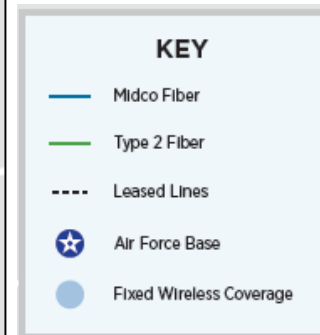
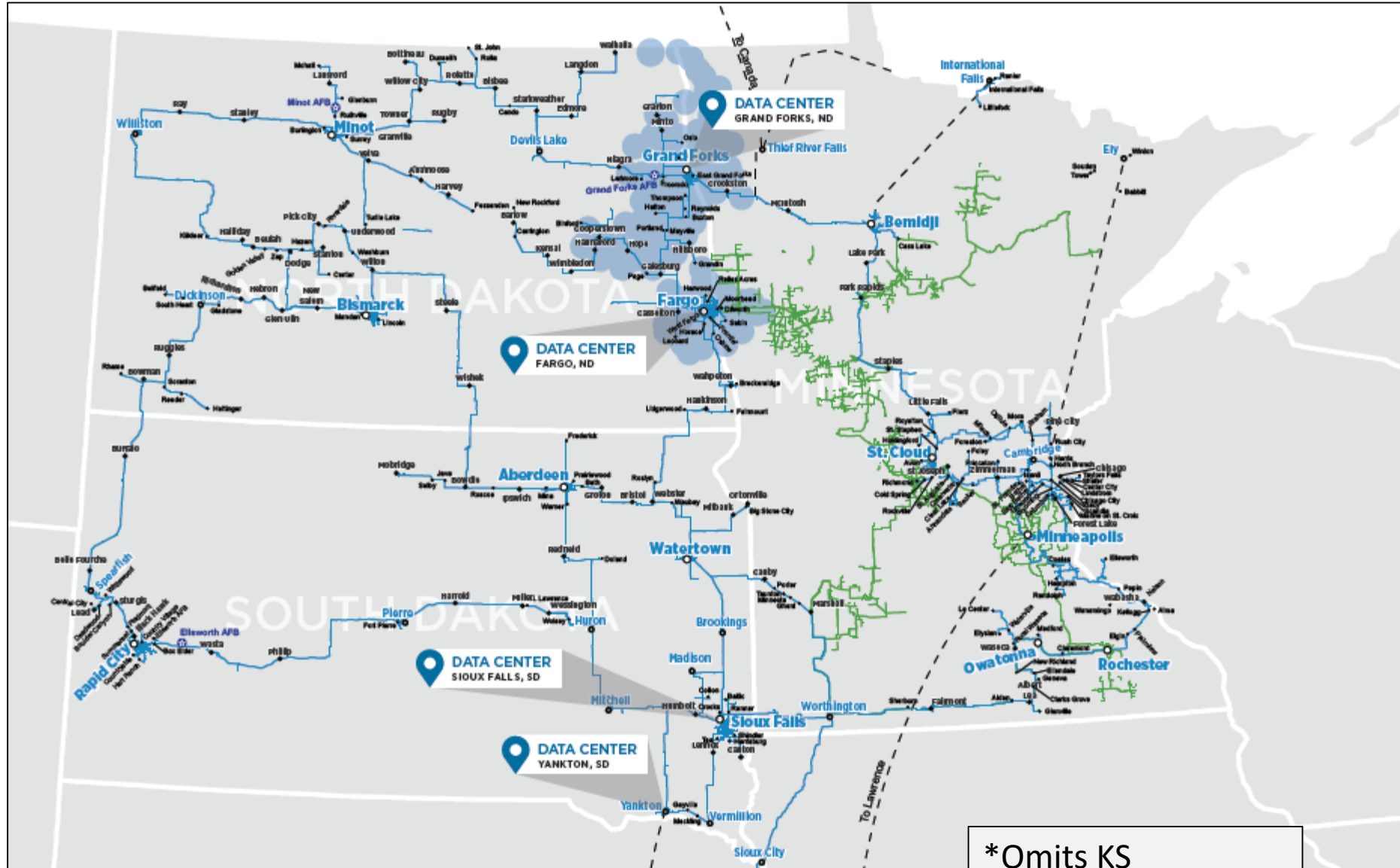

Closing the Digital Divide

Fiber and Fixed Wireless
Chairman Ajit Pai- September 2019



Current Network*



*Omits KS

Current Fiber Offerings

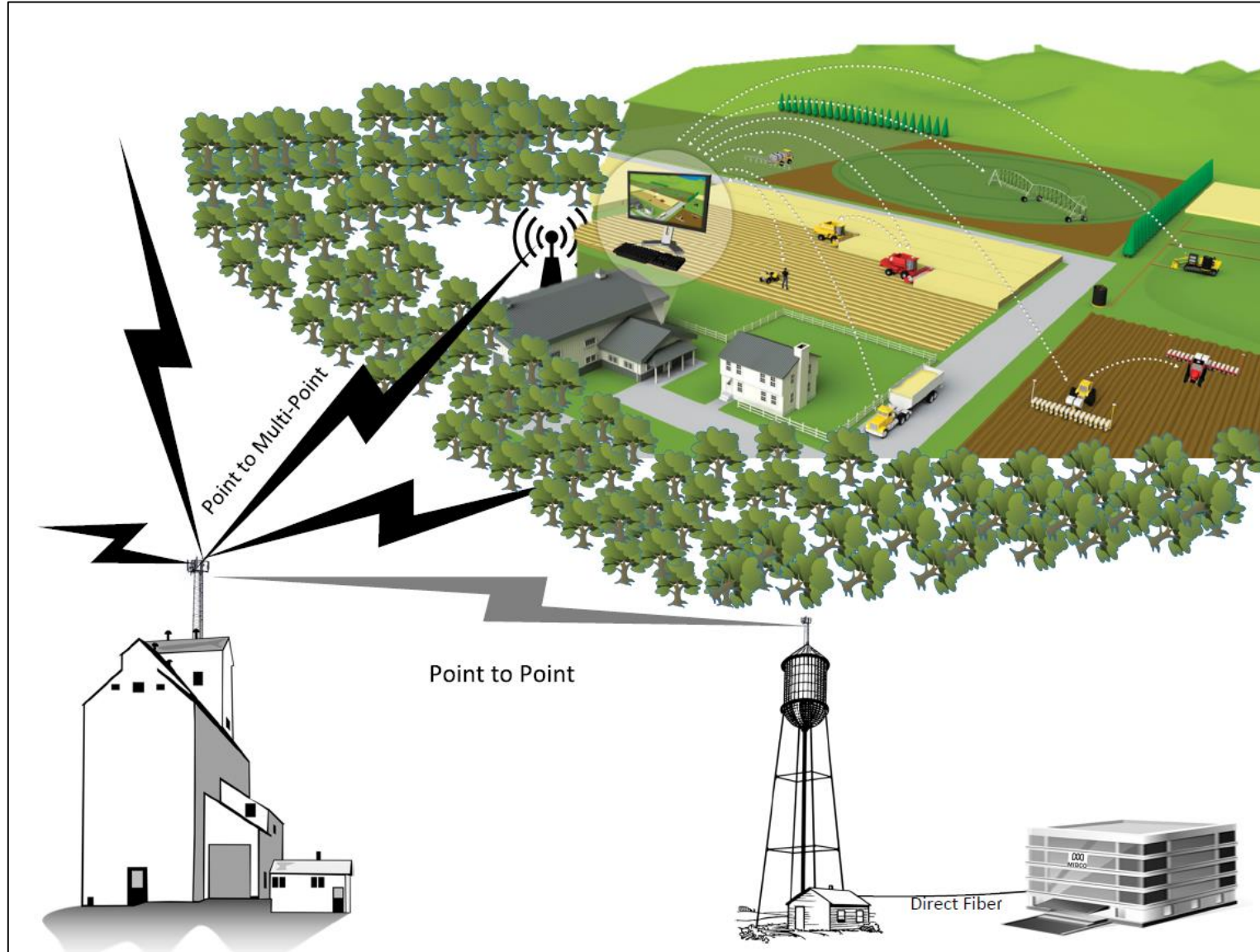
- Fiber is the backbone for innovation, including fixed wireless
 - Passing 10,000 miles of fiber in 2019
- Nearly 400,000 customers across 5 states
- 84% of SD data customers have access to affordable Gig
 - 30 more communities in MN added next month

10G Evolution

- Leverages recent advances to build upon our Gig capability
- Features fiber-smart, 2-way speeds and carrier-class 10G speeds for future generations of network technology
- Brings world-class capability to rural SD



Fixed Wireless Connects Rural America

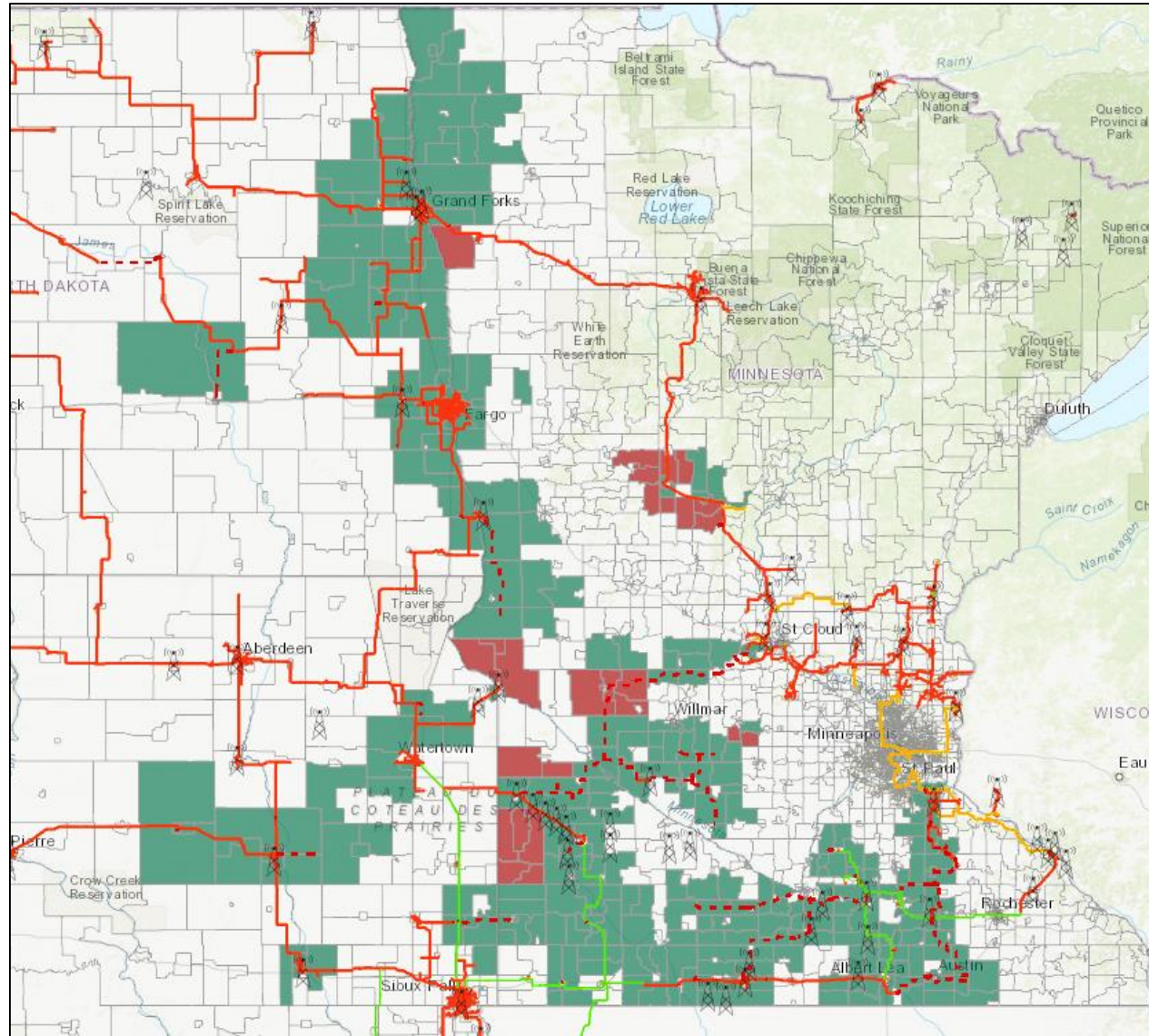


Midco® Edge OutSM

- Fiber leads all strategic builds
 - Wireline buildouts where possible
 - Fiber-fed towers for internet connectivity
- Fixed wireless is a tool in the toolbox, with various uses
 - Prior to a fiber build
 - Remote areas
 - Difficult terrain
- Awarded \$38.9 Million in CAF Phase II

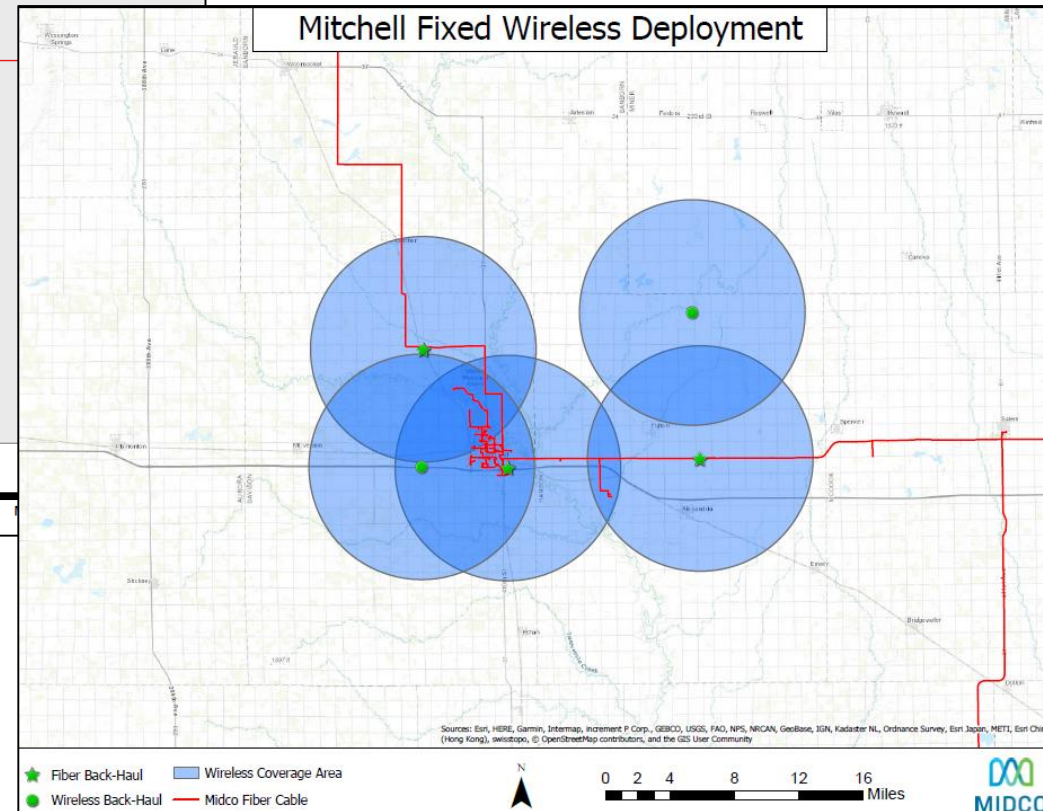
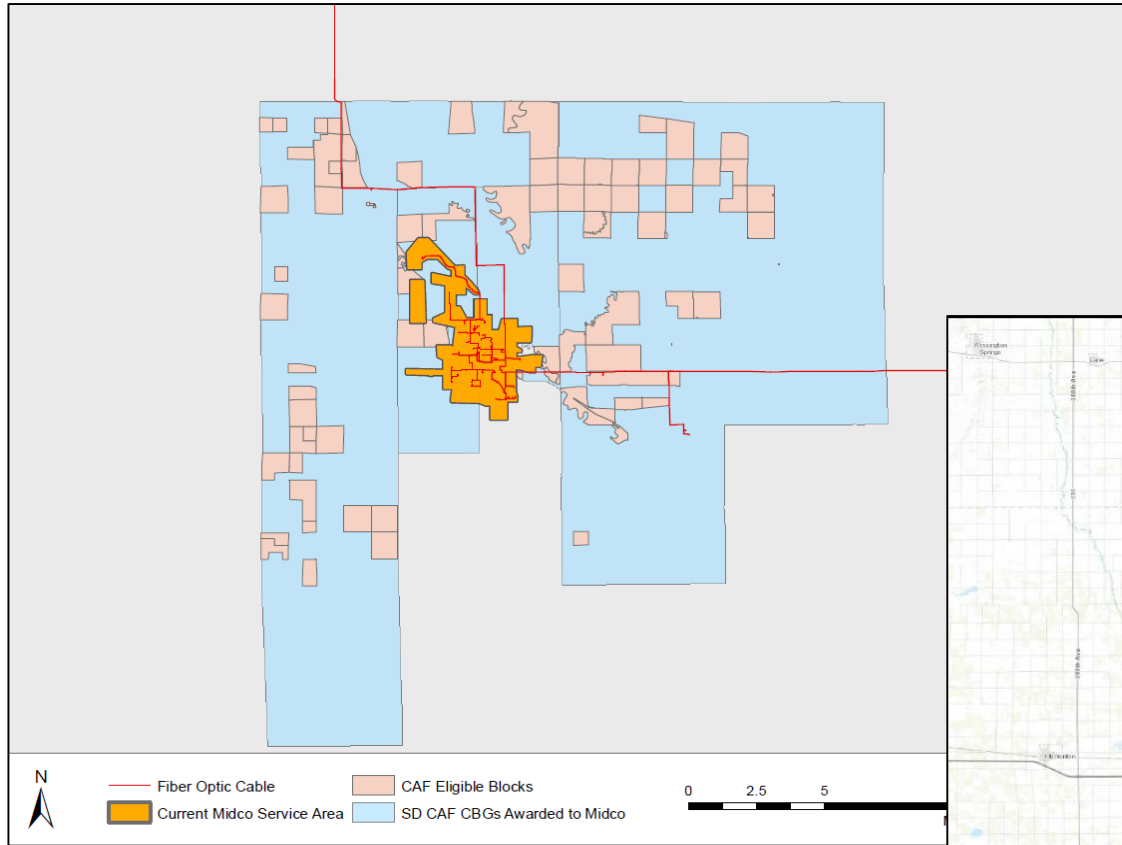
Midco CAF Areas

- This partnership with the FCC accelerates our Edge OutSM
- Reverse auction resulted in ~\$70 million saving



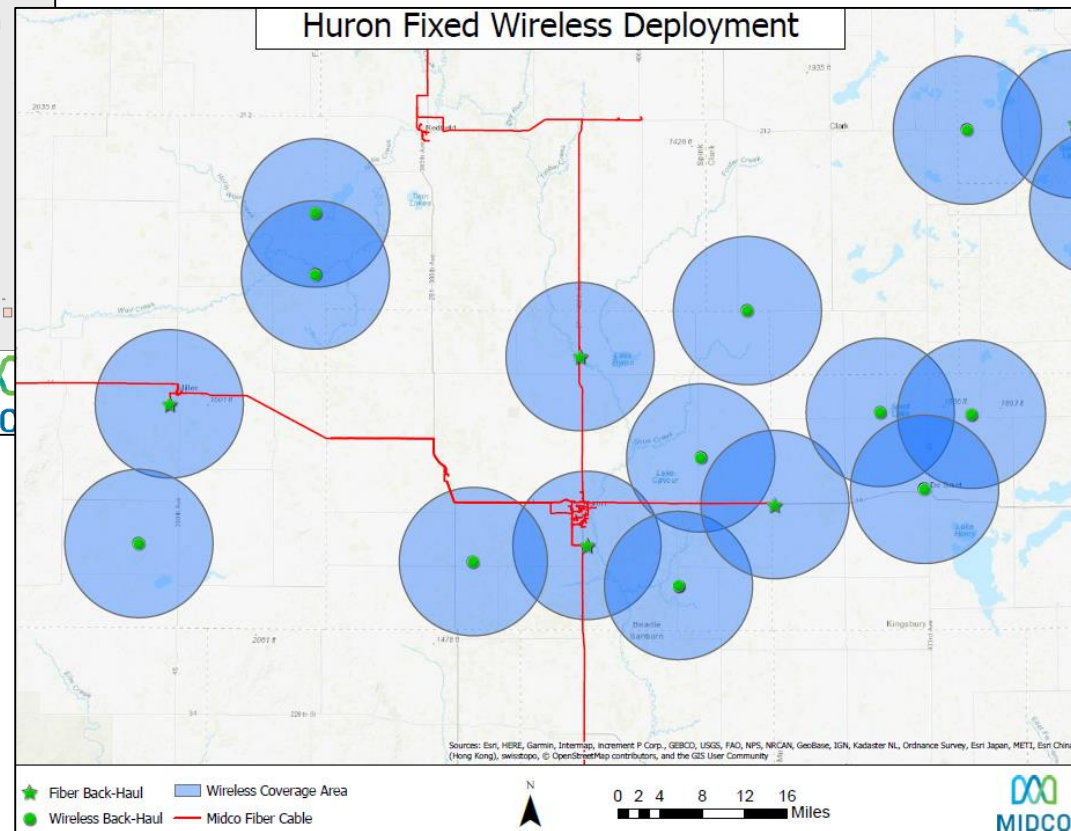
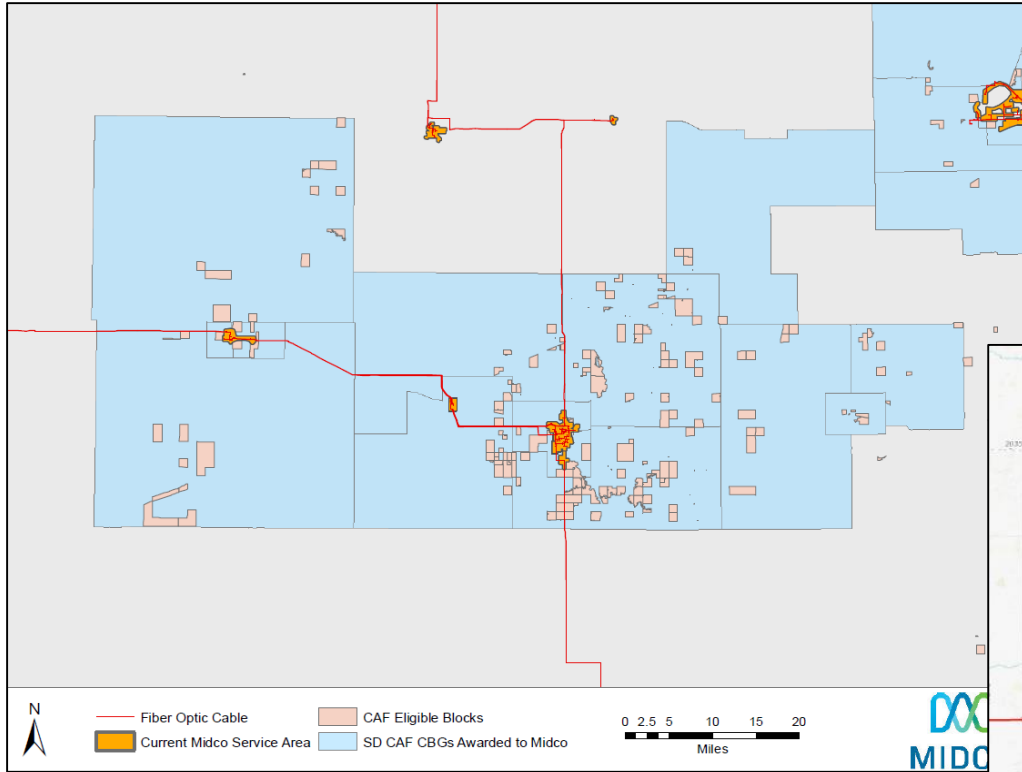
Expanding the Mitchell Service Area

- Gig service in the current service area
- 100/20 service in expanded area



Expanding the Huron Service Area

- Huron, Milbank, Miller, etc. all have Gig availability
- 100/20 in expanded area



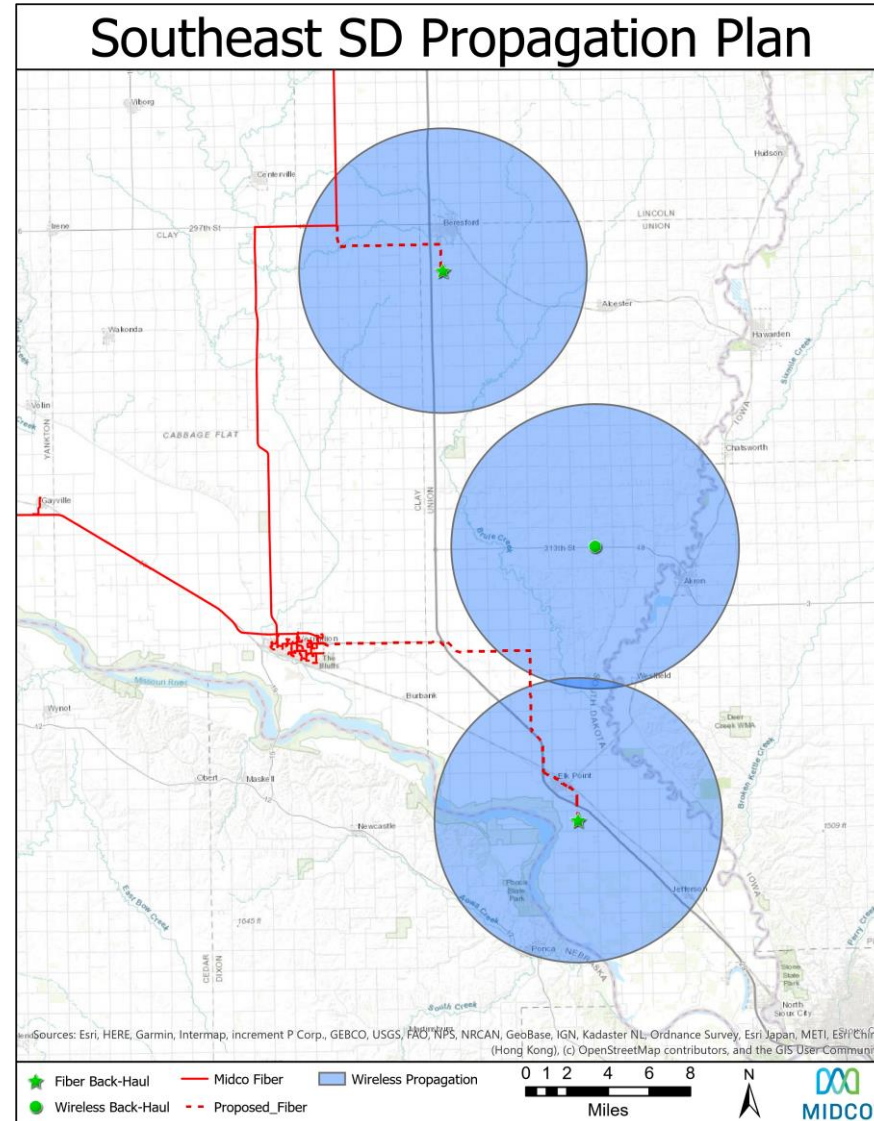
Midco Fixed Wireless Broadband

- 9,371 CAF locations
 - Minnesota- 7,410
 - North Dakota- 1,069
 - South Dakota- 892
- 100/20+ speeds will be offered; no data caps



Midco Participation in State Programs

- Awarded \$300,000 from Governor Noem's Connect SD Program
- Recently submitted 6 applications for Minnesota's Border-to-Border Broadband grant program



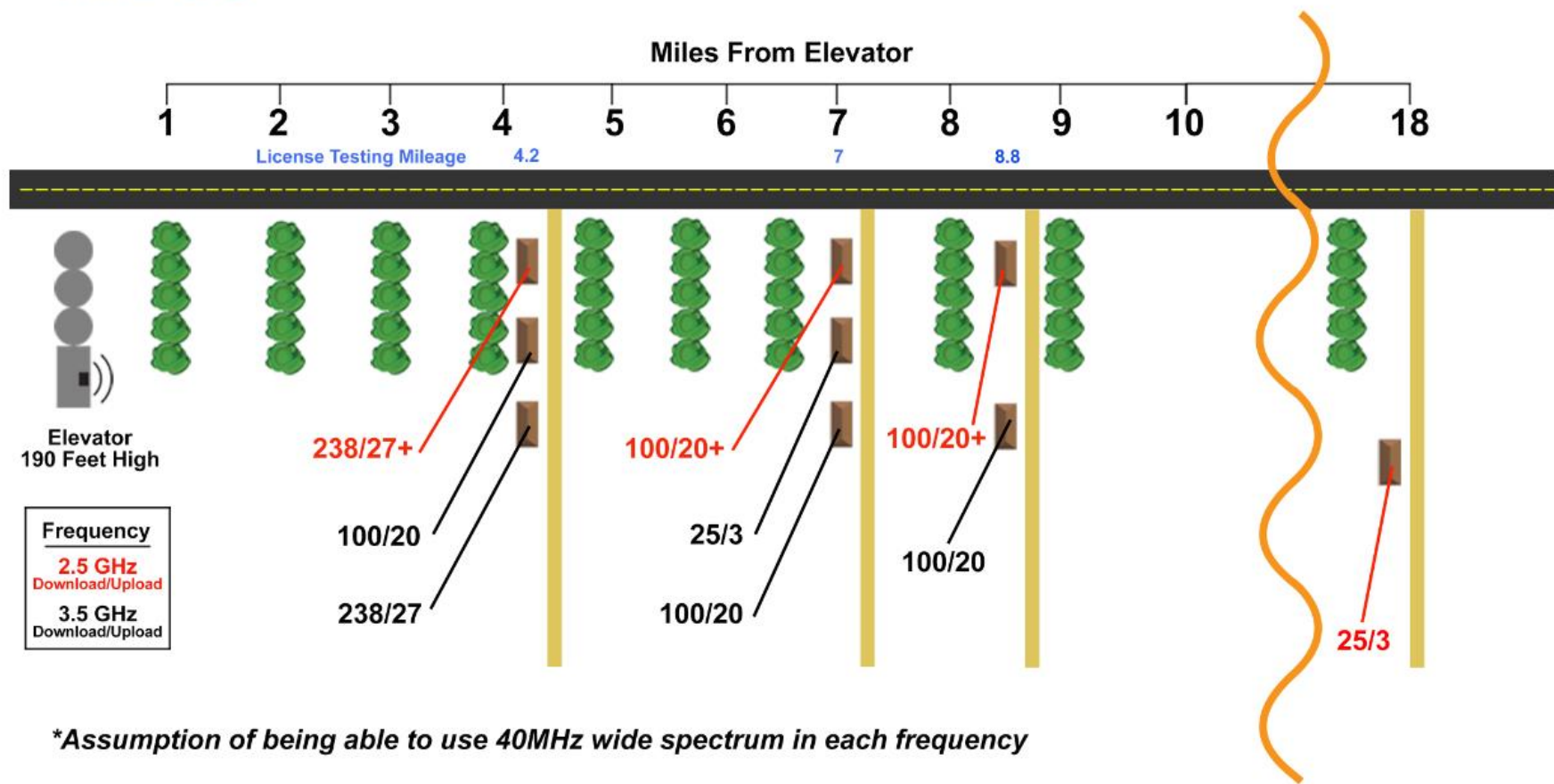
Current Core Network is LTE

- Carrier-grade network using LTE technology
- “4.5G” current capability
- **Fixed 5G** future capability; with access to more spectrum
- Can be upgraded to 2.5 GHz for near and non-line of site when spectrum becomes available

Mid-Band LTE Network

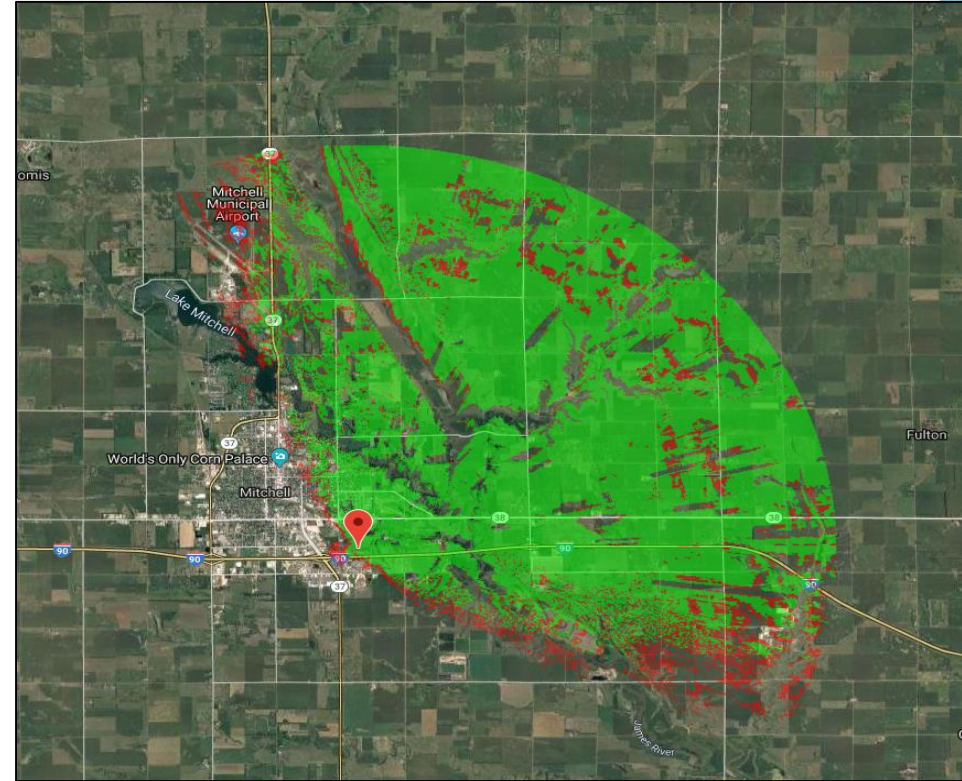


Expected Throughput per Frequency*

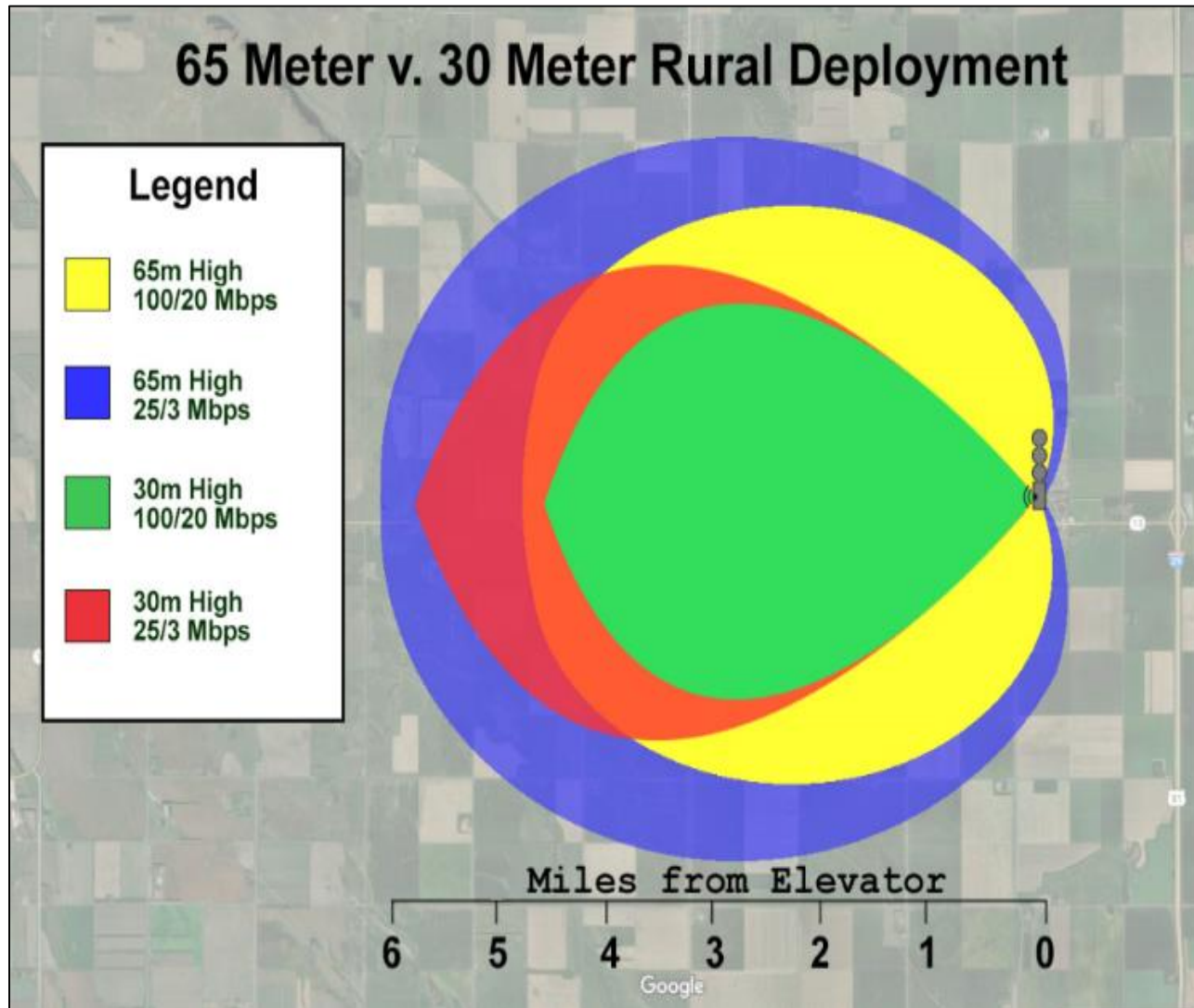


C Band

- Midco recently completed testing in the lower 100 MHz (3700-3800 MHz) of the C Band
- Using current technology, we can achieve speeds of 100/20 Mbps; new Telrad equipment capable of 200/40 Mbps
- We support shared use after satellite and cable are repacked



Future - 6 GHz Band Expands Possibilities



- 850 MHz for fixed wireless & Wi-Fi 6
- 160 MHz channels, compared to 80 MHz channels in 5 GHz, provide greater potential for speeds / coverage areas
- Need higher power and higher deployment height

Rural Digital Opportunities Fund

- Technology neutral
 - Use the same weights for speed and latency as CAF II
- Continue reverse auction approach
- Define broadband as a minimum of 25/3 Mbps
- Support the tiered approach; focus on unserved