

# CITY OF PALM SPRINGS

# DEPARTMENT OF PLANNING SERVICES

# **MEMORANDUM**

Date:

October 7, 2009

To:

Planning Commission

From:

Director of Planning Services

Subject:

Discussion of Cell Towers: Installations, Site Planning and City Standards

In the past few months, several applications have been filed for commercial communications antennas. These antennas are typically mounted on basic monopoles, disguised as artificial palm trees (monopalms) or located on rooftops here in the City of Palm Springs. The purpose of this study session is to update the Planning Commission on the current state of wireless antenna installations and City standards, including a discussion of height variances. Staff will provide information on various wireless providers and their existing locations within the City. Representatives from various wireless communications carriers have been invited to attend today's meeting and will provide information on their network and details of enhancing their network's service area.

#### ANTENNA ORDINANCE

Section 93.08.00 *Antennas* of the Zoning Code guides the development of all antennas within the City, including single-family, multi-family, commercial, manufacturing, etc. Section 93.08.01 of the Zoning Codes states:

The purpose of this section is to regulate the height and placement of antennas which are located outside of buildings and which can be seen from public streets and neighboring properties. The value of antennas is recognized and it is not the purpose of this section to prohibit their use through undue restrictions; however, it should be recognized that the uncontrolled installation of outside antennas can be detrimental to the appearance of a neighborhood and to the city of Palm Springs and is contrary to the city's policy of requiring utilities to be installed underground. Therefore, in considering the welfare of the citizens and property owners of the city of Palm Springs, the city council finds it desirable and necessary to regulate the height and location of antennas, and the following regulations are determined to be imperative.

Section 93.08.02 and 93.08.03 of the Zoning Code provides definitions and regulations, respectively (see attached). This Ordinance provides guidance on the development of

various broadcasting and receiving antennas when located in all zones within the City, including commercial communications antennas commonly referred to as cell towers.

#### **PROCESSING**

When an application for a commercial communications antenna is submitted, staff determines if the project will have a visual impact on the surrounding areas, and if so, requires the applicant to submit a Type II Conditional Use Permit. A Type II Conditional Use Permit may be permitted when such use is deemed by both the commission and council to be essential or desirable for the public welfare and convenience and in conformity with the general plan and its objectives. This application is a public hearing and requires action by both the Planning Commission and City Council. Typically, these types of applications are new installations of monopoles, monopalms, lattice towers and the like.

If staff determines that the commercial communications antenna will not have a visual impact on the surrounding areas, the application is approved by the Director of Planning Services. This application is a not a public hearing and does not require action from the Planning Commission or City Council. The process for these applications is much easier and typically involves rooftop installations and co-location on existing monopoles / monopalms. An example that was recently approved will be located at 3601 East Mesquite Avenue (see attached). Others that have recently been approved include another rooftop installation at the Hyatt in downtown and a co-location at 2050 Executive Drive by Vista Chino Road and Gene Autry Trail.

The current ordinance encourages wireless providers to co-locate or install rooftop systems that are less of a visual impact to surrounding areas through a streamline process. The installation of a new monopole, whether it be disguised as a palm tree, a pole with / without arrays or lattice tower, requires public hearings and a lengthier entitlement process. Ultimately, it will be up to each wireless carrier to decide the chosen route, which will more than likely be dependant upon land available, existing development and service needs.

# **DEVELOPMENT STANDARDS**

When a Type II application is submitted for a cell tower, staff reviews the proposal against the development standards of Section 93.08.03 of the Zoning Code and the respective zone. Section 93.08.03(A)(2) of the Zoning Code categorizes the tower's development standards into three sections:

- 1. Areas Zoned M-1
- 2. Commercial and Professional Zones
- 3. Other Areas

#### Areas Zoned M-1

The standard requires that "no part of the antenna structure shall extend to a height of more than sixty (60) feet above ground level." There are no requirements that the structure be outside of the setback areas.

# Commercial and Professional Zones

The Zoning Code refers the development standards of communication antennas (including cell towers) in commercial and professional zones to the same standards that govern broadcast receiving antennas — Section 93.08.03(A)(1)(c) of the Zoning Code. This Section requires the following:

If the antenna is mounted on a building, no part of the antenna structure shall extend to a height of more than six (6) feet above the surface of the roof directly beneath the antenna, unless screened from view. If the antenna is not mounted on a building, no part of the antenna structure shall extend to a height of more than fifteen (15) feet above ground level nor shall it be located within any required yard except as permitted by Section 94.06.01.

#### Other Areas

Section 93.08.03(A)(2)(c)(iii) of the Zoning Code states the following:

In areas other than those zoned M-1, commercial or professional, not more than one (1) communications antenna shall be permitted on a property, except that two (2) antennas shall be permitted on a property if one (1) of the two (2) antennas is a whip antenna. No part of the antenna structure shall extend to a height of more than twenty-five (25) feet above the highest point of the roof of the principal building on the property...Antennas, exceeding six (6) feet in height, shall not be located within required setback areas, except in accordance with Section 94.06.01.

# Development Standards Discussion

All cell towers within the City exceed fifteen foot heights and typically range between forty-five and ninety feet in height. A wireless communications provider seeking approval of a forty-five foot cell tower within a commercial or professional zone must apply for a variance application to exceed the maximum height of fifteen feet, whereas if the provider pursued the same entitlement on a multi-family property that has a building height of twenty-four feet, no height variance would be necessary. While each project is treated on a case-by-case basis, cell towers have been consistently granted height variances in commercial zones. When a variance approval becomes common, an amendment to that code section may be necessary.

#### Attached:

- 1. 93.08.00 Antenna Ordinance
- 2. Co-location at 3601 East Mesquite Avenue Plans

## 93.08.00 Antennas.

Sections 93.08.01 through 93.08.03 contain the regulations for antennas. (Editorially amended during codification; Ord. 1294 (part), 1988)

# 93.08.01 Purpose.

The purpose of this section is to regulate the height and placement of antennas which are located outside of buildings and which can be seen from public streets and neighboring properties. The value of antennas is recognized and it is not the purpose of this section to prohibit their use through undue restrictions; however, it should be recognized that the uncontrolled installation of outside antennas can be detrimental to the appearance of a neighborhood and to the city of Palm Springs and is contrary to the city's policy of requiring utilities to be installed underground. Therefore, in considering the welfare of the citizens and property owners of the city of Palm Springs, the city council finds it desirable and necessary to regulate the height and location of antennas, and the following regulations are determined to be imperative. (Ord. 1294 (part), 1988)

## 93.08.02 **Definitions.**

As used in Sections 93.08.00 through 93.08.03, the following terms are defined in this section:

- A. "Antenna" means a device for radiating and/or receiving radio waves.
- B. "Antenna structure" refers collectively to an antenna and its supporting mast, if any.
- C. "Array antenna" means an antenna consisting of two (2) or more radiating elements, generally similar, which are arranged and excited in such a manner as to obtain directional radia-

tion patterns. It includes any structural members which are necessary to maintain the proper electrical relationships between the radiating elements, but does not include the mast or other structure used to support the array as a whole, nor does it include the transmission line which supplies energy to or receives energy from the array as a whole.

- D. "Broadcast receiving antenna" means an outside antenna used for the reception of signals transmitted by stations licensed by the Federal Communications Commission in the radio broadcast services, including AM, FM and TV.
- E. "Building inspector" means the director of planning and building of the city of Palm Springs, or any of his authorized assistants.
- F. "Collinear antenna" means a linear array in which the radiating elements are disposed end-to-end in a substantially straight vertical line.
- G. "Commercial communications antenna" means a telecommunications antenna designed to transmit or receive communications as authorized by the Federal Communications Commission (FCC). The commercial communication antenna shall not include amateur radio operators' equipment, as licensed by the FCC, or home satellite/television antennas.
- H. "Dipole" means a driven element in the form of a conductor approximately one-half (½) wavelength long, split at its electrical center for connection to the transmission line feeding the antenna.
- "Director element" means a parasitic element located forward of the driven element of an antenna, intended to increase the directive gain of the antenna in the forward direction.
- J. Dish Antenna. See "Parabolic antenna."
- K. "Driven element" means a radiating element coupled directly to the transmission line feeding the antenna.

- L. "Inverted-V antenna" means an antenna consisting of a single dipole constructed of wire and supported at the center and ends in such a manner as to form an inverted "V" in a vertical plan.
- M. "Linear array" means an array antenna having the centers of the radiating elements lying along a straight line.
- N. "Mast" means a pole of wood or metal, or a tower fabricated of metal, used to support a broadcast receiving antenna or a communications antenna and maintain it at the proper elevation.
- O. "Parabolic antenna" means an antenna consisting of a driven element and a reflector element, the latter having the shape of portion of a paraboloid or revolution.
- P. "Parasitic element" means a radiating element which is not directly coupled to the transmission line feeding the antenna. It includes director elements and reflector elements.
- Q. "Radiating element" means a basic subdivision of an antenna which in itself is capable of effectively radiating or receiving radio waves. It includes driven elements and parasitic elements.
- R. "Reflector element" means a parasitic element located in a direction other than forward of the driven element of an antenna, intended to increase the directive gain of the antenna in the forward direction.
- S. "Whip antenna" means an antenna consisting of a single, slender, rod-like driven element, less than one (1) wave-length long, which is supported only at its base and is fed at or near its base. It may include at its base a group of conductors disposed horizontally, or substantially so, forming an artificial ground-plane.
- T. "Yagi antenna" means a linear array in which the radiating elements are parallel to each other and are disposed along and perpendicular to a single supporting boom. The plane of

the radiating elements may be vertical or horizontal.

(Ord. 1553 (part), 1998; Ord. 1551 (part), 1988; Ord. 1294 (part), 1988)

## 93.08.03 Regulations.

#### A. Plans and Permits.

It is unlawful for any person to erect or cause to be erected within the city of Palm Springs any outside antenna without first submitting plans for such antenna to the director of planning and building for approval. The director of planning and building shall issue a permit for the erection of an antenna complying with the provisions of this section, and the permit fee shall be such amount as has been prescribed by resolution of the city council. The permit procedure shall be for the purpose of insuring that an antenna is installed in conformance to requirements of this section and in a location and manner which will not be detrimental to surrounding properties. The director of planning and building shall be guided by the following standards in the approval of the antenna plans:

# 1. Broadcast Receiving Antennas.

- a. Permissible Types.
  - Broadcast receiving antennas may be of any type.
- b. Maximum Allowable Dimensions.
  - Broadcast receiving antennas may be of any size compatible with the height limitations hereinafter prescribed.
- c. Height and Placement Limitations.
  - The following limitations shall apply to broadcast receiving antennas in all areas in the city of Palm Springs:
    - (A) Whip Antennas.

If the antenna is mounted on a building, the lower extremity of the driven element shall be located not more than three (3) feet above the surface of the roof, directly beneath the antenna. If the antenna is not mounted on a building, the lower extremity of the driven element shall be located not more than twelve (12) feet above ground level, nor within any required yard except as permitted by Section 94.06.01.

#### (B) Other Antennas.

If the antenna is mounted on a building, no part of the antenna structure shall extend to a height of more than six (6) feet above the surface of the roof directly beneath the antenna, unless screened from view. If the antenna is not mounted on a building, no part of the antenna structure shall extend to a height of more than fifteen (15) feet above ground level nor shall it be located within any required yard except as permitted by Section 94.06.01.

# 2. Communication Antennas.

## Permissible Types.

The use of communications antennas shall be restricted to the following types:

- i. Whip antennas;
- ii. Inverted-V antennas:
- iii. Collinear antennas;
- iv. Yagi antennas:
- v. Parabolic antennas.

## Maximum Allowable Dimensions.

Dimensions of the several allowable types of communications antennas shall be limited as follows:

#### i. Whip Antennas.

The antenna may be of any size compatible with the height limitations hereinafter prescribe.

#### ii. Inverted-V Antennas.

The radiating element may be of any size compatible with the height and placement limitations hereinafter prescribed.

#### iii. Collinear Antennas.

The antenna may be of any size compatible with the height limitations hereinafter prescribed.

#### iv. Yagi Antennas.

The length of the single boom supporting the radiating elements shall not exceed twenty (20) feet. The length of the longest radiating element shall not exceed thirty (30) feet.

## c. Height and Placement Limitations.

The following limitations shall apply to the several allowable types of communications antennas in the indicated areas of the city of Palm Springs:

#### i. Areas Zoned M-1.

In areas zoned M-1, no part of the antenna structure shall extend to a height of more than sixty (60) feet above ground level.

# Commercial and Professional Zones.

The provisions governing broadcast receiving antennas shall apply.

#### iii. Other Areas.

In areas other than those zoned M-1, commercial or professional, not more than one (1) communications antenna shall be permitted on a property, except that two (2) antennas shall be permitted on a property if one (1) of the two (2) antennas is a whip antenna. No part of the antenna structure shall extend to a height of more than twenty-five (25) feet above the highest point of the roof of the principal building on the property. The mast supporting the antenna, or supporting the center of the antenna in the case of an inverted-V antenna, shall be of the self-supporting type, without guy wires. The maximum crosssectional dimension of the mast shall not at any point along the axis of the mast exceed fifteen (15) inches, plus one-third (1/3) inch for each foot of distance between such point and the top of the mast. The director of planning and building may, in approving a permit for the antenna, require the mast to be painted in such a manner as to render it less conspicuous. The location of the antenna on the property shall be such as to screen the antenna as much as possible from view from surrounding properties and streets, and the director of planning and building may, in approving a permit for the antenna, require additional landscaping to be provided for screening purposes. If the antenna structure (or, in the case of a whip antenna, that portion of the antenna structure below the base of the driven element) is screened by buildings or vegetation so that it is not visible to a person standing anywhere on adjacent property or standing anywhere in the same block on the closest street in any direction, the foregoing height limitations shall not apply. Antennas, exceeding six (6) feet in height, shall not be located within required setback areas, except in accordance with Section 94.06.01.

# iv. Commercial Communication Antennas

A communication antenna in which the means for transmitting or receiving communications do not have a visual impact on the immediate area as determined by the director of planning and building are subject to Section 94.04.00 (Architectural review). These facilities shall be of a scale consistent with surrounding structures and shall be incorporated into the overall architectural design of the structures and/or the site. Commercial communication antennas that may have a visual impact in the surrounding area as determined by the director of planning and building shall be subject to Section 94.02.00 (Conditional use permit).

#### B. Variances.

Pursuant to the procedure set forth in Section 94.06.01 of the Zoning Code, the director of planning and building may grant variances to the above-specified limitations. In cases involving applications for height limit variances, no such variance shall be granted unless the director makes one (1) of the following findings in addition to those required in Section 94.06.01.

# 1. For Broadcast Receiving Antennas.

That in the area involved, reception is adversely affected by obstructions, and no qualified installer will be able to make a satisfactory installation within the specified height limitations;

#### 2. For Communications Antennas.

That in the area involved, transmission or reception is adversely affected by obstructions and, as verified by at least one (1) person holding a valid radio-telephone first-class operator's license issued by the Federal Communications Commission, it is not feasible to achieve and maintain satisfactory communications within the specified height limitations.

#### C. Exceptions.

Nothing contained in this section shall prevent the installation and maintenance of antennas necessary for the operation of public authorities for the protection of the health, safety and welfare of the community. Plans for such antennas shall be reviewed by the director of planning and building before installation.

# D. Authority to Inspect.

A building inspector is empowered to inspect or reinspect any antenna installation for violation of this code and, if such installation is found in violation, shall notify the person owning or operating such antenna and require the correction of the condition within forty-eight (48) hours.

#### E. Failure to Correct.

Failure to correct violations within the time specified in Section 93.08.03(D) above shall subject the violator to the penalties provided in Section 1.01.140 through 1.04.165 inclusive of the Palm Springs Municipal Code. (Ord. 1553 (part), 1998; Ord. 1551 (part), 1998; Ord. 1347 (part), 1990; Ord. 1294 (part), 1988)

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