



Ocean County Public Safety Communications 700 MHz Upgrade

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Agenda

- How did we get here?
- Current System
- Why Upgrade?
- Existing Tower Sites
- New Tower Locations
- Status of New Towers
- Anticipated Tower Completion Schedule
- Status of Conversion to 700 MHz radios
- Related Public Safety Communication Projects
- Questions

How did we get here?

- Counties and agencies are required to provide universal and reliable public safety communications within their respective jurisdictions and the State as well as interconnect into the State's E911 emergency communications system.
- Current system 500Mhz system operated on six (6) tower sites
- Four (4) of the six (6) towers sites operated within 50 miles of Philadelphia
- System experienced significant interference from the digital television signals also operating on the 500Mhz spectrum
- Pursuant to the Middle Class Tax Relief and Job Creation Act of 2012 (Public Law 112-96), 500 Mhz channels must be vacated by February 21, 2021

How did we get here?

- In 2010, the County applied for licenses to operate in the 700Mhz spectrum
- FCC granted Ocean County the license in 2012
- In 2014, the County awarded a contract in the amount of \$16.2 million to Motorola for 700MHz overlay to our existing 6 tower sites and to construct an additional 5 tower sites

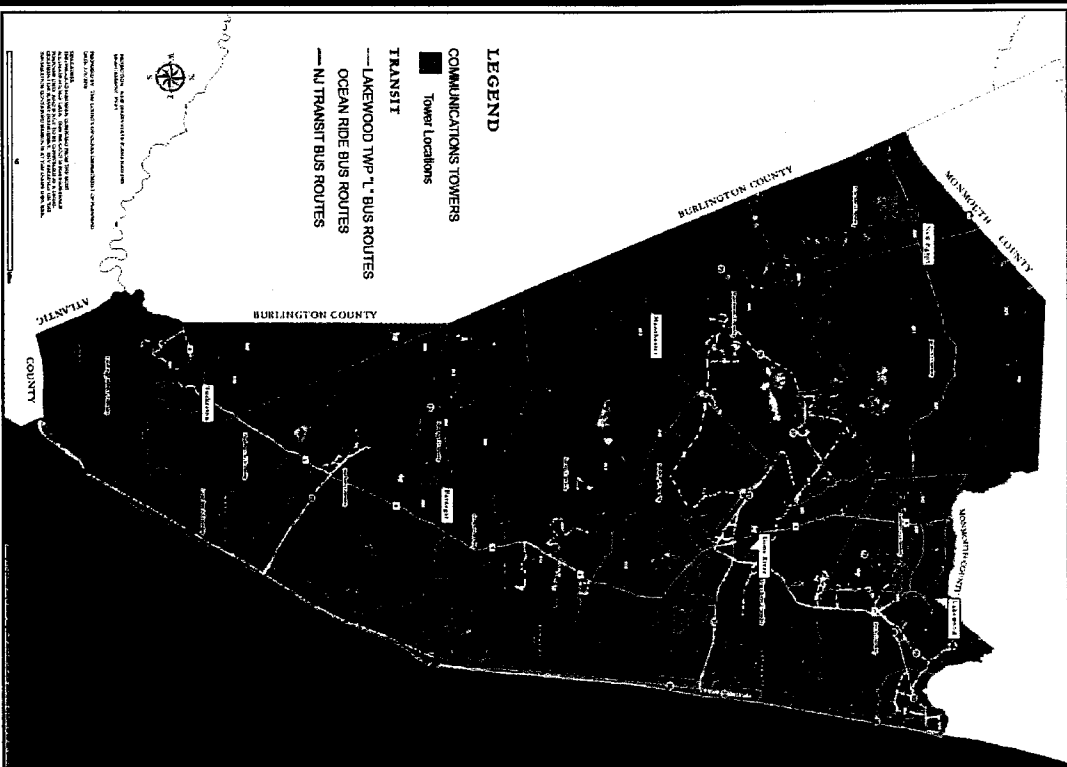
Why Upgrade?

- To comply with FCC requirement to vacate the 500MHz spectrum by 2021
- To avoid the digital interference conditions that exist under the current 500 Mhz (UHF-T) based system
- To achieve a higher level of interoperability among all public safety agencies

Existing Tower Locations

- Barnegat
- Tuckerton
- New Egypt
- Lakewood
- Whiting (Pasadena)
- Toms River

The County of Ocean
FACILITIES MANAGEMENT



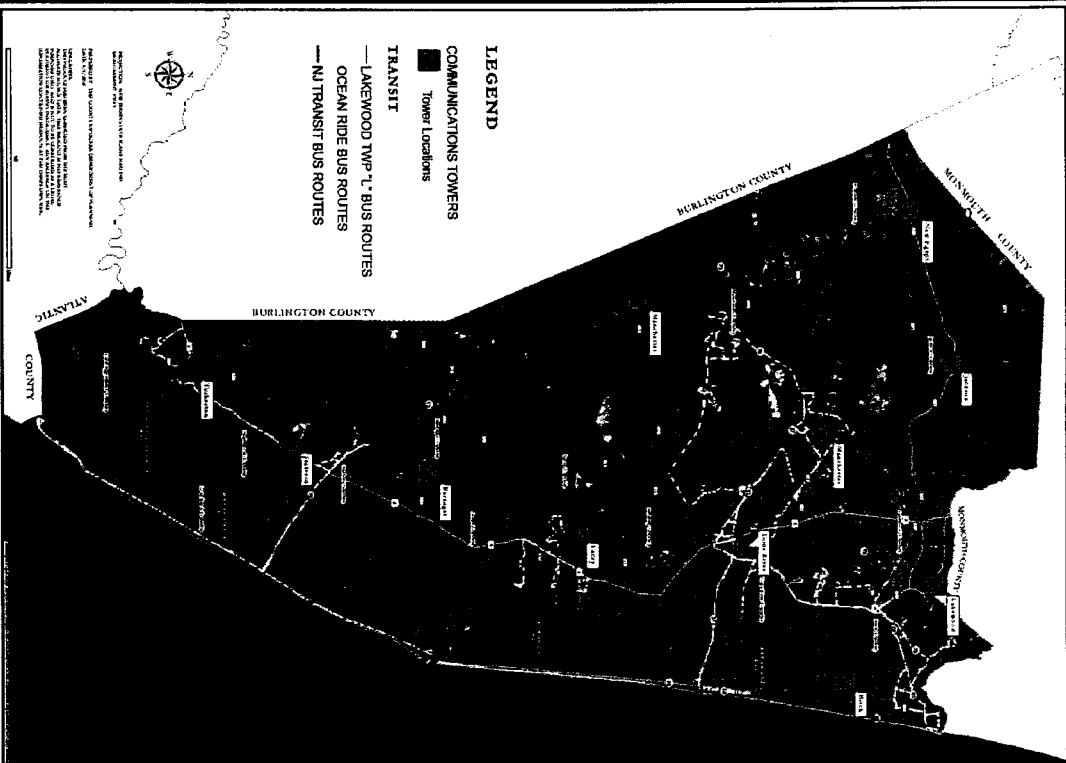
New Tower Locations

- Toms River (Completed 2014)
- Brick (Completed June 2017)
- Stafford (Completed January 2018)
- Lacey
- Jackson
- Manchester



The County of Ocean

FACILITIES MANAGEMENT



Status of New Towers

- Toms River
- Brick
- Stafford
- Lacey – Under Construction
- Jackson - Preconstruction
- Manchester – Preconstruction

Anticipated Tower Completion Schedule

- Lacey (Fall 2018)
- Manchester (Fall 2018)
- Jackson (Fall 2108)
- All existing towers are currently operating under the 700MHz spectrum
- The County anticipates all towers to be operating under the 700Mhz frequencies by the end of 2018
- County will begin coverage testing once all towers are fully operational
- County system will be able to communicate on both 500MHz and 700Mhz frequencies

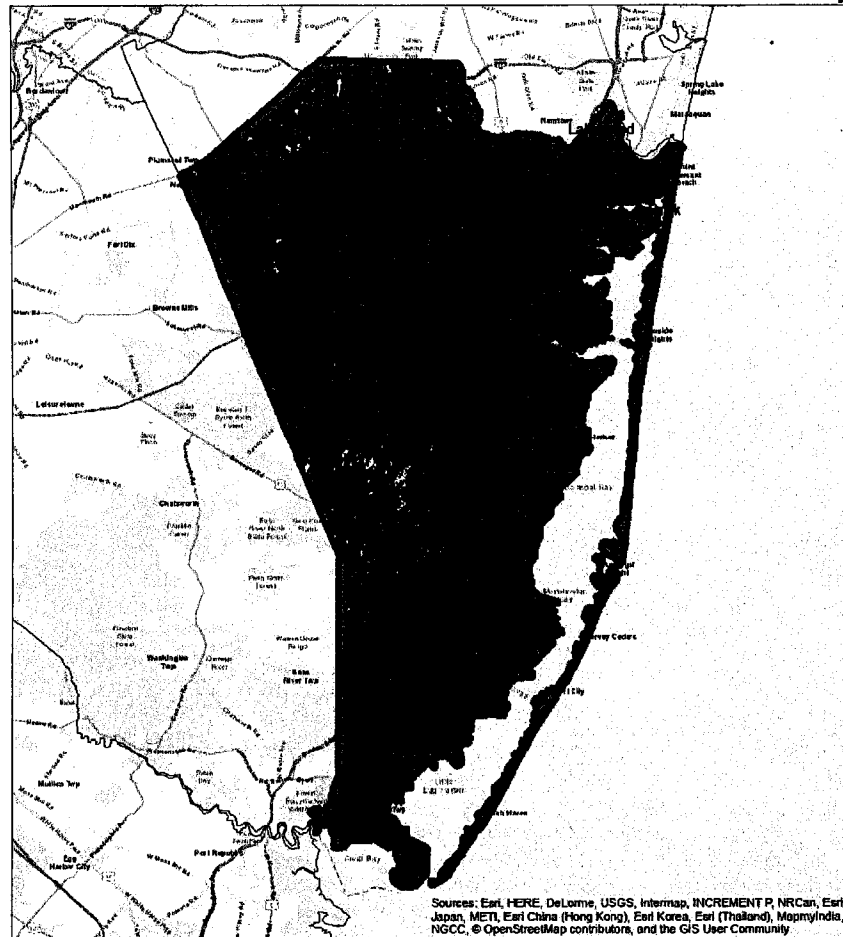
Status of Conversion to 700MHz radios

- Following County Departments are using/testing 700 MHz radios
 - Security
 - Weights and Measures
 - Fire Marshal
- Following Departments in the process of upgrading radios
 - Parks and Recreation
 - Transportation
- All non-public safety users will receive upgraded radios by end of 2018
- Public Safety agencies and municipalities will begin conversion in 1st Quarter of 2019
- All mobile radios and law enforcement portable radios have GPS capability



Ocean County, NJ
In Street

For Reference Only



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NSCC, © OpenStreetMap contributors, and the GIS User Community

0 1.5 3 6 Miles

1 in = 6 miles

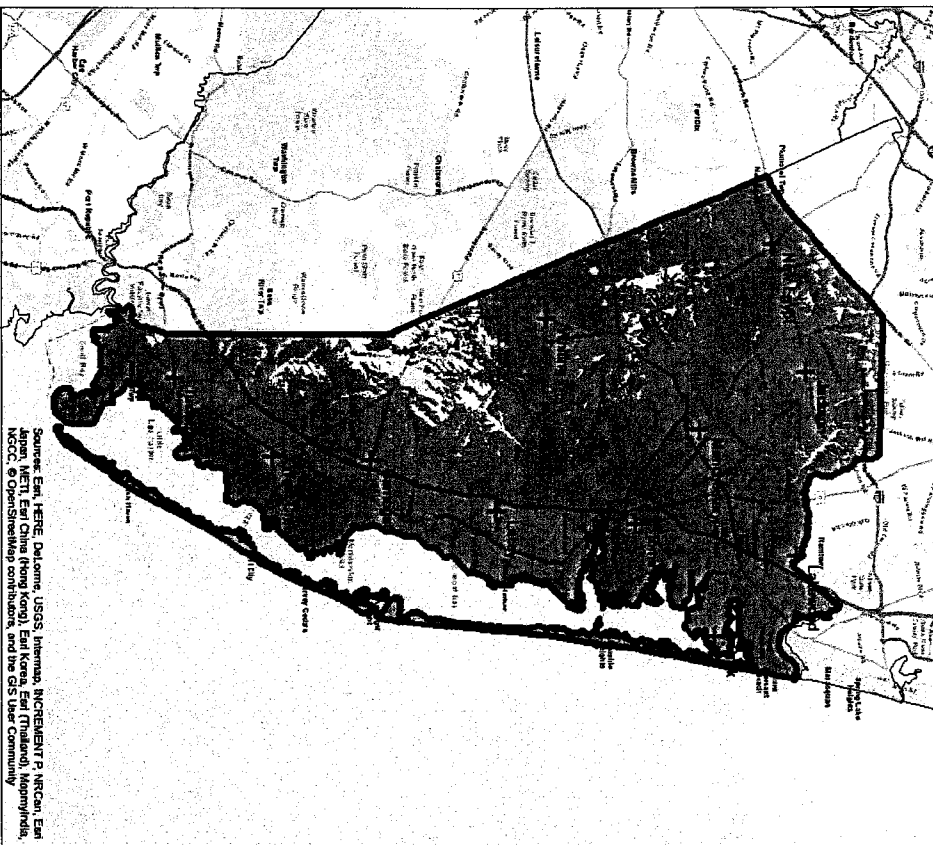
97% Area Round Trip Portable In Street

Hy5_Design_17_(Ocean County 2016 map (4))
QBRN34
CCDTLAB-352

Mar 01, 2018

Status 2.1.1

7988965560.1.Design 4



0 1.5 3 6 Miles
1 in = 6 miles
95% Area Round Trip Portable in light residential above grade buildings
DMA 3.0 - Speech understandable with slight effort. Occasional repetition required.
Map 01, 2018
Sims 2.1.1
NJ - Ocean County
Ocean County
08/24/2014
CC01L06-552
6879794271.1 Design 4 Workfile

Related Public Safety Communications Projects

- Upgrades to 911 Center
- New 911 Switch
- Spillman Computer Aided Dispatch System
- Upgrade to Microwave Network (2018)
- Upgrade to Paging System (2019)

QUESTIONS?