



DENVER
THE MILE HIGH CITY

Small Cell Infrastructure Administration

Land Use, Transportation & Infrastructure

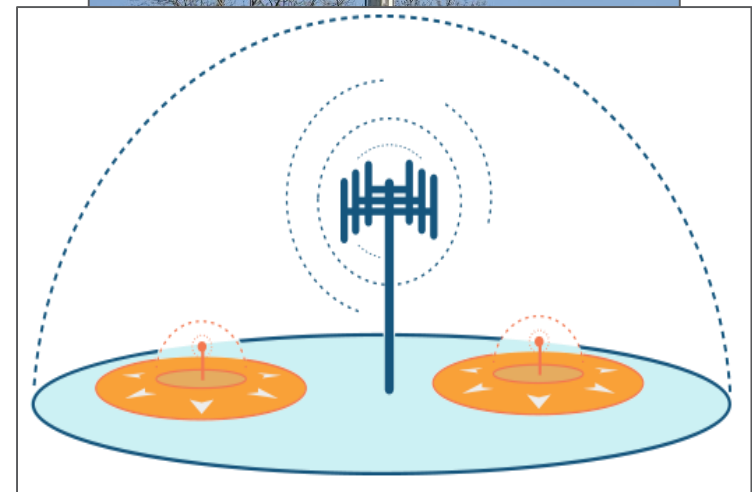
4/24/18

FOR CITY SERVICES VISIT | CALL
DenverGov.org | **311**



According to the Wireless Industry:

- Tall (macro) cell tower antennas cannot keep up with exploding DATA demands
- Macro antennas were originally intended to handle phone calls over large distances, not DATA
- Rather than build more macro antennas, the industry plans on densely deploying smaller, lower powered antennas to improve high speed data coverage for customers



A state law passed in March 2017 granted telecommunications companies the right to place small cell infrastructure in the public Right of Way (ROW) in Colorado, including locating infrastructure on government owned light poles and traffic signals

- Requires governments to process any application within **90 days**.
- Requires a neutral government approval process that allows **batching**.
- Denver maintains the authority to regulate new small cell equipment based on public health, safety, and welfare.



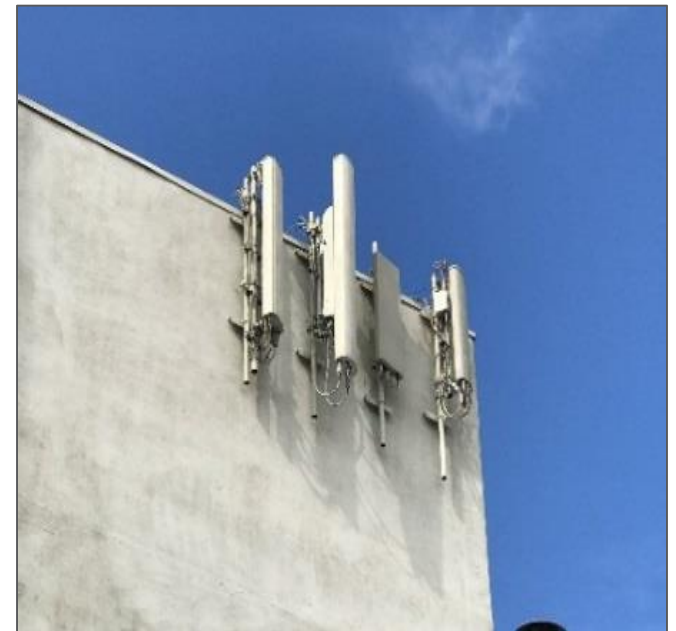
Why Not on Private Property?

According to wireless providers, antenna location on private property **takes significant time** and is burdensome.

Each site is negotiated with an individual owner and each installation is subject to different zoning requirements, making standard bulk solutions difficult.

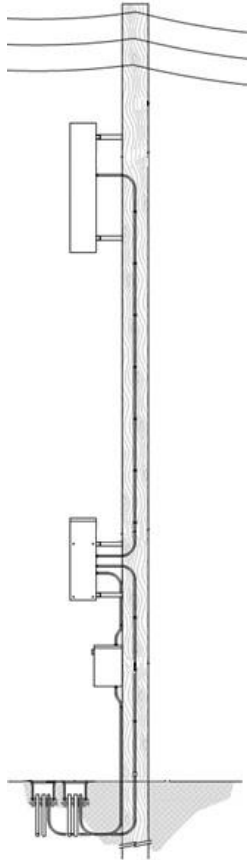
Zoning requirements are sometimes incompatible with technology requirements.

Wireless companies are still pursuing Private property locations for “mini macro” sites, but intend on deploying in ROW locations for bulk and speed to market



Deployment Types in Public Spaces

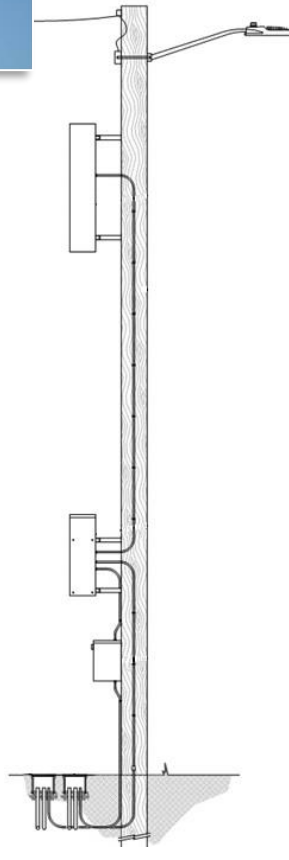
 **1**



Onto or between
Xcel Utility Poles

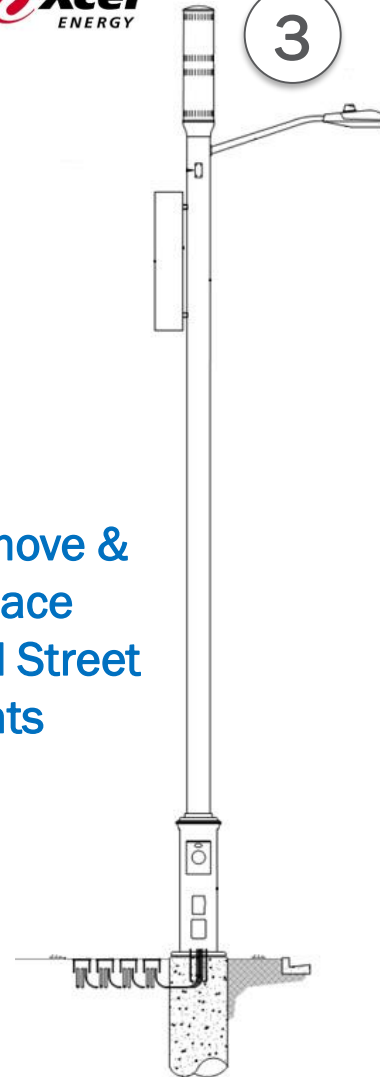


 **2**



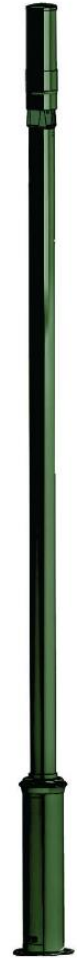
Onto Xcel Wood
Street Lights

 **3**



Remove &
replace
Xcel Street
Lights

 **DENVER**
THE MILE HIGH CITY **4**



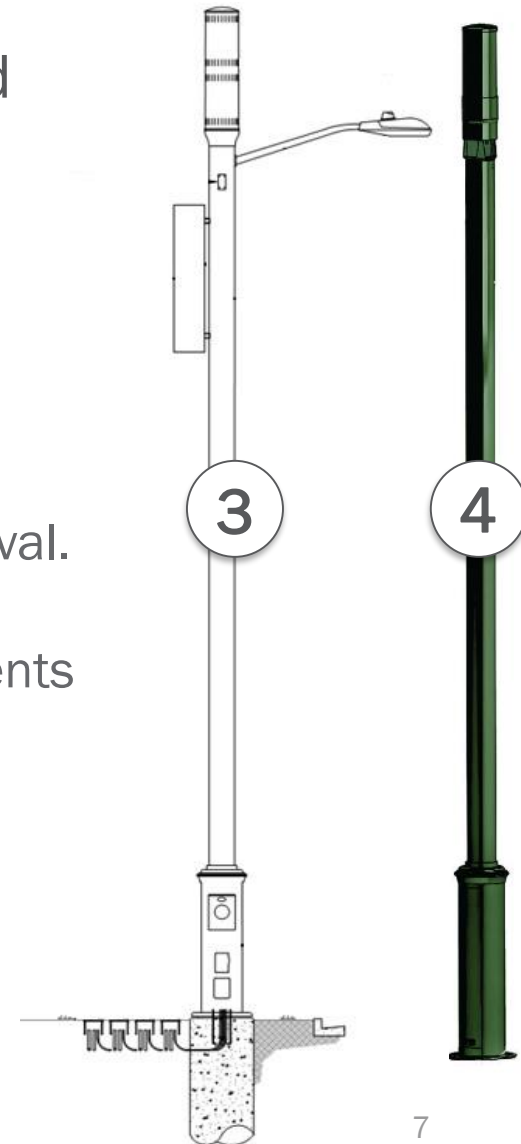
New Freestanding
Antenna - Private



- Xcel will accept co-location on Xcel-owned infrastructure via agreements with carriers.
- Xcel will permit and approve these requests.
- Denver Design Guidelines to be followed.
- Denver Public Works is working to defer as many new pole requests as possible to Xcel

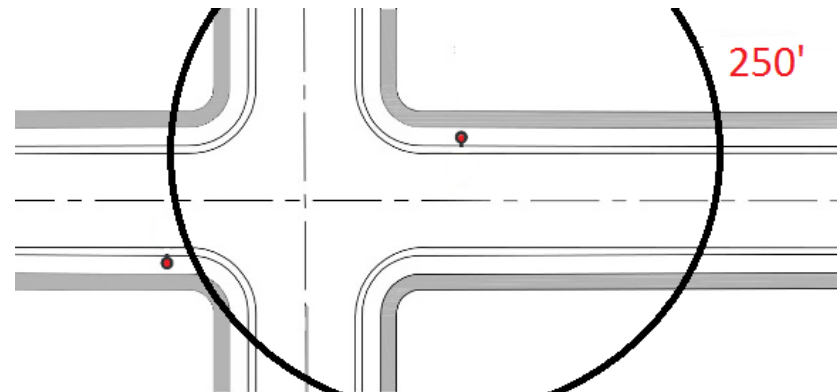
For non-Xcel poles, Public Works has developed custom permit procedures to comply with new State law.

- Applicant applies for PW **Encroachment** Permit
- Applicant must obtain a MASTER Permit (**Tier III** Encroachment Resolution) requiring City Council approval.
- Subsequent permits are considered **Tier II** encroachments and can be processed in batches up to 10 locations.
- Meets State permit timeline requirement of **90 days**



Public Works' Small Cell permit requirements include:

- Public-facing review process including Council offices, Districts, City Departments, Neighborhood Organizations
- Notification of adjacent property owner
- Restricting new pole density through min 250' spacing
- Restricting placement (along parks, historic & residential frontages)
- Restricting placement in front of residential & valuable sight lines
- Requiring camouflage and concealment
- Policy for co-location first
- Limiting height and equipment size
- Opportunity to coordinate fiber optic



These companies have been in contact with the City about Small Cell Infrastructure



(Permitted)



(Now requesting Permit)



(Application Pending)



(Application Pending)



(No Formal Submittals Received Yet)

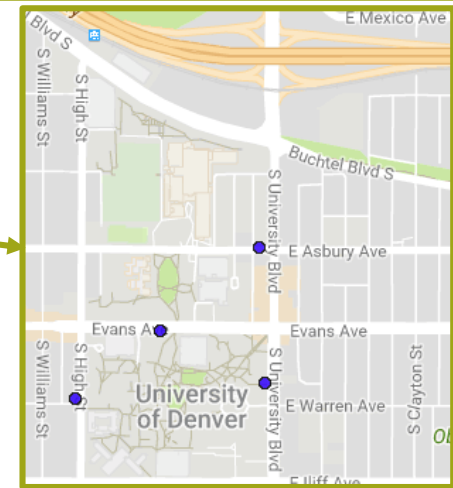
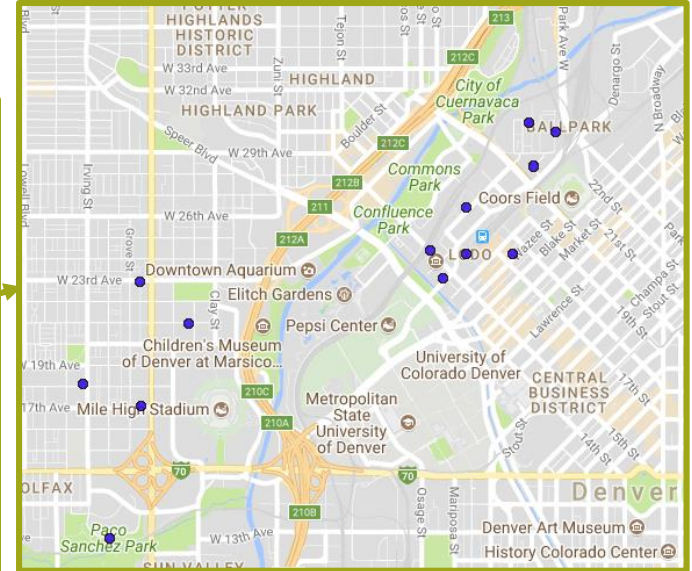
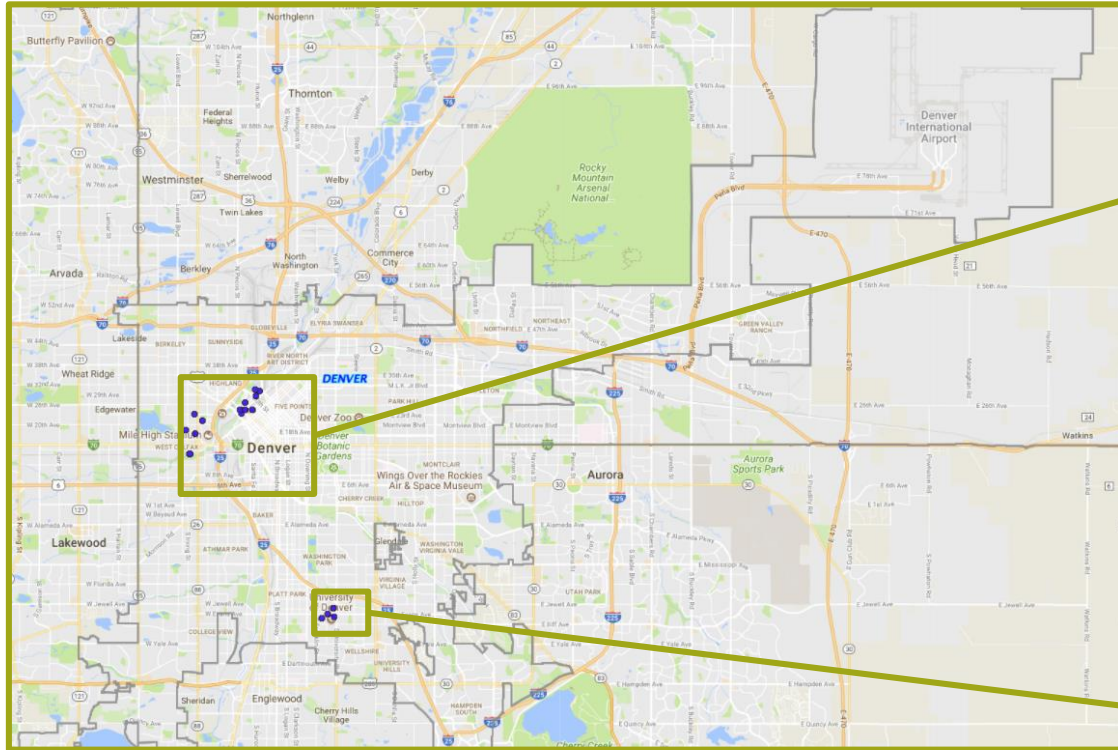


- Proposed **1st pole** (for Tier III) located at **1465 Wewatta**
 - Height: 30'
 - Pole is approved CCD Type 4 w/enclosed equipment
 - 5'x 5' foundation
 - Electrical connection and Xcel meter
 - Underground fiber box with fiber optic conduit
- **17** more poles expected to be applied for in near future
- **~65** antenna currently proposed at Xcel Energy locations
- AT&T has committed to defer bulk of program to Xcel





AT&T Proposed Poles to Date





DENVER
THE MILE HIGH CITY

Questions

FOR CITY SERVICES VISIT | CALL
DenverGov.org | **311**