

# Pahrump Guyed Tower Plus Installation General Specifications

The 180 foot guyed tower shall be designed to meet or exceed the latest TIA/EIA-222-G specifications for communications towers. Wind and ice loading criteria shall comply with these guidelines for the Nye County in which it will reside. Tower loading regarding antennas, mounts, and feed lines will be provided so that the tower can be properly engineered.

This tower and foundation shall be certified and stamped by a professional engineer that is approved by the State of Nevada where the tower will reside.

This tower shall contain an articulating base with a single base pin. Foundation shall be designed for the soil type where the tower will be constructed. A soil report will be provided for the purpose of designing an appropriate foundation.

Tower construction shall be that of solid steel for leg and diagonal members. The tower design shall be a three-legged triangular shaped tower. All steel must be of domestic grade and mill certifications must be provided upon request. All welding must be done by certified welders and in compliance with ANSI, ASNT, and AWS. Assembly bolts and connection hardware must conform to the A325 specification. Guy wire must be galvanized class A EHS strand, produced in accordance to ASTM A-475 specifications. The entire tower and all components – including hardware – must be entirely hot-dipped galvanized in accordance with the latest ASTM and EIA-222 specifications.

Tower lighting is required and it should be that of a Dual Strobe System which will comply with FAA regulation for aviation obstruction lighting. Dual strobe systems have a white light during the day and a red light at night.

The tower is to have a built-in climbing ladder or horizontal members on one face, and waveguide ladder on the other. A safety climb device (full kit) will be required on the climbing ladder or horizontal members side.

Tower grounding and lightning protection: This tower shall have at least an EIA standard grounding such as a lightning rod, ground rods installed at the base and anchors, and ground wire connected from the ground rods to the tower base and anchors. Grounding solutions can be affected by soil conditions. Enhanced grounding such as with chemrods or other solutions may be needed and will be procured with a change order.

The tower project must be completed in ninety days from the receipt of an executed contract or purchase order.

## GUY TOWER SPECIFIC SPECIFICATIONS

36 x180 Guyed Tower constructed of solid steel members to include the following:

- Hot dipped galvanized sections and components
- Solid rod construction of tower sections
- Tower assembly hardware
- Horizontal members or climbing ladder
- Anchor steel
- Pivot base Section
- Guy assembly hardware, turnbuckles, Preformed guy grips
- Class "A" EHS guy cables per ASTM-A475
- Integral S-Type transmission line hanger brackets: 2 runs for 15 lines
- One torque arm assembly
- Safety Climb system
- EIA grounding
- Custom foundation design unit base or drilled caisson if soil report is supplied
- Tower foundation and guy anchor point foundations
- Engineering drawings to be sealed by registered Nevada professional engineer
- FAA Approved Dual Strobe lighting system

## ANTENNAS AND TRANSMISSION LINES

<u>Materials:</u>	<u>Units:</u>
Scala SL-8-3 Chnl.24-CBS & 28-PBS	1 ea.
Scala SL-8-2 Chnl. 17-NBC & 19-FOX	1 ea.
Scala SL-8-1 Chnl. 36-ABC	1 ea.
SL-8 Side Arm Mounting brackets sets	3 ea.
HJ7-50 1 5/8" Air Cable (or equivalent)	3 ea @ 200'
H7PNF 1 5/8 N-Female Connectors (or equivalent)	6 ea.
3' FSJ4 N-Male Jumpers (or equivalent)	6 ea.
1 5/8" mounting hardware (lot)	1 ea.
HMD8HC-W W-Band Antenna	1 ea.
HMD8HC Side Arm Mounting Bracket	1 ea.
7/8" Air Heliac HJ5-50 (or equivalent)	200'
HJ5-50 N-Female (or equivalent)	2 ea.
3' Superflex Jumpers N-Male (or equivalent)	2 ea.
7/8" Mounting Hardware (lot)	1 ea.
UHF Telewave Land Mobile Antenna (or equivalent)	1 ea.
Telewave Side Arm Bracket set	1 ea.
5/8" Helaix LDF4.5-50 (or equivalent)	150'
3' Superflex Jumpers N-Male (or equivalent)	2 ea.
5/8" Mounting Hardware (lot)	1 ea.
PL6-65 PXA 6 GHz w/radome	1 ea.
PL6-65 Side Arm Brackets	1 ea.
Elipical Wave Guide EW63 (or equivalent)	120'
EW63 Connectors CPR137G (or equivalent)	2 ea.
3' Superlex Jumpers N-Male (or equivalent)	1 ea.
EW63 Mounting Hardware (lot)	1 ea.
PR-TV UHF Grid Antennas Chan.49 & 53	1 ea.
PR-TV UHF Grid Antennas Chan.42 & 44	1 ea.
PR-TV Side Arm Brackets	2 ea.
5/8" Heliac LDF4.5-50 (or equivalent)	2 ea. @ 100'
LDF4.5-50 N-Female #438107 (or equivalent)	4 ea.
3' Superflex Jumpers N-Male (or equivalent)	4 ea.
5/8 Mounting Hardware (lot)	1 ea.
P6A96GN-S 8' Grid Antenna Chn.38	1 ea.
P6A96GN Side Arm Bracket	1 ea.
7/8" Heliac HJ5-50 (or equivalent)	100'
HJ5-50 N-Female #417171 (or equivalent)	2 ea.
3' Superflex Jumpers N-Male (or equivalent)	2 ea.

7/8" Mounting Hardware (lot)

1 ea.

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## RECEPTION & TRANSMISSION ELECTRONICS

Receiver Dividing Network-PR-TV Antennas	2 ea.
SCMA-UB Single Chnl Pre-Amp UHF (or equivalent)	4 ea.
PS-1526 Power Supply for SCMA (or equivalent)	4 ea.
Microwave Filter #3278(4)-42 (or equivalent)	1 ea.
Larcan MX100U Transmitters (Chn. 17, 19 & 24)	3 ea.

## INSTALLATION REQUIREMENTS

Engineering Drawings and Calculations	1 ea.
Tower Foundation and Guy Anchor concrete pour & installation	1 ea.
Tower Erection	1 ea.
Installation of nine (9) antennas as per drawing	1 ea.
Termination of all transmission & coax lines (Lot)	1 ea.
Installation of all transmission & coax lines on tower	1 ea.
Installation of all transmission & coax Lines into building	1 ea.
Interconnect to transmission & reception electronics	1 ea.
Installation of Reception & Transmission Electronics	1 ea.
Proof of Performance Report on all RF services	1 ea.

## ADDITIONAL BID REQUIREMENTS

Freight estimate of anchor steel to Pahrump, NV	1 ea.
Freight estimate of remaining tower and antennas and electronics	1 ea.
Nevada Contractors license number and classification	1 ea.

## EXCLUSIONS

Bid does not include geotechnical investigation or report, permit application or permit fees.

