



# A better way to connect your community.

An introduction to microtrenching

JUNE 2020

The pathway to possible.

# About Us

- Local Crown Castle office in Chandler, AZ
- Existing towers, small cells, and fiber throughout the MAG Members Municipal Planning Areas and the rest of Arizona
- Future projects to build additional fiber infrastructure through out the area
- Want to be good partners and minimize impact to communities during construction

## Our role in your world.

We own and operate the nation's most unique and comprehensive portfolio of communications infrastructure. It all works together to meet unprecedented demand—connecting people, businesses, and communities and erasing life's conventional boundaries.

### Our infrastructure transforms everything around us.

#### People

We connect people to the devices, apps, and data they rely on to communicate, stay informed, and live their lives to the fullest.

#### Businesses and organizations

We make sure businesses and other large organizations have secure access to the essential data and applications they need to embrace new technologies and stay ahead.

#### Communities

We provide connections that improve safety and efficiency and that make communities better places to live.

#### Schools and universities

Our fast, secure fiber networks support new learning technologies in the classroom and promote groundbreaking research in higher education.

#### First responders

We give police officers, firefighters, and EMTs secure access to the information they need to react quickly to emergencies.

#### Venues

We give stadiums, convention centers, amusement parks, and other venues the wireless coverage and capacity to accommodate large crowds.

#### Innovators

We help deploy exciting new technologies that build smarter communities and create new opportunities for cities and technology companies alike.

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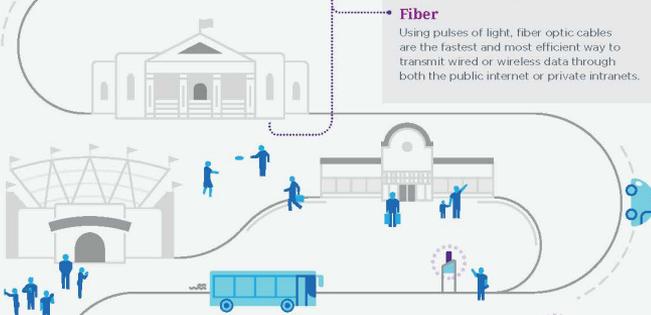
#### Cell towers

Towers receive and transmit cellular signals over a large geographic area—carrying the voice and data that people send and receive on their wireless devices.



#### Fiber

Using pulses of light, fiber optic cables are the fastest and most efficient way to transmit wired or wireless data through both the public internet or private intranets.



#### Small cells

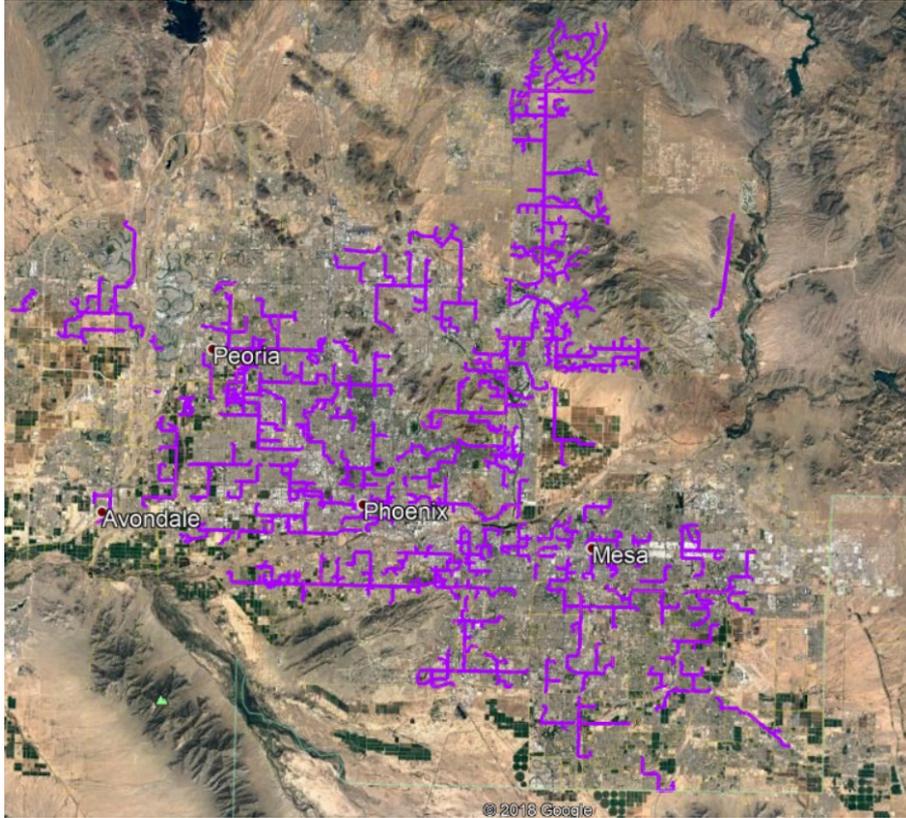
Lower to the ground, and often attached to streetlights or utility poles, small cells add additional wireless coverage and capacity—or bring new coverage where towers aren't feasible.



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# Current and Future Fiber in MAG Areas



MAG Members Municipal Planning Areas

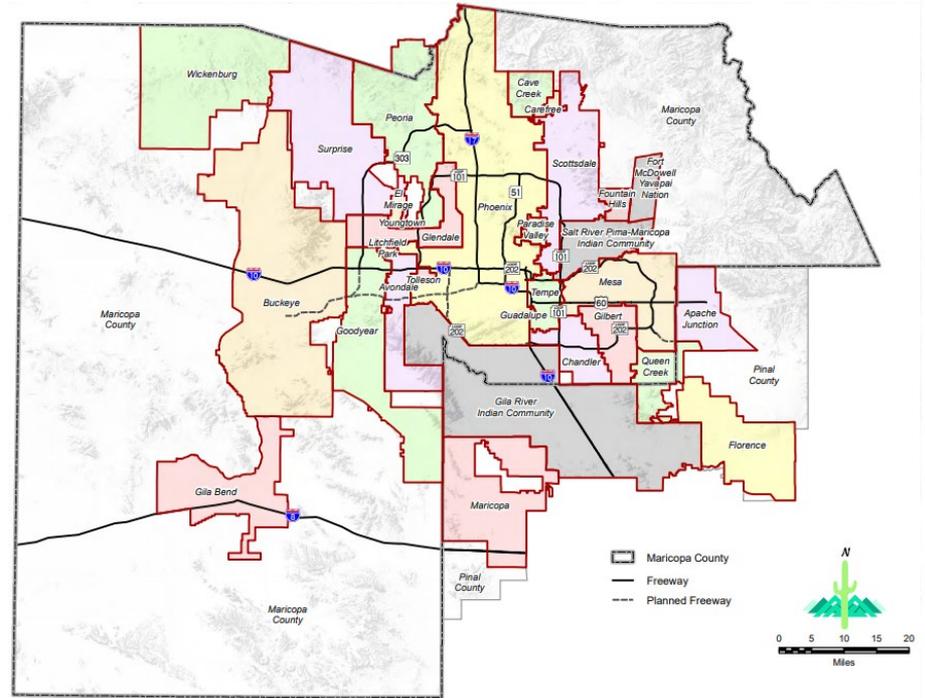


Figure 1: Map of MAG Member Agencies

# New technologies are driving greater data demand and usage.

More devices, faster speeds, and more data-heavy traffic.

**2x**

Expected growth  
in broadband speed  
from 2017 to 2022.

**10B+**

Expected growth in  
connected devices from  
2017 to 2022.

**82%**

Expected amount of all  
consumer internet traffic that  
will be video by 2022.

To support this growing demand, it's estimated we'll need 800,000 small cells by 2026<sup>1</sup>—each supported by fiber.

Sources: Cisco Visual Networking Index Forecast. Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2017–2022 White Paper, February 2019. S&P Global Market Intelligence, "Small Cell and Tower Projections through 2026," 2016

# Microtrenching - an innovated and improved way to install fiber

Faster, smaller, and less disruptive from installation to restoration



Pre-installation



Installation



Conduit Placement



Restoration



Example of a restored microtrench

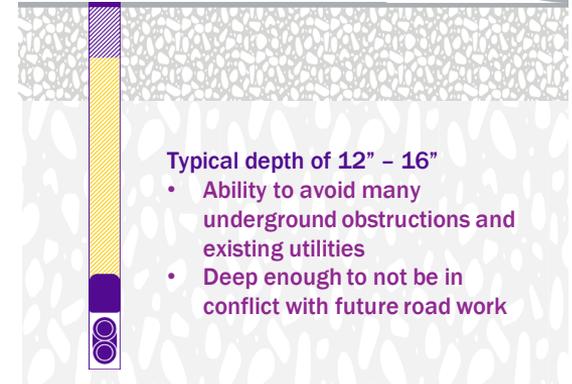
**DAYS VS. WEEKS**  
Less construction time means less disruption

- 80% faster than traditional trenching
- Minimal disruption to traffic
- Less noise and equipment
- Fewer resident complaints
- Less waste and debris from microtrenching are vacuumed up during process
- Fewer new materials needed to reinstate roadway



### Typical width of 2"

- minimizes impact to your streets and municipal infrastructure



# And we're using it successfully in communities around the country.

- Austin, TX
- Boston, MA
- Charlotte, NC
- Chicago, IL
- Dallas, TX
- El Paso, TX
- Lexington, KY
- Los Angeles, CA
- Louisville, KY
- Manhattan Beach, CA
- Miami-Dade County, FL
- Mt. Vernon, NY
- New York City, NY
- San Diego, CA

# Example 5 year old Microtrench - Austin, TX

Originally installed in 2015

Photos taken February 2020



# Example Project – Los Angeles



# Q&A



# Thank you

**For further information please contact:**

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