

PROJECT NARRATIVE

To: City of Mesa Board of Adjustment

Date: May 3, 2023

Re: Proposed Wireless Communication Facility
City of Mesa Pole – Pioneer Park

Location: 526 E Main St, Mesa, AZ 85203



Proposed Use

The City of Mesa is proposing to develop a 65-foot Wireless Communication Facility on City of Mesa Parks, Recreation, and Community Facilities owned property (Pioneer Park), located at 526 E Main St, Mesa, AZ 85203. The proposed WCF consists of a new wireless pole, camouflaged as a palm tree (mono-palm), with all equipment being housed in the existing park support/restroom building near the center of the park.

Background

To address the digital divide experienced by underserved communities of Mesa school students during the COVID-19 pandemic, the City is building broadband internet infrastructure to provide non-commercial, no cost, public-accessible internet for the students in greatest need. In conjunction with Mesa Public Schools (MPS), the City will build a network of 21 cellular radio towers to address the hardest hit students experiencing a lack of internet services. This is one component of a wider effort by the City of Mesa to address the digital divide.

The system as designed will support up to 5,000 students and residents in historically underserved areas of west Mesa from Gilbert Rd to Price Rd and from Brown Rd to Southern Ave. 12 towers are already live, and devices are actively being distributed for this network through Mesa Public Schools, Mesa Library, and the non-profit Compudopt. The project is completely funded by grants from the Federal American Rescue Plan Act State and local fiscal recovery fund (ARPA SLFRF) and the City Dept. of Innovation and Technology at no additional cost to the residents.

The technology being implemented is a 4G LTE service using Citizens Broadband Radio Service (CBRS) in the 3.5 GHz band (3550 MHz to 3700 MHz). Due to regulations on this band of frequency, the tower cannot broadcast at a high power like normal 4G cell towers. The output of these antennas is only similar to an outdoor Wi-Fi hotspot. Consequently, the size of the antenna array and any radio frequency concerns are far lower with this service than with typical wireless facilities.

Site Description

City of Mesa's Pioneer Park is approximately 17.5 acres in total area. The parcel is developed with a City park including playgrounds, sport courts, a splash pad, ramadas, and green space. Efforts have been made to site a potential WCF in an area compatible with the park development. The proposed site is near available power and data connections and near a stand of palm trees. Such siting is used to reduce the tower's visibility.



Facility Description

The proposed tower is camouflaged as a palm tree (mono-palm). This was chosen to reduce visibility more than that achieved with a standard monopole. The mono-palm has an approximate overall height of 70 feet including the tower, all antennas, and branches of the faux tree. The proposed pole is a City standard 65 foot pole per Mesa Standard Detail M-94.07. The pole's concrete foundation is 3 feet in diameter. The pole diameter is 12 inches at the base and reduces to 8 inches at the upper section of the pole. The mono-palm proposal includes 47 total faux palm fronds ranging in length from 3 feet to 9 feet. The pole will also receive a paint and bark application to mimic a natural palm tree. The upper antenna array would have an approximate centerline height of 63 feet and an overall height of about 5 feet, leaving the top 2 feet of the tree free of equipment.

The City of Mesa array consists of 6 sectors with 1 antenna per sector. It is unlikely that the tower can accommodate an additional telecommunication array. Examples of such camouflaging are shown below.



The following photo is of an existing pole of the same type being proposed with the same antenna arrays proposed at the top of the pole. The lower bunch of equipment is not proposed with this WCF site.



Ground Screening and Camouflaging

The proposed Pioneer Park WCF site will have no additional ground equipment. The only addition will be the base of the mono-palm. This request proposes to omit the 6-foot required wall around the mono-palm because there will be nothing to screen other than the pole base itself. It is thought that adding a screen wall at this site would be more visually impactful to the park and would consume more park space than the mono-palm alone. No additional landscaped buffer area surrounding the WCF is proposed. The park area around the site is turf with existing, mature trees. There are no existing shrubs in the immediate vicinity.

Attachment A-Application

The site provides a few advantages for reduced impact. It is in the western edge of the park (removed from the primary usable park area and amenities), is removed from Main Street (reduced visibility), it is setback from Lesueur St by the height of the pole, is in an area with existing palm trees (also will reduce visibility) and is in an area of the park with a buffer from the surrounding streets to the nearest residential lot.

The approximate location of the proposed WCF is marked in red in the photo below (looking East from Lesueur).



Landscaping

No additional landscaping is proposed. All existing trees and landscaping are to remain in place. The WCF site is planned in an area covered with turf and no shrub vegetation. The existing turf will remain other than that in the pole foundation footprint. No additional trees are proposed at this time.

The following images show the existing conditions on site in the vicinity of the proposed WCF. Additional landscaping, particularly shrubbery, would be out of character with the existing park landscaping. Therefore, it is proposed to omit the required/added landscape buffer per MZO Section 11-35-5(H) because the existing landscape to remain will best maintain the landscape character of the park.

Attachment A-Application



Attachment A-Application





Attachment A-Application

Noise

The normal functioning of equipment will not produce any noise at the WCF site as all equipment will be housed inside the existing park building (between the splash pad and the parking lot off N Hobson). The WCF equipment in the park building will create minimal noise which will be quieter than existing equipment in the building. No noise from the proposed facility will be able to be heard from the property boundaries.

Impact to Existing Park

The proposed location of the wireless facility (mono-palm pole) will not impact existing landscaping on site. The pole will be situated between trees in an area with existing landscaping. There will be minimal to no impacts to park use by patrons.

No Adverse Effects on Adjacent Properties

The site will not have an adverse impact on the surrounding properties. The proposed facility is located a fair distance away from residential properties. The nearest residential lot to the West is approximately 220 feet away. The residential areas to the North and East are over 500 feet away. Based on the current use of the property, the design of the facility is intended to maintain the appearance of the surrounding area. The design and the density of existing palm trees will ensure the proposed facility will have virtually no aesthetic impact.

Applicable Regulations

The proposed facility will comply with all local, state, and federal regulations for such facilities and will be maintained in accordance with applicable standards. This compliance includes but is not limited to FCC radio frequency emission standards.

Conclusion

The proposed facility has been planned in keeping with MZO Section 11-35-5 and provides location, concealment, aesthetic, and design considerations, thus reducing the overall impact on the community. Further, the proposed WCF will comply with and is compatible with the requirements of MZO Section 11-35-6(E). The WCF will provide no-cost broadband internet service to those underserved in the area and is the least intrusive feasible means to do so. The WCF is a needed addition to the community without being physically or visually intrusive for the park or surrounding properties.

In conclusion, we respectfully request consideration and approval of the proposed Wireless Communication Facility.

11-35-5: - LOCATION, DESIGN, AND OPERATION REQUIREMENTS

The following requirements apply to all wireless communications facilities that are not exempt from regulation under this Chapter unless the decision-making authority approves a Special Use Permit pursuant to Chapter 70, Conditional Use Permits.

A. Location Preferences. The preferred locations for wireless communication facilities are in the following order:

1. On existing non-residential structures such as buildings, communication towers, or utility facilities located more than 300 feet from a residential zone, without modification to the structures.

There are no existing non-residential structures such as buildings, communication towers, or utility facilities in the area where the service need exists to accommodate the City's equipment. There is an existing cell tower approximately 475' to the southwest; however, it is a monopalm facility that would not be able to camouflage the City's equipment nor mount it at the needed height. The proposed WCF will be 225' away from the nearest residential.

2. On existing signal, power, light or similar kinds of permanent poles located more than 300 feet from a residential zone.

There are no signal, power, light or similar poles in the area where the service need exists to accommodate the City's equipment. The proposed WCF will be 225' away from the nearest residential.

3. Co-located with existing wireless telecommunication facilities that conform to the requirements of this Ordinance.

There is an existing cell tower approximately 475' to the southwest; however, it is a monopalm facility that would not be able to camouflage the City's equipment nor mount it at the needed height. The proposed WCF will be 225' away from the nearest residential.

4. Limited, General and Heavy Industrial Districts sites more than 300-feet from a residential zone.

The proposed WCF will be located in a DR-2 Zone 225' away from the nearest residential.

5. Camouflaged, stealth, or building-mounted facilities in Limited and General Commercial Districts or in Planned Employment Park Districts.

The proposed WCF will be a camouflaged monopalm located in a DR-2 Zone 225' away from the nearest residential.

6. Camouflaged, stealth or building-mounted facilities on non-residential structures, including monopoles, in any Agricultural or Residential District.

The proposed WCF will be a camouflaged monopalm located in a DR-2 Zone 225' away from the nearest residential.

B. Design Preferences. The preferred design approaches for new wireless communication facilities are in the following order:

1. Building or structure mounted antennas designed and sited to be completely concealed from view or not readily visible because of integration into design of non-residential buildings or structures erected and approved for use other than as wireless telecommunications support. Examples of antennas completely integrated into the structure include existing parapet replacements, bell towers, steeples, clock towers and cupolas.

There are no suitable buildings or structures in this area where the service need exists capable of accommodating the City's equipment.

2. Building or structure mounted antennas set back from roof edge, concealed and not visible from the public right-of-way or from surrounding residential properties or minor faux-structural alterations. Examples include faux penthouses and parapet additions.

There are no buildings or structures in this area where the service need exists capable of accommodating the City's equipment. The proposed WCF will be a camouflaged monopalm located in a DR-2 Zone 225' away from the nearest residential.

3. Building or structure mounted antennas below roof-line (façade mount, pole mount) visible from public right-of-way but artistically integrated into the existing structure and painted to match existing structure.

There are no buildings or structures in this area where the service need exists capable of accommodating the City's equipment. Therefore, the most appropriate alternative is a WCF that is a camouflaged monopalm.

4. Freestanding camouflaged structures visible from public right-of-way and from surrounding residential properties. Examples include steeples, sculptures and clock towers.

The proposed WCF will be a camouflaged monopalm removed from the nearest ROW and nearest residential.

5. Building or structure mounted antennas above the roof-line visible from public right-of-way or from surrounding residential properties behind frequency-transparent panels.

There are no buildings or structures in this area where the service need exists capable of accommodating the City's equipment.

6. Freestanding stealth tree, such as monopalm.

The proposed WCF will be in the form of a monopalm. All equipment on the proposed monopalm will be painted to match.

7. Freestanding monopoles or other antenna towers.

The proposed WCF will be in the form of a monopalm. All equipment on the proposed monopalm will be painted to match.

- C. **Location of Facilities.** Wireless telecommunication facilities shall be located where the existing topography, vegetation, buildings or other structures provide the greatest amount of screening and in compliance with the following requirements.

1. No new facility shall be sited on or above a ridgeline.

The proposed WCF will not be located above a ridgeline.

2. Within Residential and Mixed Use Districts, no new freestanding antenna structure, including towers, lattice towers, and monopoles, shall be located within 1,000 feet of another freestanding facility unless mounting on a building or co-location on an existing pole or tower is not feasible and techniques have been used to camouflage, screen, or otherwise minimize the visual impact of the facility to the extent feasible.

The proposed WCF will be a monopalm and located in a DR-2 Zone 225' away from the nearest residential. There is an existing WCF within 1,000 ft, but co-location is not feasible.

3. Within Commercial and Employment Districts, new freestanding antenna structures, including towers, lattice towers, and monopoles, may be located within 1,000 feet of another freestanding facility, provided a stealth or camouflaged design is used.

The proposed WCF will be a monopalm and located in a DR-2 Zone 225' away from the nearest residential. There is an existing WCF within 1,000 ft, but co-location is not feasible.

4. Ground-mounted wireless telecommunication facilities shall be located in close proximity to existing above-ground utilities, such as permanent electrical towers, light poles, trees of comparable heights, and in areas where they will not detract from the appearance of the City.

The proposed WCF will be a monopalm with no additional ground mounted facilities. The WCF is removed from the ROW and nearest residential.

5. Facilities may only be located on a property zoned for a residential or agriculture use if the antennas, antenna structures, and all related equipment can be sited to comply with the setback and separation requirements of this Chapter. Exceptions of up to 30% of the setback and up to 75% of the separation requirements may be considered as part of a Special Use Permit request when the application includes stealth or camouflaged facilities.

The proposed WCF is on property zoned DR-2. The WCF location meets setback requirements and is setback from N Lesueur ROW and pavement edge per requirements.

D. Height of Facilities. The height limitations for each zoning district applicable to buildings and structures shall apply to all towers and antennas that are not exempt from regulation except as provided in this Chapter. The height of building-mounted antennas shall include the height of that portion of the building on which the antenna is mounted. In determining the height of portable "crank-up" or similar towers whose height is adjustable, the height of the tower shall be the maximum height to which it is capable of being raised.

The proposed WCF will be a 65' monopalm pole with the highest faux frond tips reaching 70' in height. The proposed height is necessary to address the service need.

1. Roof-mounted or facade-mounted antennas proposed on an existing building, or on a tower, pole or other structure shall not extend or project more than 15 feet above the existing height of the building or structure.

There are no building or structures in this area where the service need exists capable of accommodating the City's equipment, which is why the City is proposing a 65' monopalm.

2. Antenna support equipment for stand-alone facilities (not attached to a building) shall be screened by a minimum 6-foot high masonry wall unless placed within a fully enclosed building. When placed in a building, the building design shall be no taller than one (1) story or 15 feet in height with elevations designed and constructed in a manner compatible with building designs typically found in the area.

The antenna support equipment will be located in the existing park building near the center of the park. No new masonry wall is proposed.

3. Antenna support equipment that is roof mounted shall meet the screening requirements specified in Section 11-30-9 of this Ordinance.

The antenna support equipment will be located in the existing park building near the center of the park. No new masonry wall is proposed.

E. Required Separation and Setbacks. Antenna structures and antennas that are not exempt from regulation under this Chapter shall be setback from property lines and separated from other antenna structures in compliance with the following requirements.

1. Antenna structures other than alternative antenna structures must be set back from any property in residential use a distance equal to the twice the height of the structure. Alternative antenna structures shall be setback from residential uses a distance equal to the height of the structure plus one (1)-foot.

The proposed WCF and antenna support equipment is compliant with the setbacks for a DR-2 Zone and 225' from the nearest residential.

2. Antenna structures, including alternative antenna structures, must be set back from public right-of-way a distance equal to the height of the structure plus one foot.

The proposed WCF and antenna support equipment is setback 130' from the public right-of-way, exceeding the required setbacks.

3. In Non-Residential Districts, all free-standing antenna structures, except for alternative tower structures, must be at least 1,000 feet from another free-standing antenna structure, unless appropriate camouflage or stealth techniques have been used to minimize the visual impact of the facility to the extent feasible and mounting on a building or co-location on an existing facility is not feasible.

The proposed WCF will be a monopalm and located in a DR-2 Zone 225' away from the nearest residential. There is an existing WCF within 1,000 ft.

4. All wireless communications facilities and related equipment shall comply with the required building setbacks for the zoning district in which the facility is located. However, in no instance shall the facility (including antennae and equipment) be located closer than 5 feet to any property line. Exception: Antenna support equipment that is not placed within enclosed buildings provided the surrounding security wall complies with the maximum fence height requirements as found in Section 11-30-4, Fences and Freestanding Walls.

The proposed WCF project is 5' or more from each property line. The antenna support equipment will be placed within an enclosed, existing park building. No new fencing is proposed.

F. Design Standards. Antennas, antenna support structures, and related equipment shall be located, designed and screened to blend with the existing natural or built surroundings and existing supporting structures.

1. Facilities that are not camouflage or stealth shall close mount all panel antennas.

The proposed WCF will be in the form of a monopalm. All equipment on the proposed palm will be painted to match.

2. Stealth or camouflaged facilities shall not have antenna mounts that extend beyond the outside edge of the materials used to provide the stealth or camouflage design.

The proposed WCF will be in the form of a monopalm. All equipment on the proposed palm will not extend beyond the faux fronds.

3. When freestanding, non-stealth tower elements are used, antennas and support structures, where utilized, shall be monopole type.

The proposed WCF will be in the form of a monopalm.

4. Monopole support structures shall not exceed 4 feet in diameter unless technical evidence is provided showing that a larger diameter is necessary to attain the proposed tower height and that the proposed tower height is necessary.

The proposed WCF will be in the form of a monopalm and will not exceed 4' in diameter.

5. Wireless telecommunications facility support structures and antennas shall be a non-glossy color and/or exterior finish so as to minimize visual impacts from surrounding properties. Example: galvanized steel for freestanding, non-stealth facilities; fiberglass artificial bark cladding for stealth tree-like facilities.

The proposed WCF shall be a non-glossy color and/or exterior finish so as to minimize visual impacts, but will be in the form of a monopalm. All equipment on the proposed palm will be painted to match.

6. All facilities shall be designed and located to minimize their visibility to the greatest extent feasible. All wireless telecommunications facilities proposed for locations where they would be readily visible from the public right-of-way or from the habitable living areas of residential units within 100 feet shall incorporate appropriate techniques to disguise the facility and/or blend into the surrounding environment, to the extent feasible. Facilities shall be compatible in scale and integrated architecturally with the design of surrounding buildings or the natural setting.

The proposed WCF will be in the form of a monopalm. The proposed WCF will be 225' from the nearest residential.

7. No telecommunications antenna or ancillary support equipment shall be located within a front or corner side setback except for facilities that are completely placed within sub-grade vaults no higher than the maximum height of a fence within a street or front setback, pursuant to Section 11-30-4, Fences and Freestanding Walls.

The proposed WCF antenna support equipment will be located in an existing park building.

8. Support structures and site areas for wireless telecommunications antenna shall be designed and of adequate size to allow at least one additional wireless service provider to co-locate on the structure. Stealth facilities are exempted from this requirement.

The proposed WCF will be in the form of monopalm. However, the pole will not be structurally capable of accommodating additional service providers or without compromising the camouflaging ability of the structure.

9. Towers shall not be artificially lighted unless required by the FAA or other applicable government authority. All objects affecting navigable airspace must comply with Federal Aviation Regulation Section 77 and must be in conformance with the current restrictions for land within one mile of a runway.

The proposed WCF will not require any type of lighting and will have FAA clearance before any construction commences. The proposed WCF is not within one mile of a runway.

10. All proposed fencing shall be constructed of masonry, and provide decorative texture, color and design in a manner compatible with the adjacent buildings and properties within the surrounding area and shall be designed to limit graffiti.

The proposed antenna support equipment will be located in an existing City park building on the property. The park location of the WCF will help ensure any type of graffiti or vandalism is reported to the facility owner.

11. Within the Desert Uplands area, as defined on page 33 in Section 9-6-5(A) of the Mesa City Code, Desert Uplands design standards shall apply, including compatibility of stealth and camouflage facilities with the list of approved landscape plant materials.

The proposed WCF is not located within the Desert Uplands area.

G. Required Signs. A permanent, weather-proof identification sign, approximately 16 inches by 32 inches in size, must be placed on the gate of the fence surrounding the facility or, if there is no fence, on the facility itself. The sign must identify the facility operator(s), provide the operator's address, and specify a 24-hour telephone number for reaching the operator or an agent authorized to provide 24/7 response to emergency situations.

A weather-proof identification sign will be placed at the entrance to the facility.

H. Required Landscaping. Sites with antennas, antenna support structures, and related equipment shall be landscaped with a buffer of plant materials that effectively screens views of

the base of support structures and equipment facilities from adjacent residential property or from any public right-of-way, path or trail.

The proposed WCF will not compromise the existing landscaping for the subject property. No additional landscaping is proposed as the existing landscaping will help to screen the WCF base. The WCF base will not be directly visible from any residential property, but it would have some limited visibility from adjacent public right-of-way and the paths within the park.

1. The standard buffer shall consist of a continuous landscaped strip with a minimum radius of 4 feet around the perimeter of the installation.

The proposed WCF will not compromise the existing landscaping for the subject property. No additional landscaping is proposed as the existing landscaping will help to screen the WCF base. The WCF base will not be directly visible from any residential property, but it would have some limited visibility from adjacent public right-of-way and the paths within the park.

2. Existing mature tree growth and natural land forms on the site shall be preserved to the maximum extent possible. In some cases, towers sited on large lots, natural vegetation around the property perimeter may serve as a sufficient buffer.

The proposed WCF will not compromise the existing landscaping for the subject property. No additional landscaping is proposed as the existing landscaping will help to screen the WCF base. The existing mature trees are of a height and similar look that will screen the proposed WCF well. The WCF base will not be directly visible from any residential property, but it would have some limited visibility from adjacent public right-of-way and the paths within the park.

3. Street trees and other landscaping may be required for telecommunications facilities proposed on lots lacking street frontage landscaping.

The subject property has existing street frontage landscaping.

4. As determined by the context of the site and design preference proposed, additional landscaping, such secondary plantings of trees similar in appearance to the stealth design of the telecommunications facility, may be conditioned as part of the approval to mitigate the visual impact of the facility.

The proposed WCF will be located on the west side of the property and will not compromise the existing landscaping for the subject property.

I. **Operation and Maintenance Standards.** All wireless communications facilities shall at all times comply with the following operation and maintenance standards.

1. Wireless telecommunications facilities and related equipment, including lighting, fences, shields, cabinets, and poles, shall be maintained in good repair, free from trash, debris, litter, graffiti and other forms of vandalism, and any damage from any cause shall be repaired as soon as reasonably possible so as to minimize occurrences of dangerous conditions or visual blight. Graffiti shall be removed from any facility or equipment as soon as practicable, and in no instance more than 48 hours from the time of notification by the City.

The proposed WCF will comply with all standards outlined in the previous paragraph. There is an existing City park on the property which will ensure that any issues will be promptly reported to the facility owner.

2. The owner or operator of a facility shall be responsible for maintaining landscaping in accordance with the approved landscape plan and for replacing any damaged or dead trees, foliage, or other landscaping elements shown on the approved plan. Amendments or modifications to the landscape plan shall be submitted to the Zoning Administrator for approval.

The proposed WCF will maintain landscaping as required.

3. Each facility shall be operated in a manner that will minimize noise impacts to surrounding residents and persons using nearby parks, trails, and similar recreation areas.

The proposed facility will not emit any noise audible from adjacent properties.

- a. Except for emergency repairs, testing and maintenance activities that will be audible beyond the property line shall only occur between the hours of 7:00 a.m. and 7:00 p.m. on Monday through Friday, excluding holidays.

The proposed facility will not emit any noise audible from adjacent properties.

- b. All air conditioning units and any other equipment that may emit noise that would be audible from beyond the property line shall be enclosed or equipped with noise attenuation devices to the extent necessary to ensure compliance with applicable noise limitations in Title 6, Chapter 12 of the Mesa City Code.

The proposed facility will not emit any noise audible from adjacent properties.

- c. Backup generators shall only be operated during periods of power outages or for testing. Any testing of the backup generators should occur during daylight hours.

The proposed WCF will not install an emergency backup generator and one would only be deployed in very rare circumstances of prolonged power outage.

- d. For the protection of emergency response personnel, each telecommunications facility shall have an on-site emergency "kill switch" to de-energize all RF-related circuitry and components at the site. For collocation facilities, a single "kill switch" shall be installed that will de-energize all carriers at the facility in the event of an emergency.

A "kill switch" will be installed in compliance with this section.

11-70-5: - SPECIAL USE PERMIT

E. Required Findings. A SUP shall only be granted if the approving body determines that the project as submitted or modified conforms to all of the following criteria. If it is determined that it is not possible to make all of the required findings, the application shall be denied. The specific basis for denial shall be established in the record.

1. Approval of the proposed project will advance the goals and objectives of and is consistent with the policies of the General Plan and any other applicable City plan and/or policies;

The proposed WCF is necessary to address a gap in service in this area and will improve access to wireless internet for residents in the area. There are no negatives to what's been proposed from a Community and City Plan/Policy perspective This site has also gained approval from the Parks and Recreation Board at the March 8, 2023 meeting.

2. The location, size, design, and operating characteristics of the proposed project are consistent with the purposes of the district where it is located and conform with the General Plan and with any other applicable City plan or policies;

The proposed WCF is necessary to address a gap in service and will be a 65' monopalm structure. The proposed WCF will be located in a DR-2 Zone 225' away from the nearest residential.

3. The proposed project will not be injurious or detrimental to the adjacent or surrounding properties in the area, nor will the proposed project or improvements be injurious or detrimental to the neighborhood or to the general welfare of the City; and

The proposed WCF will not have any negative impact in the area or negative impact to surrounding properties. In fact, access to internet has become one of the essential utilities, so the proposed site will have a positive impact in this area.

4. Adequate public services, public facilities and public infrastructure are available to serve the proposed project.

There are adequate public services, public facilities and public infrastructure available to serve the proposed WCF.