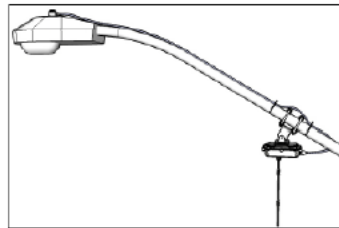


## Wireless Mini-Routers on City Streetlights

Citywide



Presenter: Paul Lopez, PE  
October 3, 2016



## Background

- Currently 7900 streetlights Citywide
  - Pursuing LED Conversion Project
- Interest from companies to co-locate wireless data transfer devices on City inventory.
- Recent advances in wireless technology have allowed companies in the wireless data transfer market to make their equipment more stealth.
- These devices are known as “Mini” or “Micro” Routers



## Other Municipalities

- City of Phoenix
- City of Mesa
- City of Scottsdale
- City of Glendale
- City of Chandler
- Town of Fountain Hills
- Town of Paradise Valley
  
- Potential Providers
  - Verizon
  - Sprint
  - AT&T
  - Etc.
- Potential for License Agreements

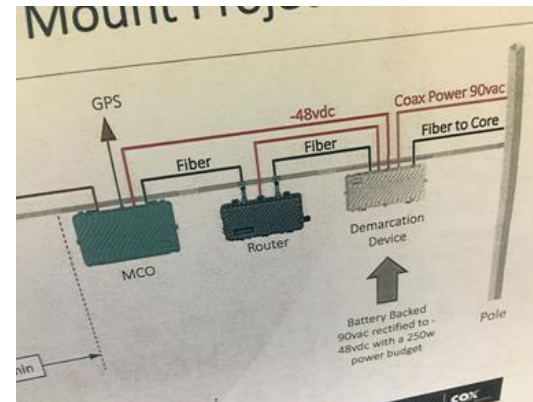


## Benefits

- Community Benefits
  - More efficient data transfer for handheld devices
  - More options and better coverage for Avondale residents
  - Annual Revenues may be used to offset the O&M costs of the street light infrastructure (~\$117.00 per street light per year)

## Considerations

- Recent Legislation HB 2497 & HB 2486
  - ARS 9-582 “Competitive Neutrality” allows municipalities to charge fees for this type of application consistently (and this is the current practice). However allows Co-location on existing Aerial Cox Facilities



- Indemnity & Insurance
  - The License agreement would require the third party indemnify the City from all consequences that may arise from co-locating their equipment on the City Street Lights.
  - Third party provider would have to carry a minimum level of insurance to cover damage and or complete loss of their equipment

## Considerations

- **First Right of Refusal**
  - The City shall reserve the right to allow any equipment be allowed to locate on any public infrastructure now or at any point in the future
- **Data Transmission**
  - Third party will be required to obtain their own separate FCC licensed frequency
- **Disruption in Service & Knockdowns**
  - Third party will be required to provide City with a spare streetlight that can be replaced quickly in the case of a knockdown
- **Number of Providers**
  - At this time staff nor neighboring communities can foresee a reason to limit the number of providers allowed in the ROW
- **Lifecycle & License Term**
  - The anticipated lifecycle is 10 years. The License Term should be valid up to 10 years.
- **Power Supply**
  - SRP has several options
  - APS is more limited to ground mount equipment with potential screening

## Potential Revenues

Municipality	Annual Co-Location Fee	Annual Rate Increase (%)	Annual Equip. Fee (\$)	Citywide Streetlights (ea.)	Approximate number of Micro/Mini Locations (ea.)	Approximate Annual Estimated Revenues (\$)
City of Phoenix	\$3,573	3	Incl.*	80,000 +	41	\$146,493
City of Scottsdale	\$3,573	3	Incl.*	38,000 +	60	\$222,000
City of Glendale	\$3,368	3	Incl.*	20,000 +	50	\$200,000
City of Chandler	\$3,368	3	Incl.*	24,000 +	0	\$0

- Staff Estimates Potential revenues in next two years to be as much as \$74,000 annually (assumes 20 separate locations) with potential for growth.

Staff is presenting this information for Council direction this evening and is available for questions.

