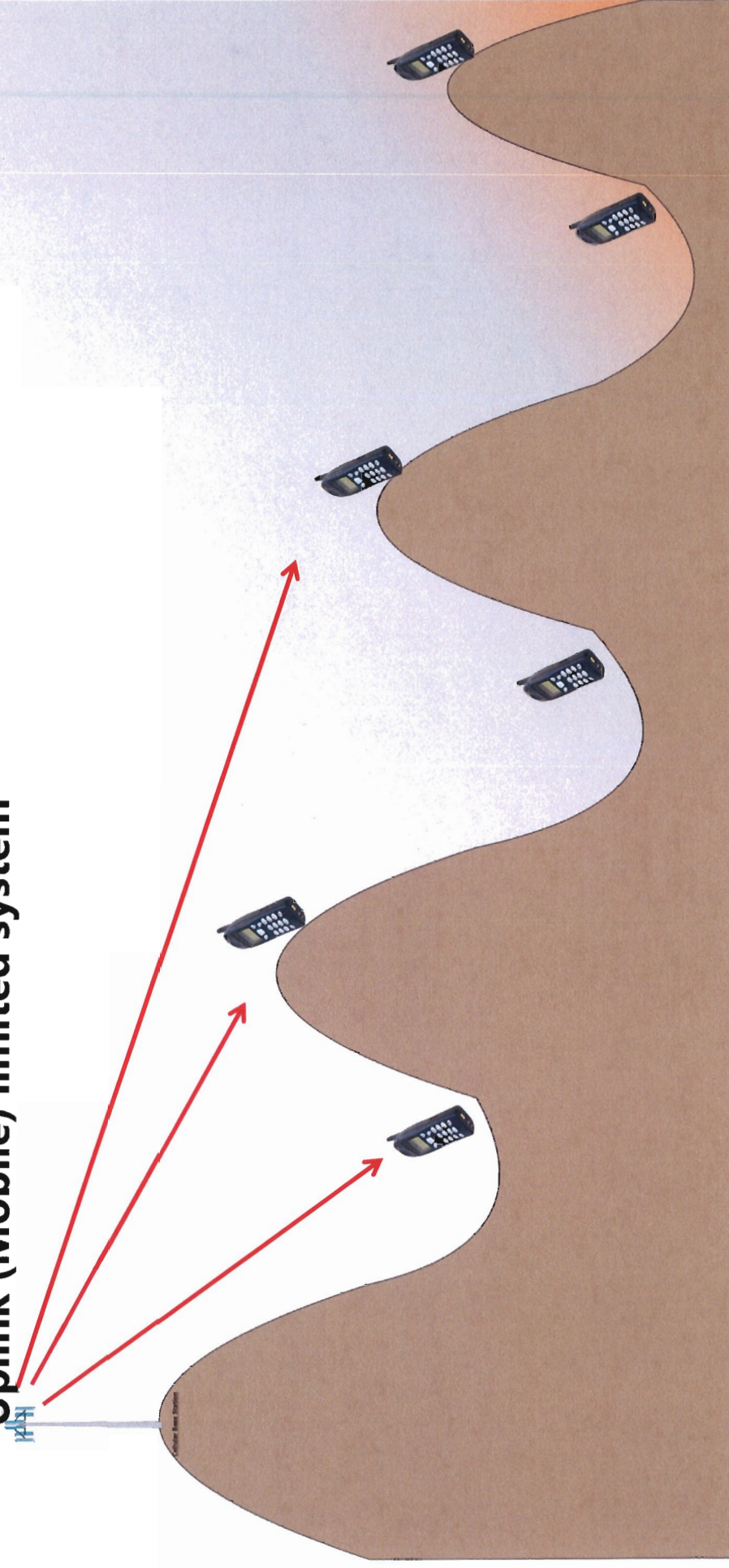
- † Terrain is a significant impact to the sites coverage area
- † With the loss of 165' in Ground elevation the replacement tower is taller than the existing tower
- † With the taller proposed tower the carriers are able to duplicate the existing coverage of the site that will be removed

Terrain can limit coverage

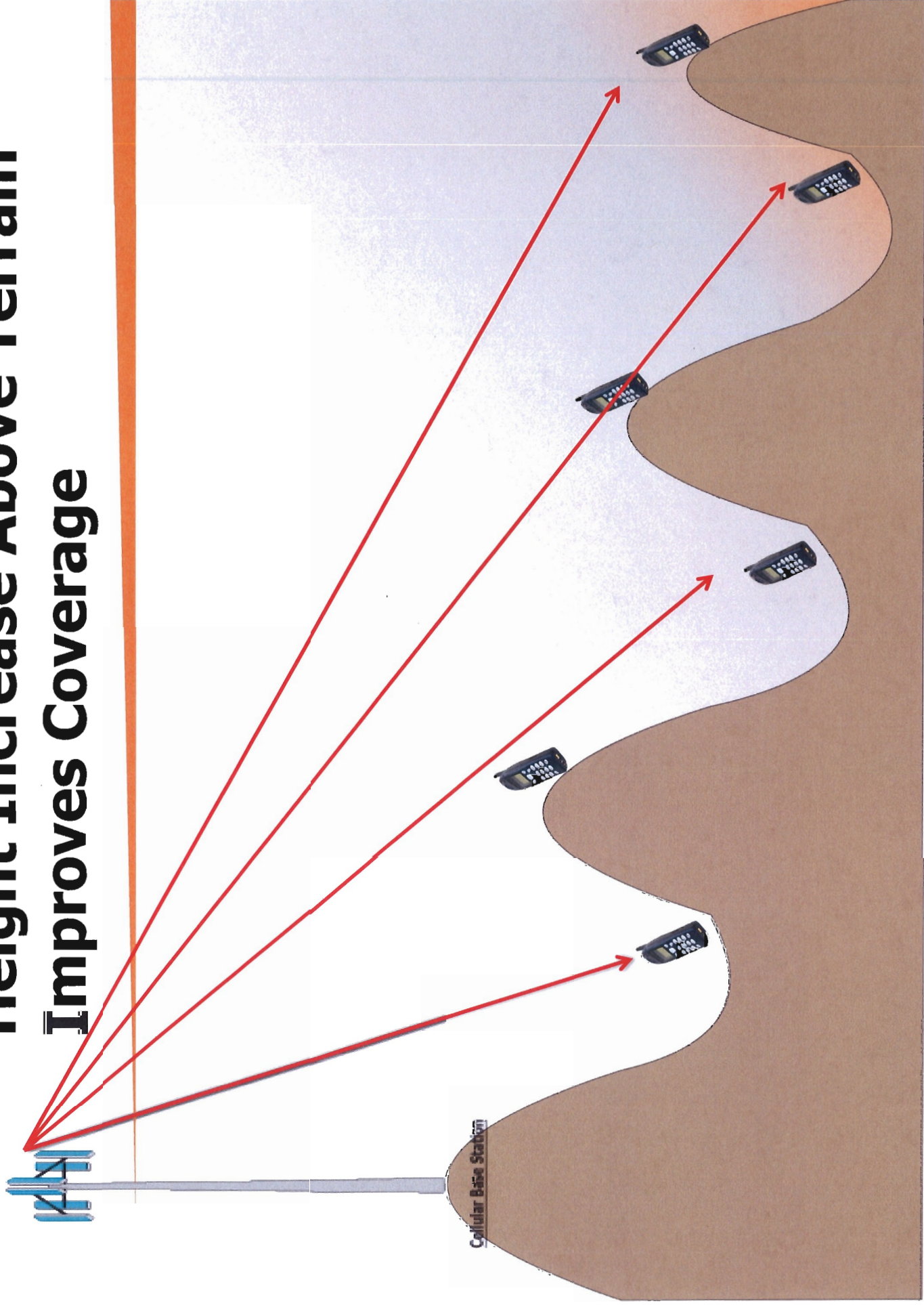
Wireless antenna must be above the terrain in order to provide services to customers

Limited primarily to "Line of Sight" communications

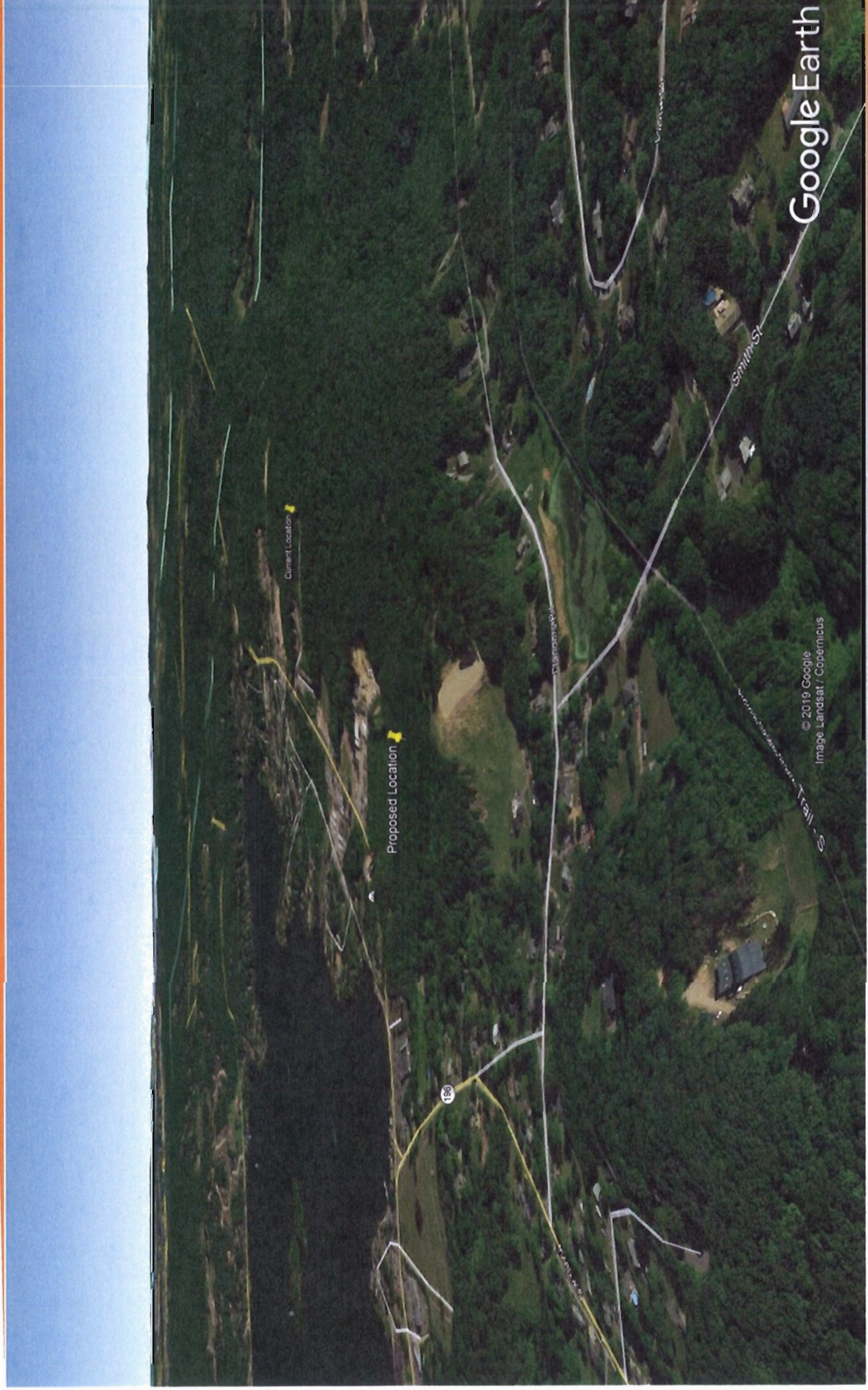
Uplink (Mobile) limited system



Height Increase Above Terrain Improves Coverage



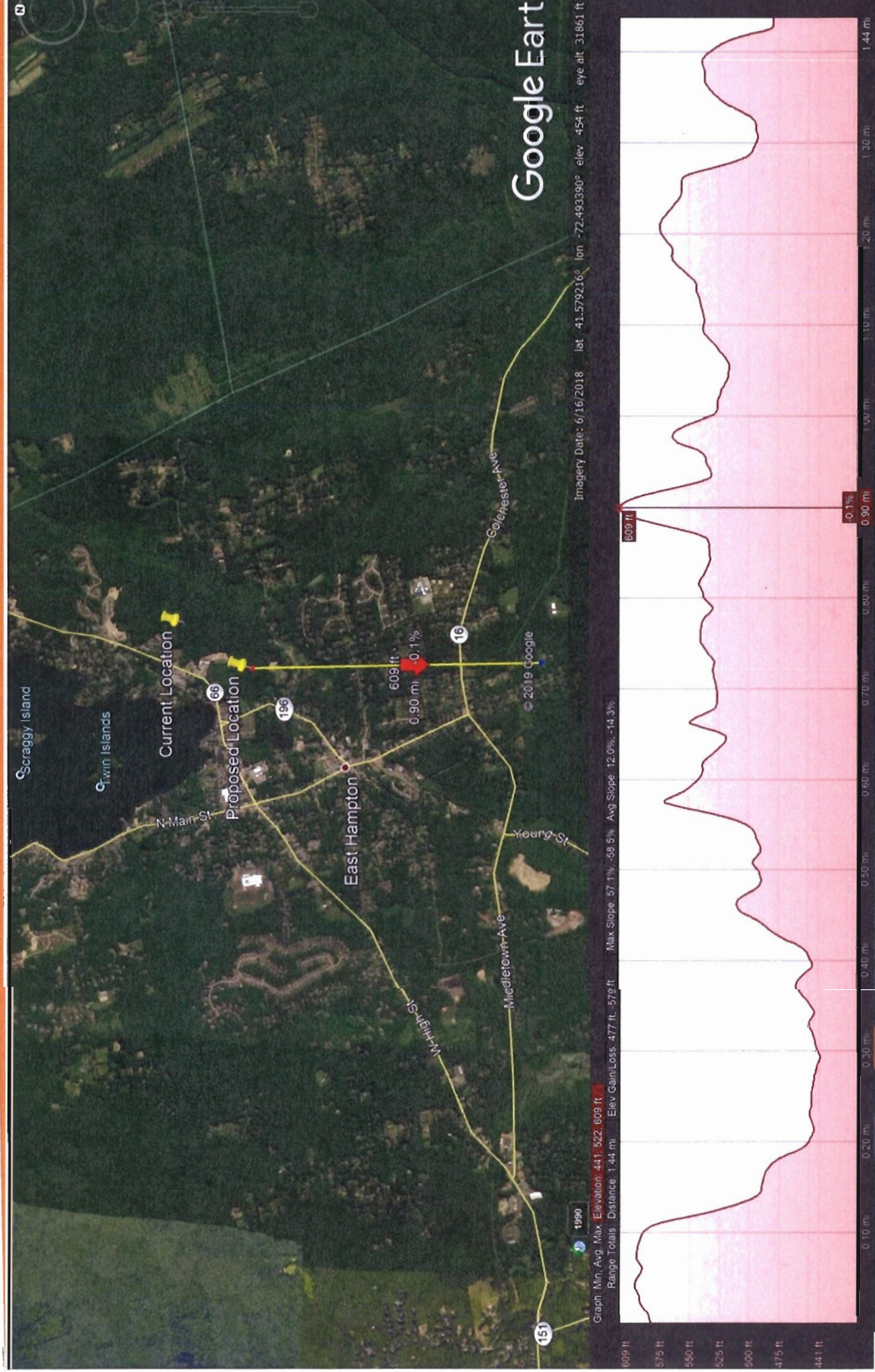
Terrain



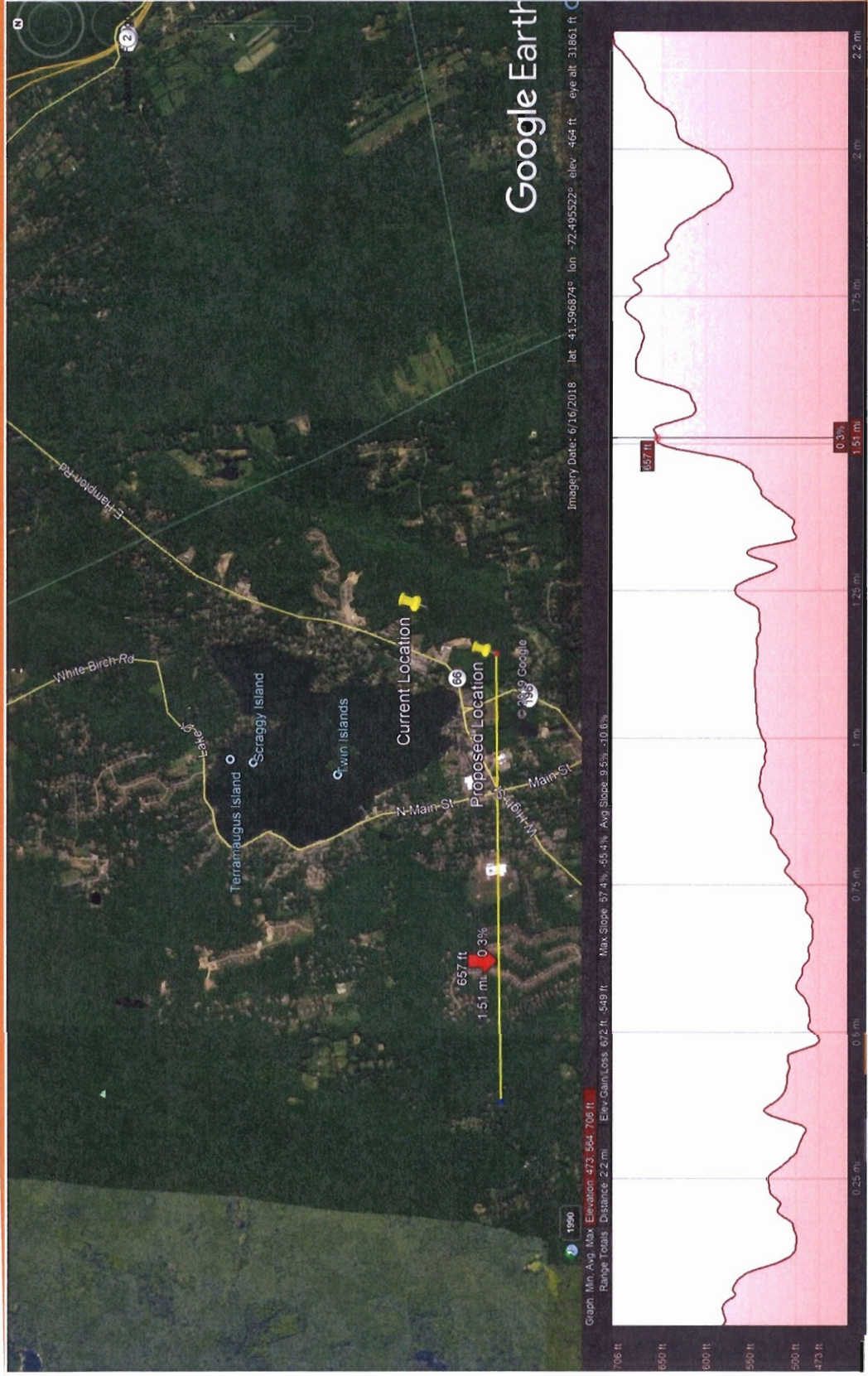
Terrain profile going East



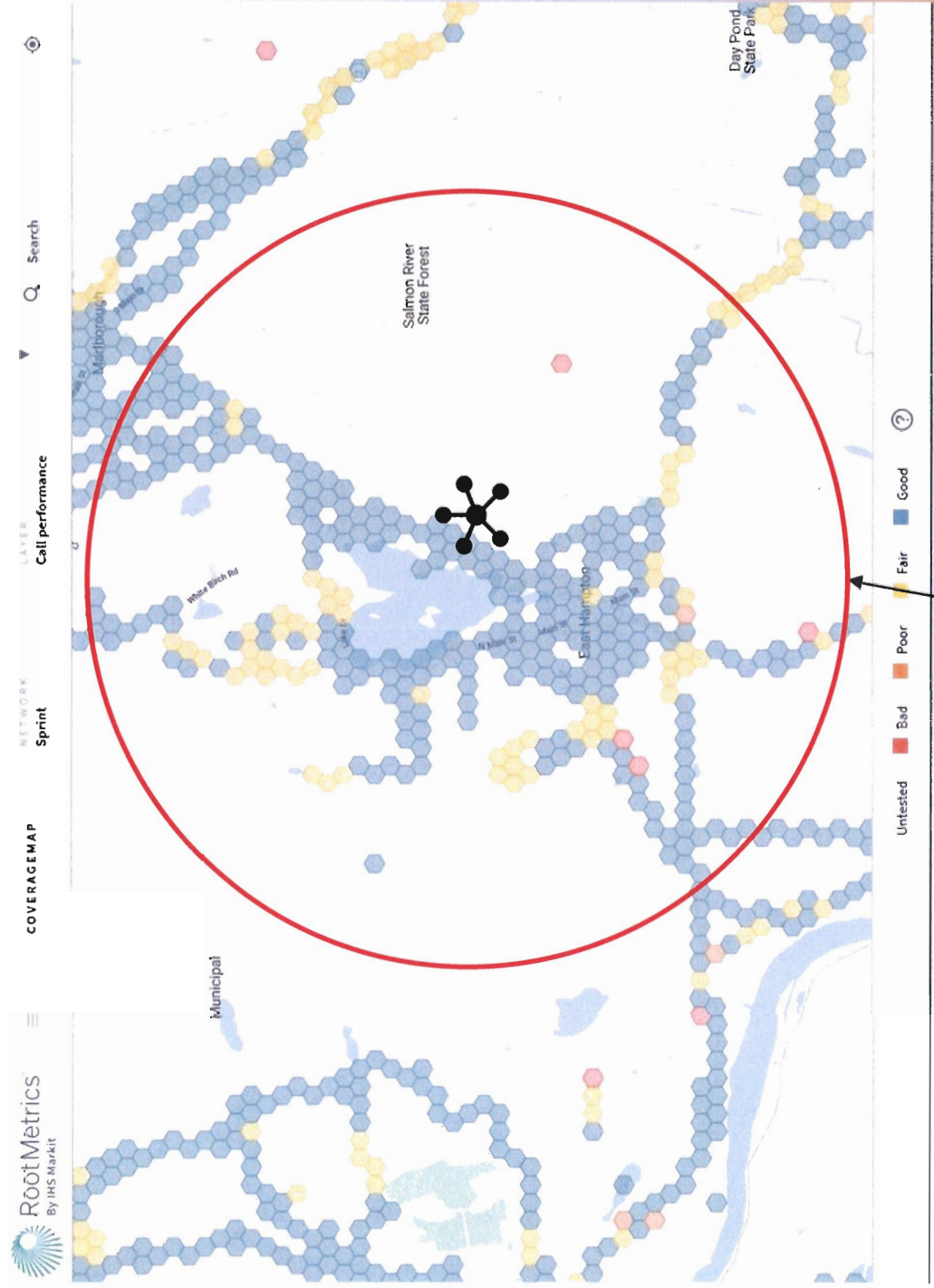
Terrain profile going South



Terrain profile going West

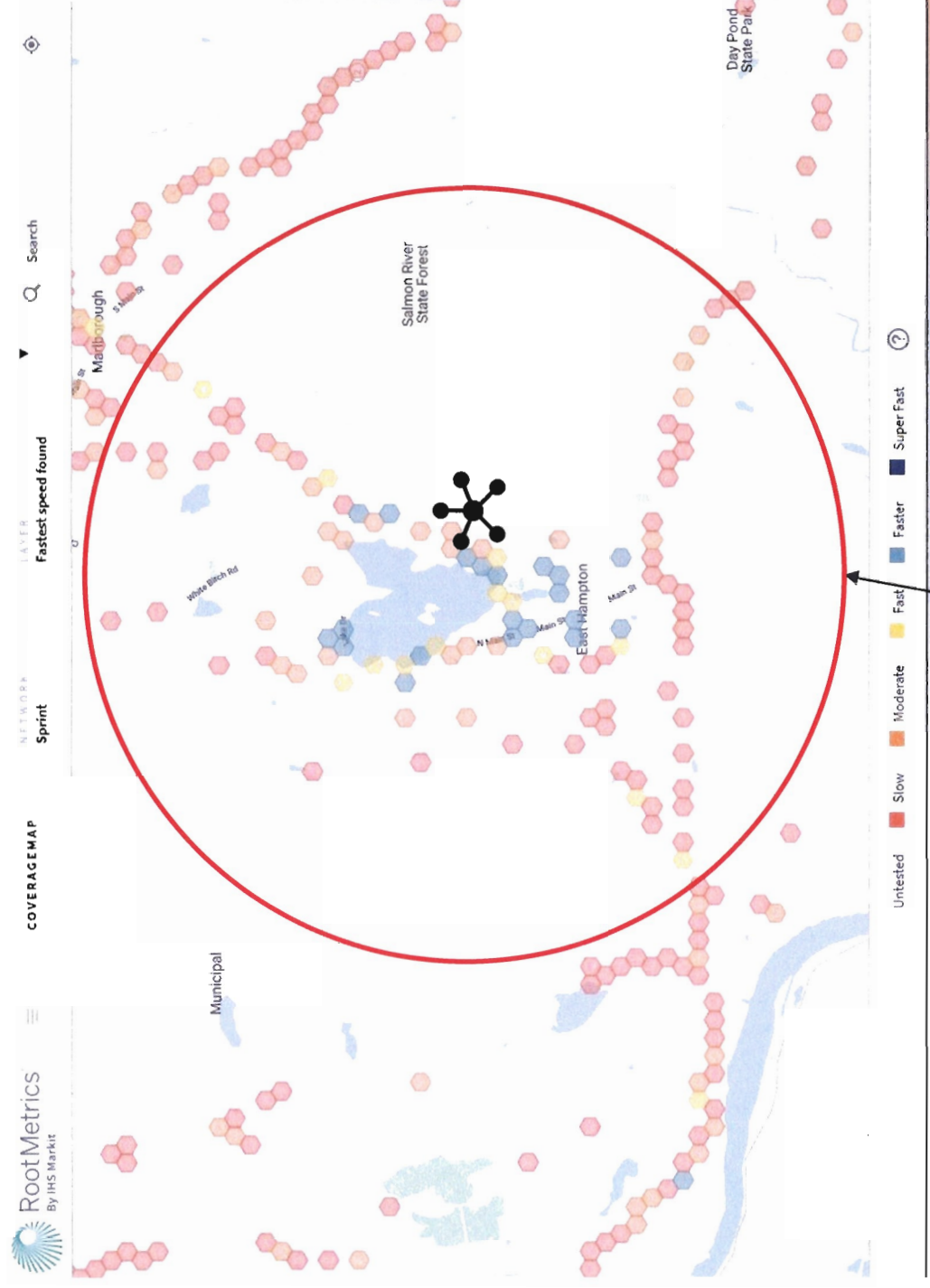


RootMetrics – Sprint Coverage Map



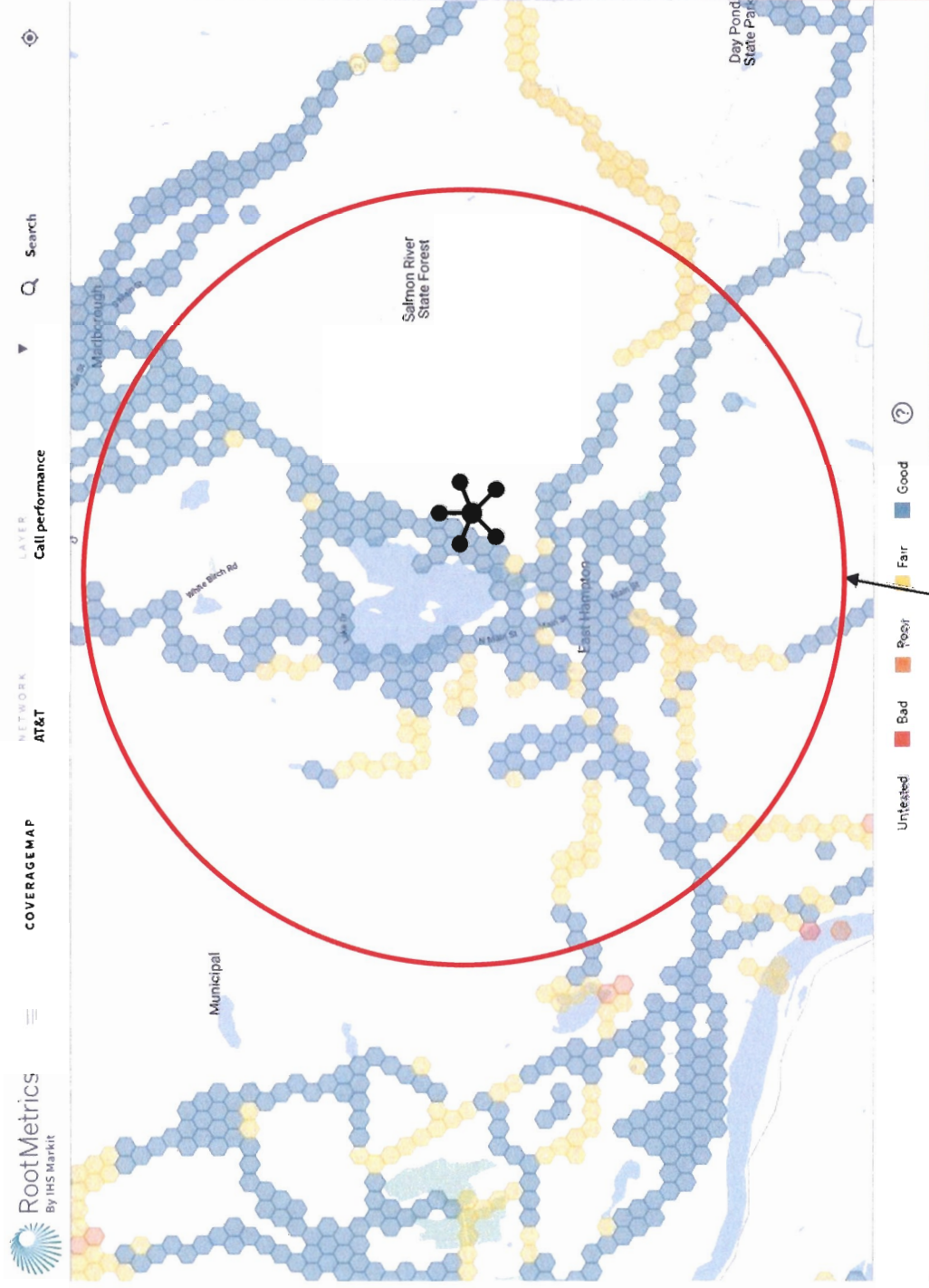
Area where existing site provides coverage and capacity

RootMetrics – Sprint Throughput Map



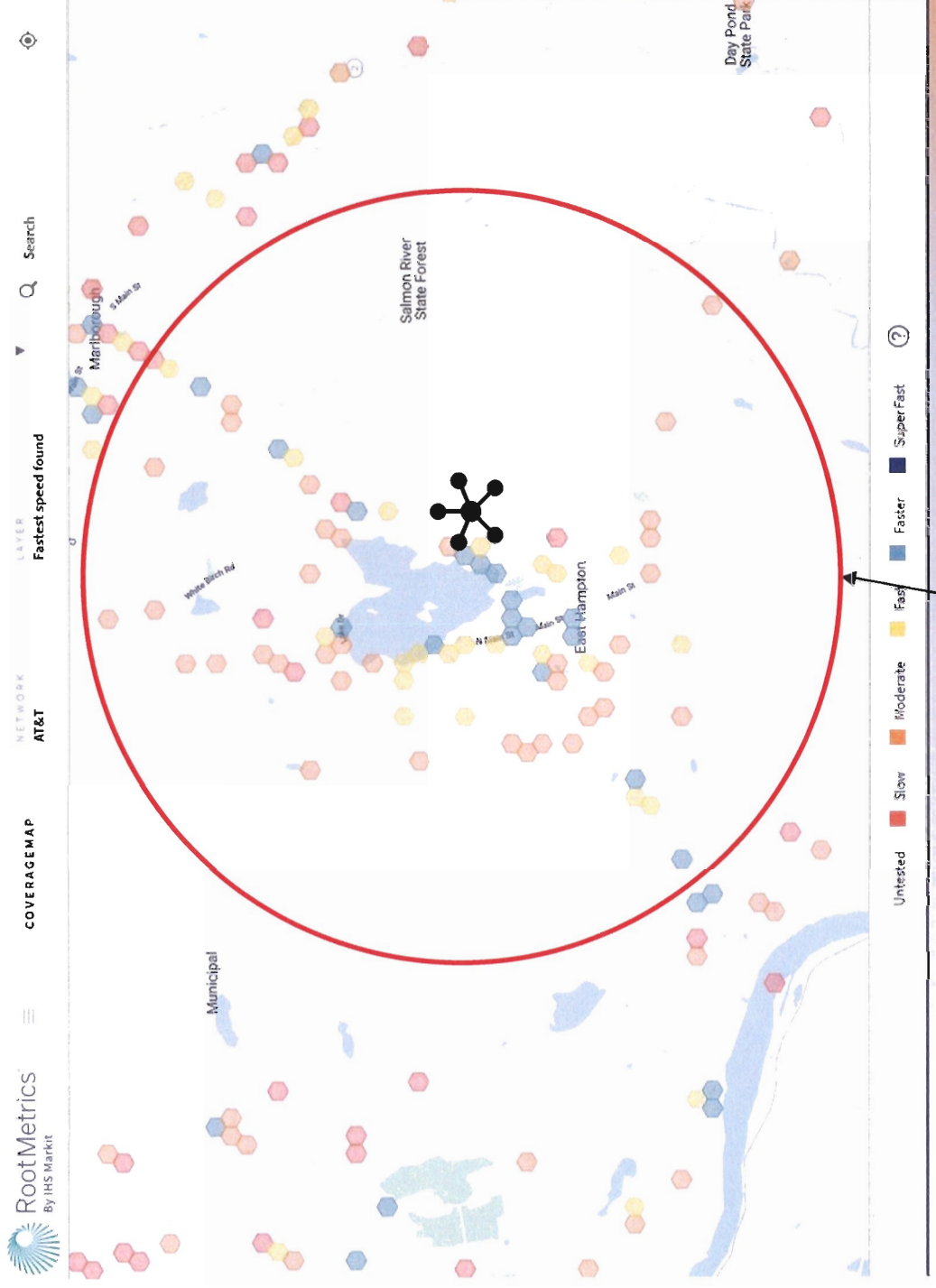
Area where existing site provides coverage and capacity

RootMetrics – AT&T Coverage Map



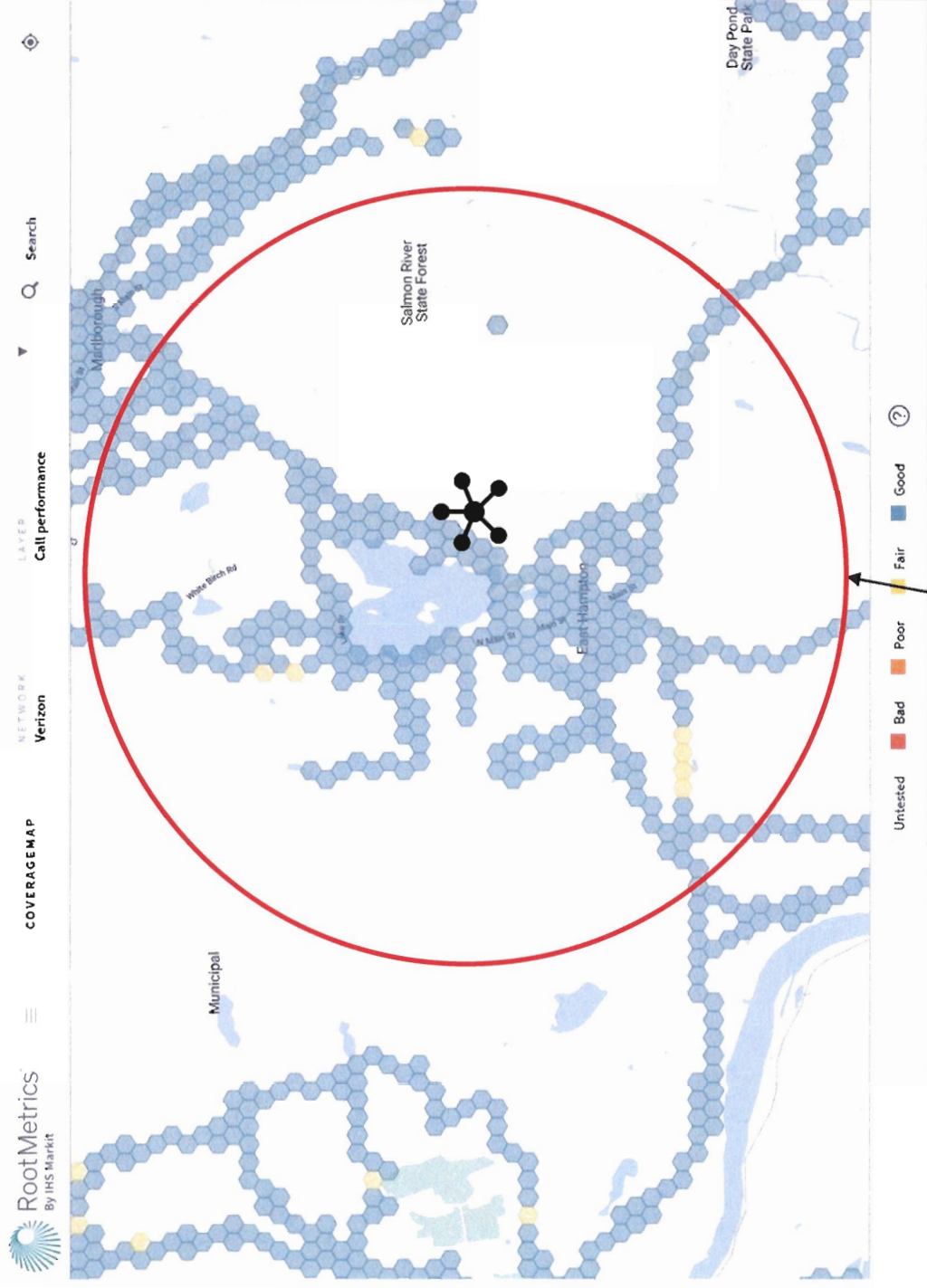
Area where existing site provides coverage and capacity

RootMetrics – AT&T Throughput Map



Area where existing site provides coverage and capacity

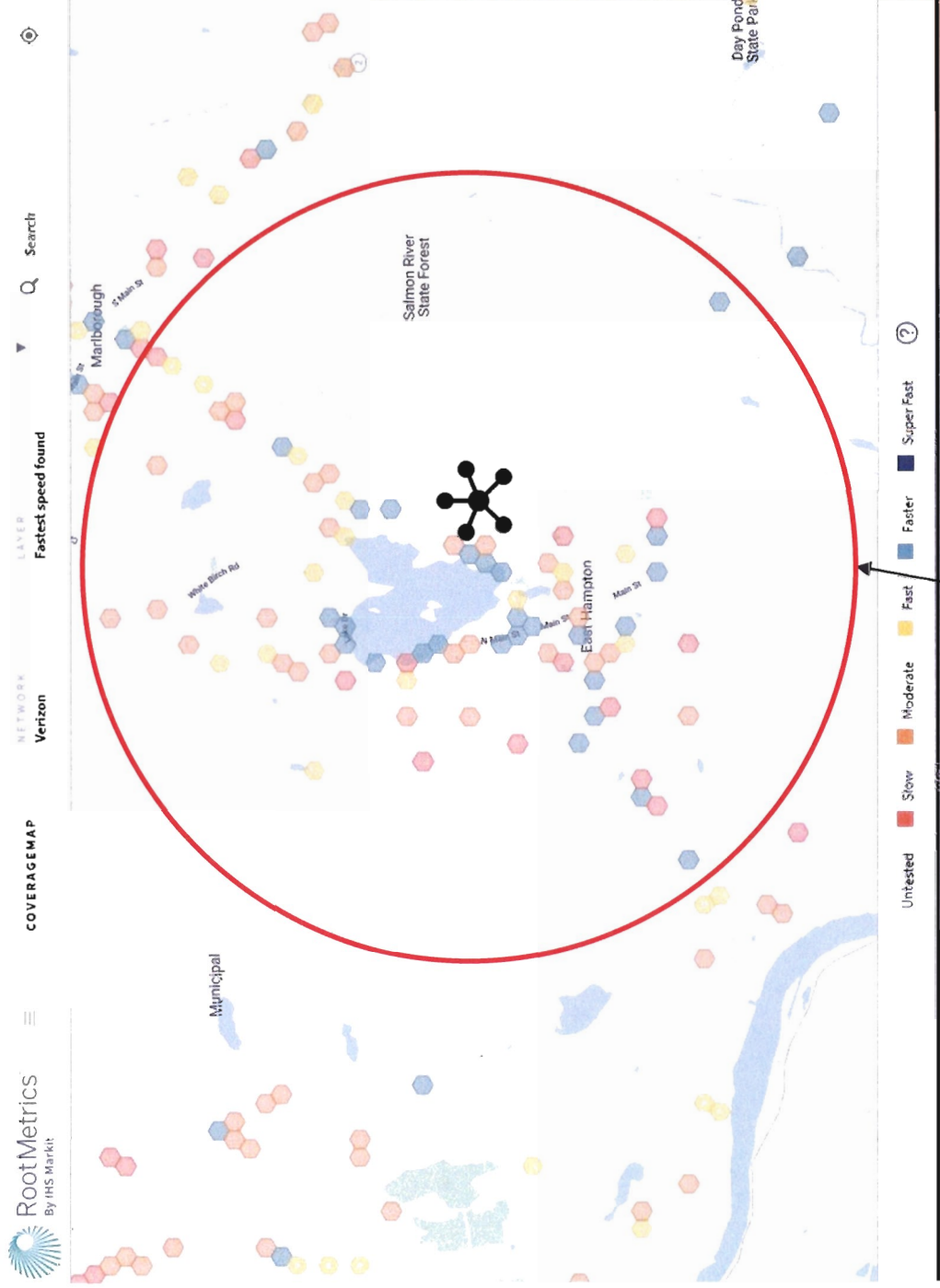
RootMetrics – Verizon Coverage Map



Area where existing site provides coverage and capacity

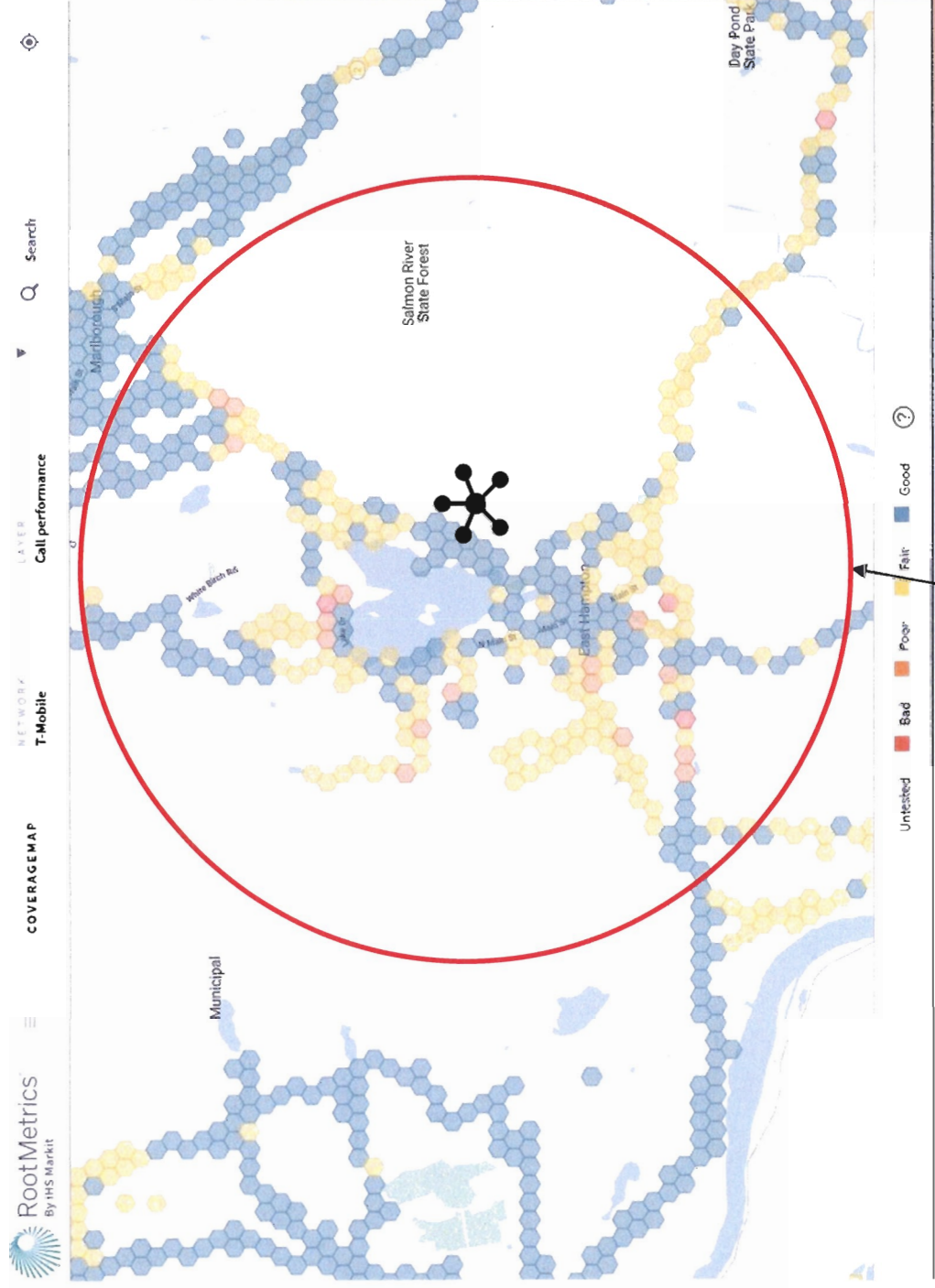
RootMetrics –

Verizon Throughput Map



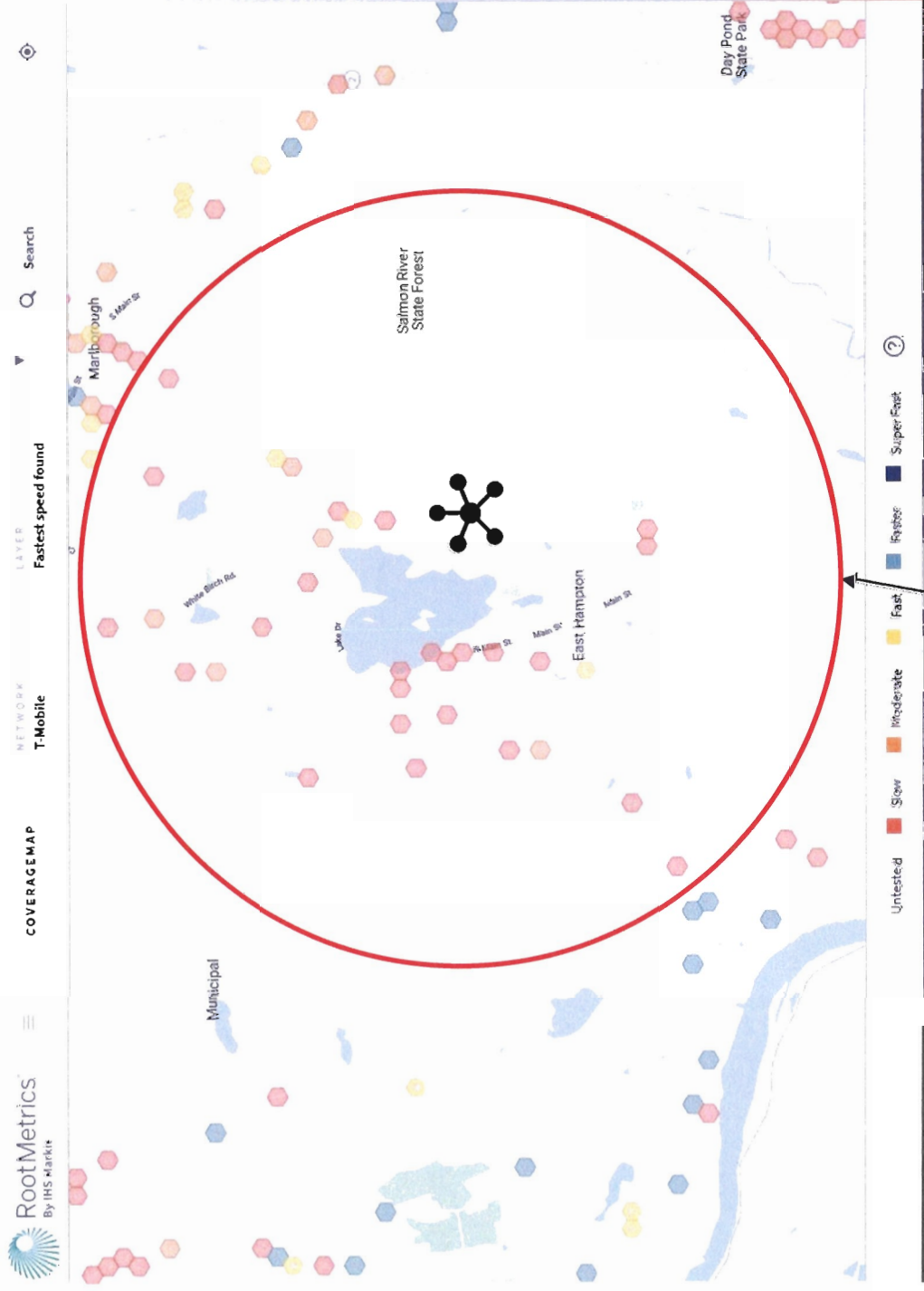
Area where existing site provides coverage and capacity

RootMetrics – T-Mobile Coverage Map



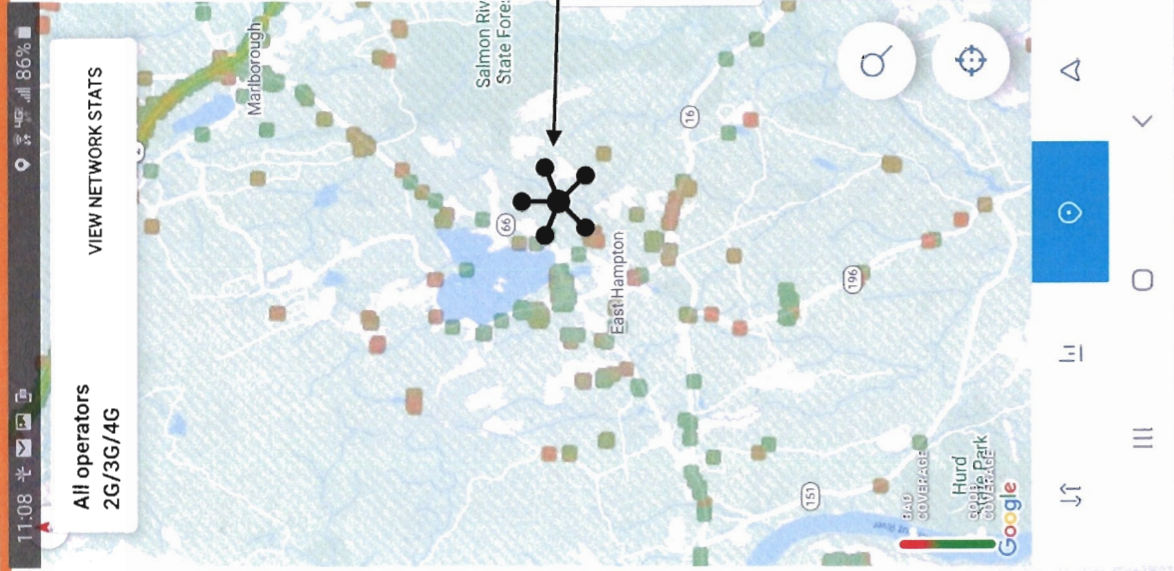
Area where existing site provides coverage and capacity

RootMetrics – T-Mobile Throughput Map

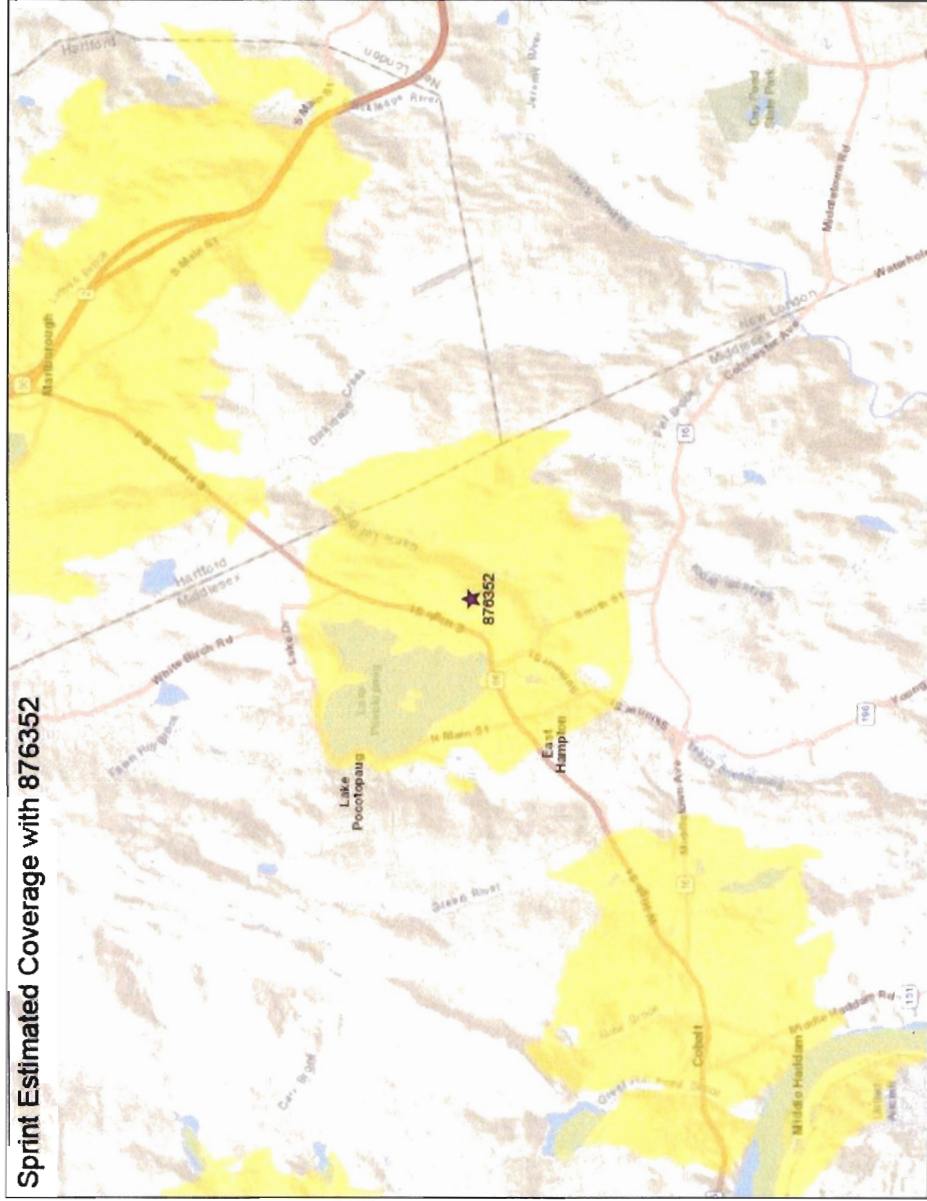


Area where existing site provides coverage and capacity

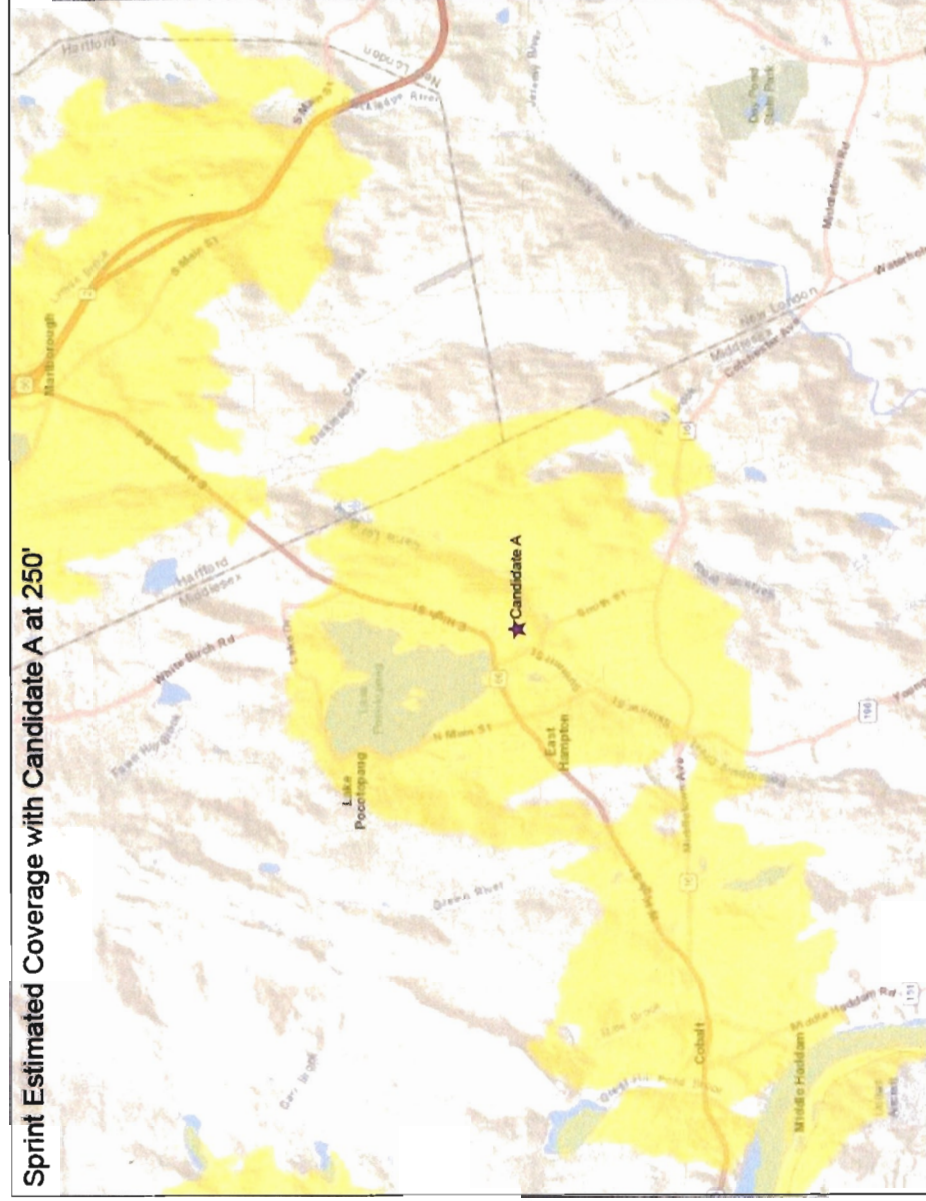
Open Signal – Quality Map



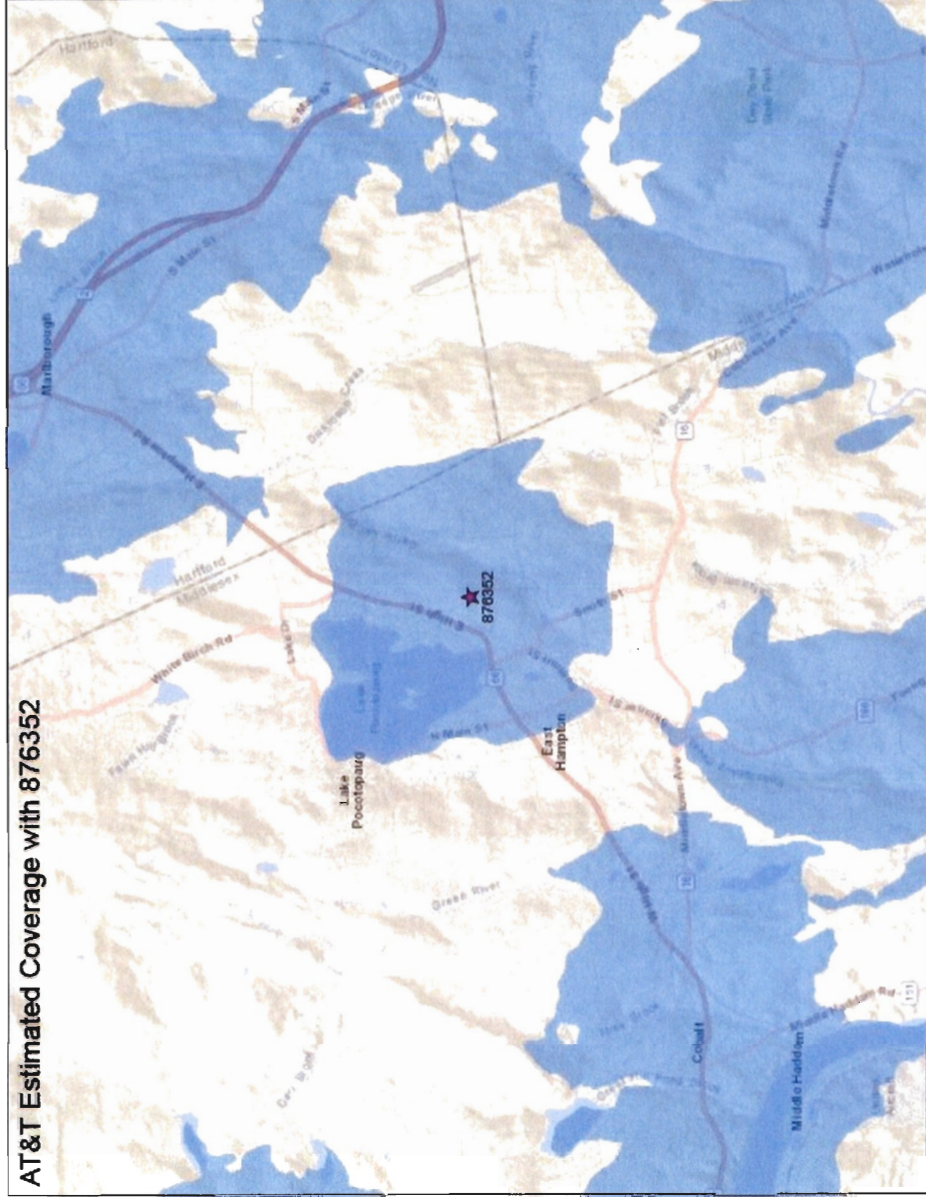
Sprint Current Coverage



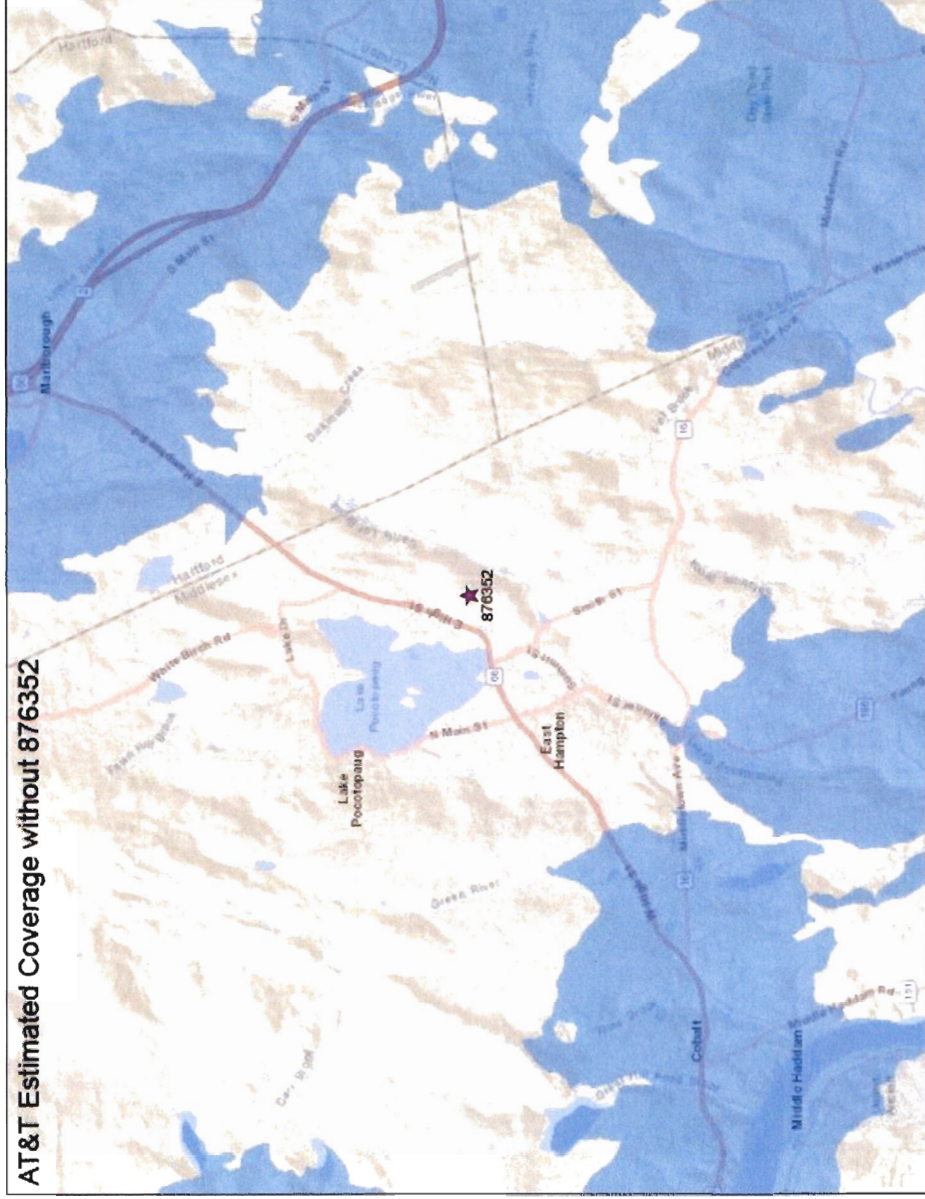
Sprint Coverage with proposed site



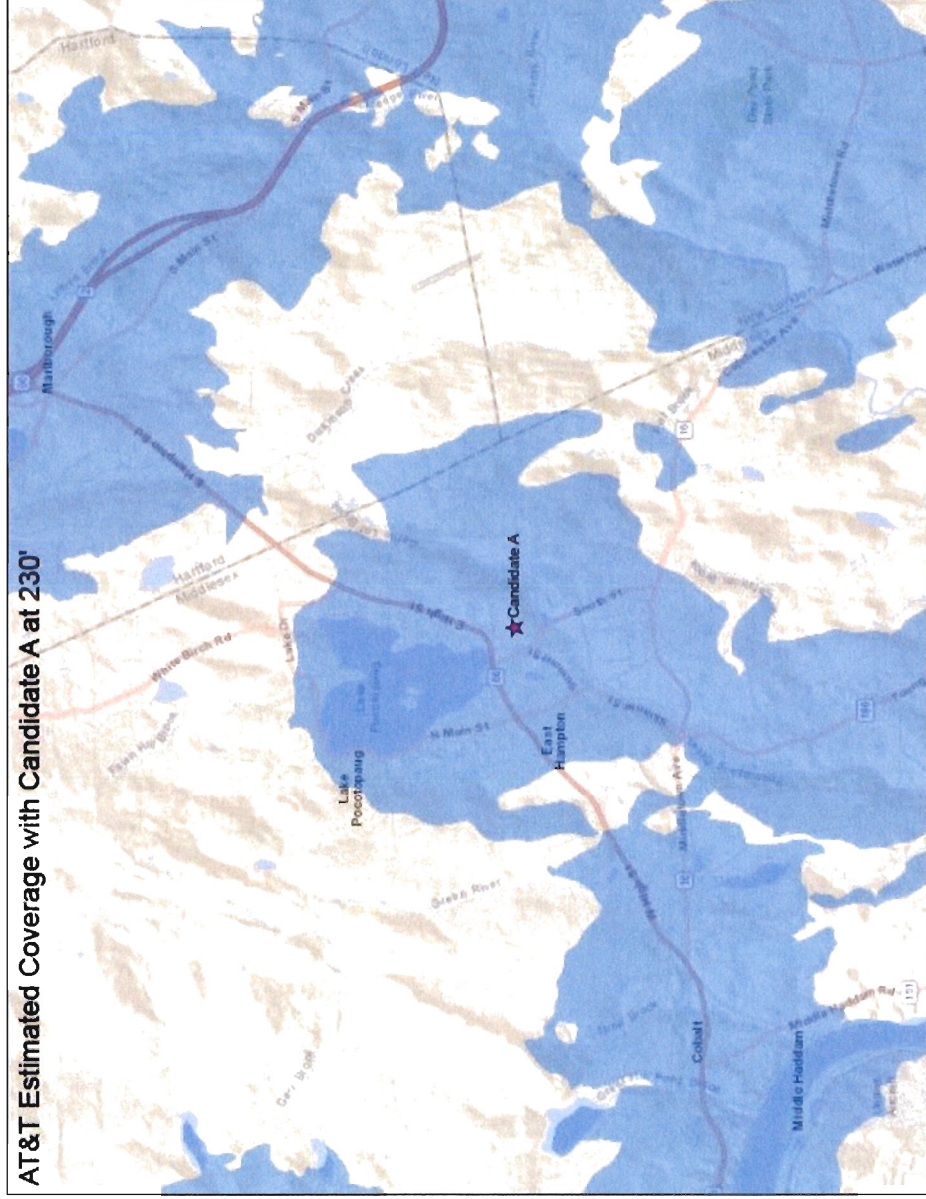
AT&T Current Coverage



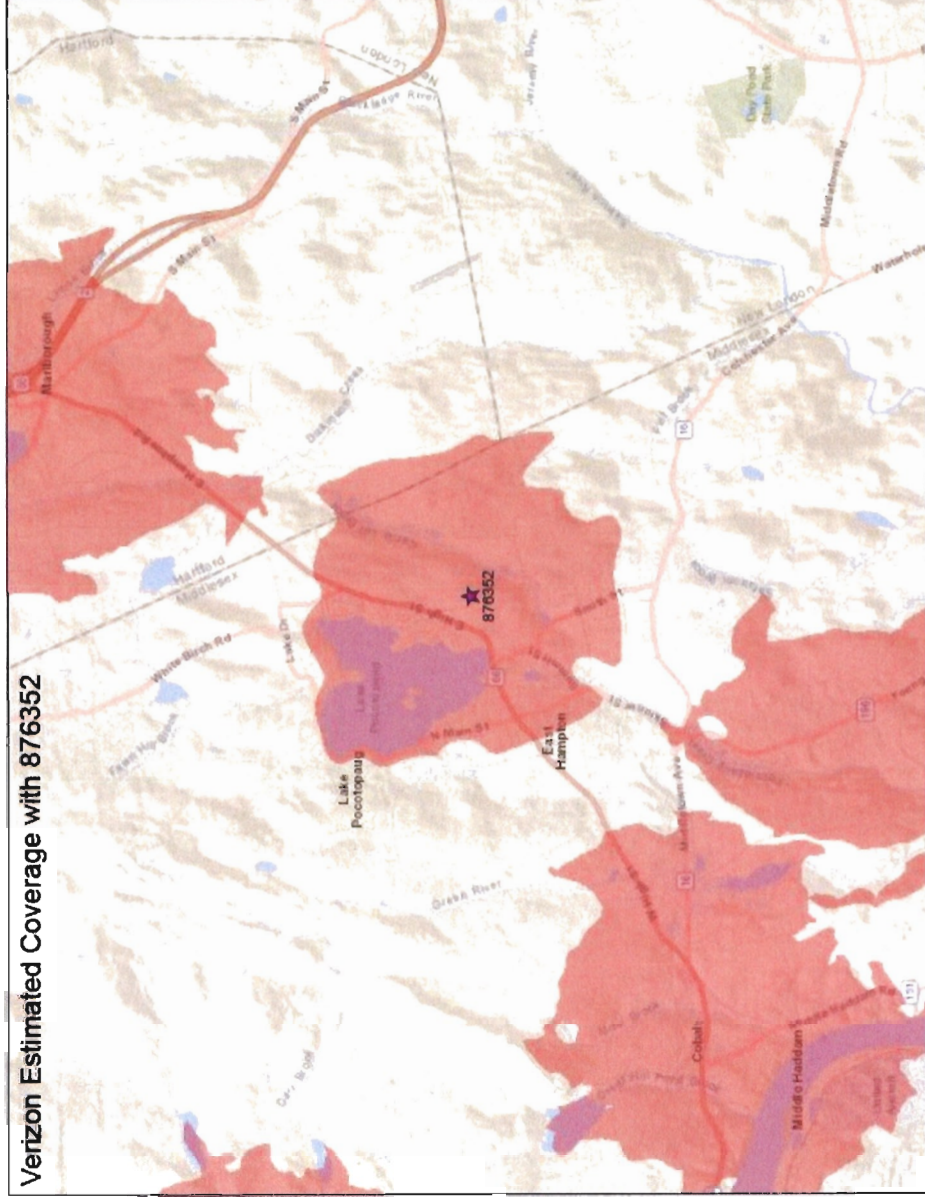
AT&T Coverage without proposed site



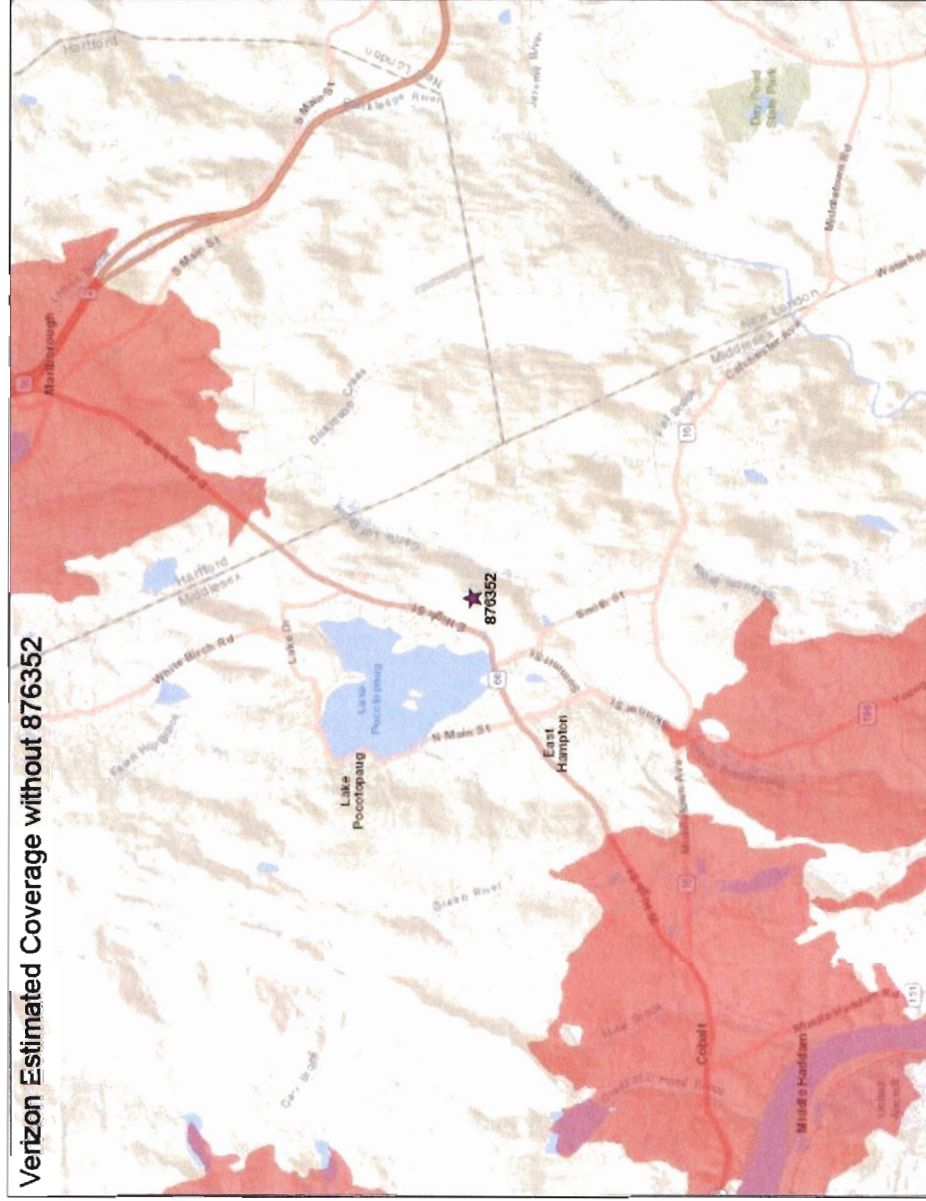
AT&T Coverage with proposed site



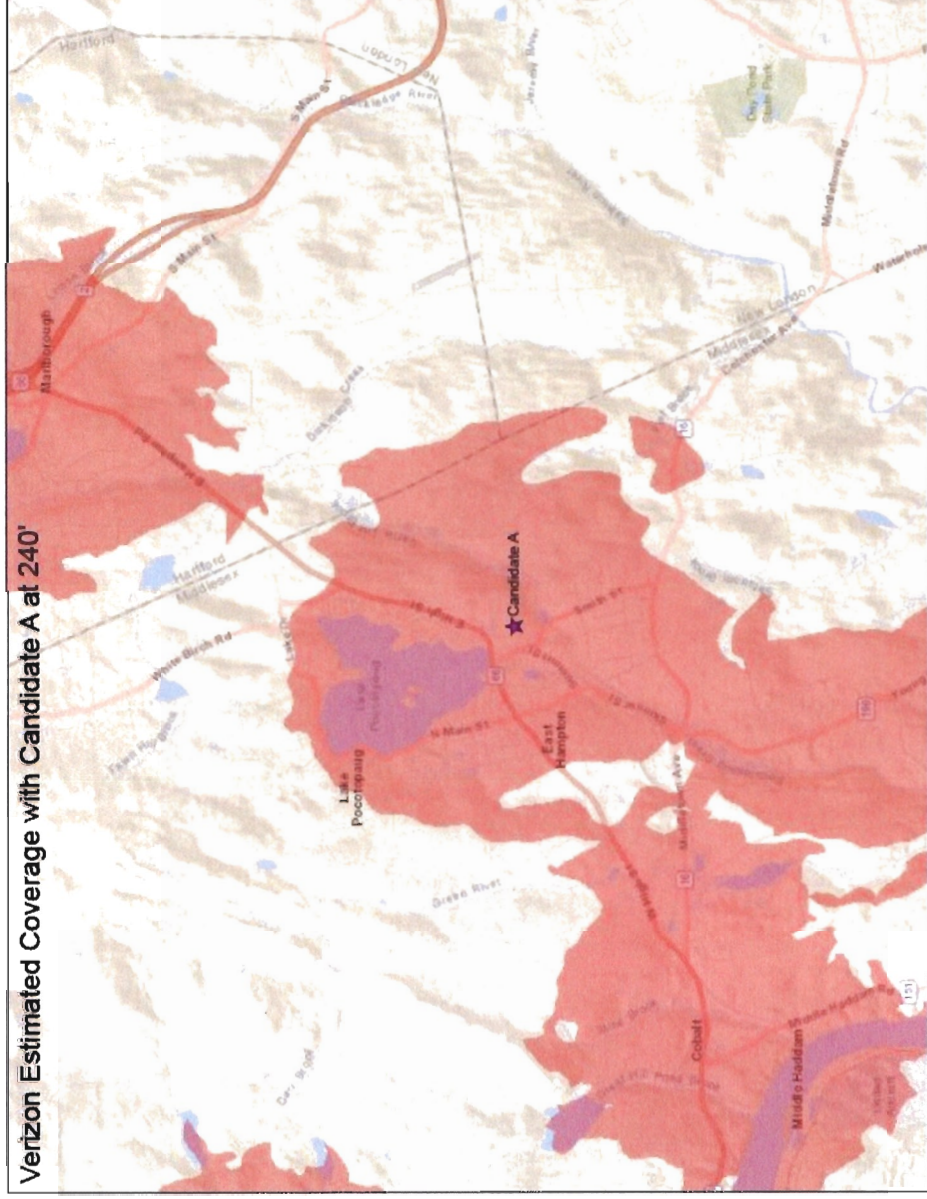
Verizon Current Coverage



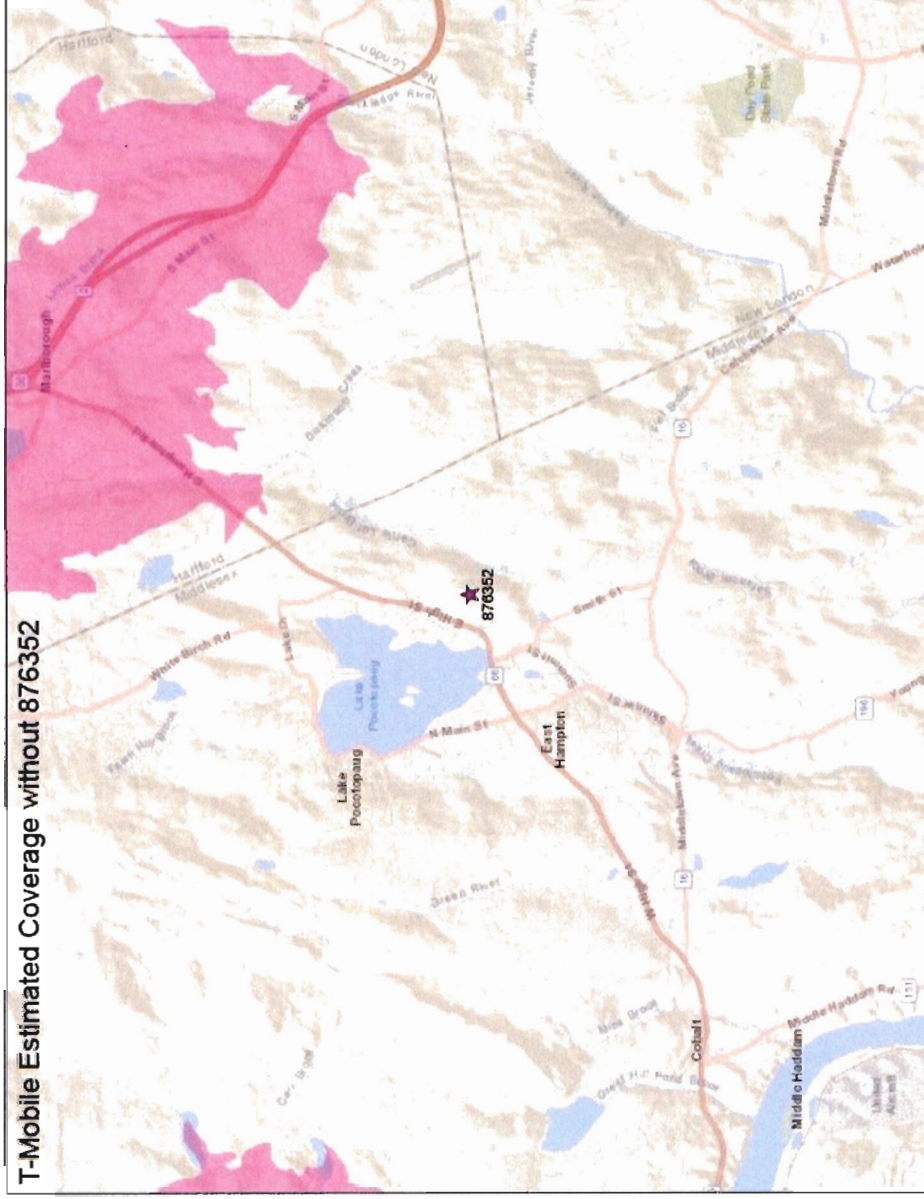
Verizon Coverage without proposed site



Verizon Coverage with proposed site



T-Mobile Coverage without proposed site



T-Mobile Coverage with proposed site

