



## Legislation Details (With Text)

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**Title:** Discussion of problems, solutions and permit processes for cell phone coverage in Paradise Valley

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**Attachments:** 1. Carrier Comparison Map, 2. PWSF Option Matrix w. EWS Edits, 3. Small Cell Policy Priorities v2, 4. 5th Gen Wireless Email, 5. Presentation - Cell Tower Discussion Packet

Date	Ver.	Action By	Action	Result
5/17/2017	1	Town Council	Received and Filed	

**TO:** Mayor Collins and Town Council Members

**FROM:** Kevin Burke, Town Manager

**DATE:** May 17, 2017

**DEPARTMENT:** Town Manager

Andrew Miller, Town Attorney

Dawn Marie Buckland, Director of Administration and Government Affairs

### AGENDA TITLE:

Discussion of problems, solutions and permit processes for cell phone coverage in Paradise Valley

### Council Goals or Other Policies / Statutory Requirements:

**Quality of Life** - Maintain and Improve the Paradise Valley quality of life

### RECOMMENDATION:

Discuss and provide direction to staff on key questions.

### SUMMARY STATEMENT:

Poor cell phone coverage has been a continuous issue for the Town of Paradise Valley for several decades. Various solutions have had limited or temporary success. After investigation with carriers and tower companies, the apparent reason remains a lack of infrastructure. Therefore, the purpose of this Quality of Life Initiative, and in turn this special joint meeting, is to explore solutions to increase or improve cell phone infrastructure without sacrificing aesthetics and staying within the confines of the new State law on this topic.

To accomplish this objective, this meeting intends to:

- Share information learned to date
- Provide an update on the State legislation
- Identify possible solutions
- Resolve process questions
- Receive public feedback
- Receive Planning Commission feedback; and,
- Receive direction from Council

## **Background**

Poor Cell Phone Service was identified in January 2016 as a Quality of Life Initiative. The Mayor is the Council Liaison and worked with the Town Manager to obtain information. That started by asking for meetings with the carriers. The Mayor and Manager met with Verizon on March 31, 2017 and AT&T on June 2, 2016. These were preceded and followed with various phone calls with the representatives. Other industry members also approached the Town and had meetings including Engineering Wireless Services (EWS), Ulti-Mobile, and 5thGenWireless (each owned by a PV residents); the Town also spent time with Coal Creek who had submitted the most recent applications for cell antennas in PV. Finally a small cell tower company out of California called Ghost Networks reached out to the Town. These companies provided a consistent message that the Town's poor cell phone coverage was due to a lack of infrastructure. This seemed odd since the Town had worked extensively with a company called New Path (later acquired by Crown Castle) to develop an outdoor distributed antennas system (ODAS) a decade earlier which is housed in faux cactus around Town. Unfortunately, it was learned that an ODAS systems are designed for high density, low interference areas. So it does well for vehicle traffic but does poorly for residential that is more than 400 feet away and/or behind walls (which is most of the PV population). Ghost Networks then provided a more detailed analysis of coverage. This data is summarized in the visuals attached. In short, there were three principal dark spots in the coverage-south central PV (approximately Lincoln and 56<sup>th</sup>), north east PV ((approximately the Camelback Golf Course), and Northwest PV (approximately Mockingbird and 52<sup>nd</sup>). Ghost Network postulated that the quickest most cost effective way to solve the problem was three 50-60' tall macro cell antenna towers in those regions that could accommodate all 4 carriers. Mayor and Council expressed appreciation for the information with some members skeptical or opposed to 60 foot monopoles camouflaged or not.

Discussion then moved to the Planning Commission to look closer at the problem and solutions. Currently, Cell Towers are regulated under the Personal Wireless Service Facilities (PWSF) chapter of the zoning code. Moreover, applications for cell phone antennas (or PWSF's) are permitted through a Conditional Use Permit (CUP) that is granted or denied by the Planning Commission. Lastly, any rewrite of the zoning code must go through the Planning Commission. For these reasons, the Planning Commission has an important role in this discussion and will join the Town Council for this meeting.

The Planning Commission had two meetings regarding this topic. The first was an orientation of the information and the second commenced the brainstorming on solutions and policy choices. During the second meeting, the Planning Commission directed the Town Manager to research and provide greater information on the different PWSF options. The owner of EWS, mentioned above, offered his free assistance. That work is attached. However, that work was never presented to the Planning Commission because in January, several bills were introduced at the Arizona State Legislature preempting cities and towns ability to regulate cell phone antennas in the Town's right-of-way (ROW).

This moved the Town into a defensive position to prevent a loss of regulatory authority on this issue. While new infrastructure is a necessary component of solving the problem, it needed to be done consistent with Town values and precedent. The Mayor & Council identified and prioritized their values relative to negotiating a better bill (attached).

The eventual legislation that was passed does require a rewrite of the PWSF Chapter of the zoning code. Staff will present key points from the legislation and ask Planning Commission and Council for direction on certain components where discretion remains with the municipality.

Following the presentation and discussion on the new State law, the conversation will focus upon solutions. Staff has divided solutions into several buckets. The first two buckets differentiate between “Market Driven” and “Town Facilitated” solutions. The cell phone market is in constant evolution as new technologies are deployed, data demands grow, use patterns change, and federal and state laws change. Therefore, solutions in vogue today may change in the next five years. Attached please find an email from the 5thGenWireless Owner with links to articles on this topic. A market driven solution focuses upon rewriting the zoning ordinance such that it provides flexibility for emerging technology but sufficient controls to manage the aesthetics. That is a very difficult balance to accomplish with a static law. Conversely, the Town could facilitate a solution such that the problem is solved in the immediate future and within acceptable aesthetic considerations but uncertain about the durability of that solution over time.

Within each of those buckets, any solution must look at both small cell and macro cell deployment. The industry appears to be aggressively moving toward small cell solutions. This is evident with the recent state legislation that was originally geared toward small cell and the fact that 5G (the next generation of cell technology) appears to require denser infrastructure. Small cell antennas generally cover about a block (~400') at a time. They also are typically higher band frequencies with a focus on data. Small cell antennas prefer to be in the 30-50 feet high range. Conversely, the last few Town applications, and discussions regarding applications, have been for macro cell solutions. Macro cell solutions cover areas of 1 mile or more and more recently deploy multiple frequencies (lower frequencies for voice coverage and higher for data coverage). It makes sense that these are the applications Paradise Valley is receiving because: 1) it is the quickest way to cover large areas of underserved customers; 2) the Town is low density; and 3) there are some topography considerations that make macro cells advantageous. The disadvantaged is that macro cells need height to be effective. In Paradise Valley, height issues often mean interference with view corridors. This then requires some creative camouflage solutions as well.

Recently, the Town has talked to another industry expert, American Tower. They have presented both micro and macro solutions to the Town. These can be seen in the attached Power Point presentation.

A Market Driven solution is not incompatible with a Town facilitated solution. Staff recommends that the policy makers explore both. It is recommended that the Planning Commission work on small cell and macro cell Market Driven solutions via a zoning code rewrite guided by a statement of direction from the Town Council. Further, staff recommends, the Town Council explore a town facilitated macro cell solution as such a solution likely involves Town ROW, ton property and policy decisions. A discussion of these options and solicitation of public feedback will round out the meeting.

**BUDGETARY IMPACT:**

None at this time.

**ATTACHMENT(S):**

**Ghost Networks Carrier Coverage Analysis**

**Small Cell Policy Priorities**

**PWSF Options Matrix**

**Dana Kully 5thGenWireless Email**

**Power Point Presentation**