



BANNOCK COUNTY

Planning & Development
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BUILDING
ENGINEERING
PLANNING AND ZONING

Bannock County Planning & Development Communication Tower Policy and Procedures

Scope

The intent of this policy is to clarify the minimum standards of the current adopted building code and to establish standard procedures pertaining to communication towers in Bannock County. Under the International Building Code (IBC), any building or structure that is constructed, enlarged, altered, repaired, moved, demolished or has a change of occupancy needs to have a building permit unless it meets the criteria for exemption. Most towers have a footprint under 200 square feet which may appear to meet exemption criteria. However, the International Building Code states the use must be similar to tool and storage sheds and playhouses. Additionally, the Bannock County Building Code Ordinance also limits the exemption of these structures to 12 feet high.

Existing Structures

Communication towers can undergo many changes throughout the life of the tower. These changes are most commonly related to the appurtenances, such as antennas and other equipment, which are attached or removed from the tower. Communication towers that change these appurtenances that are fastened to the tower are considered alterations and must provide structural analysis from a Professional Engineer licensed in Idaho. Changes in appurtenances and structural modifications to existing structures are required to be analyzed in accordance with the latest revision of the TIA-222. Analysis reports must show compliance with the provisions of TIA-222-G. A feasibility report shall state that final acceptance of changed conditions shall be based upon a rigorous structural analysis. If proposed modifications exceed load capacities, the applicant must submit the recommended structural modifications provided by the engineer of record. Inspection of any modifications will be required.

Procedure

Plan Review

A plan review for communication towers will be required when a permit is needed. International Building Code Section 3108 states that towers shall be designed and constructed in accordance with the provisions of TIA-222. However, IBC Section 3108 also states that the exceptions for seismic design listed in Section 2.7.3 of TIA-222 shall not apply and that the horizontal extent of Topographic Category 2 escarpments shall be 16 times the height of the escarpment. This policy addresses the current revision of the TIA-222 which at the time of policy implementation is "Revision G". Drawings submitted for review must show the details and markings required to allow the proper installation of the structure. These drawings shall contain the seal of a Professional Engineer licensed in Idaho. Engineered plans must show compliance with the latest revision of the TIA-222 and the IBC.

Applicants must submit plans that detail the following data at a minimum for the site specified used:

Site Plan and Specifications

- Location of project
- Scope of work
- Responsibilities of erector

Foundation Plan and Specifications

- Geotechnical report
- Type of foundation
- Anchorage of tower members
- Concrete strength
- Reinforcing bar
- Frost depth

Tower Plan and Specifications

- Risk category
- Structural analysis (see below)
- Member sizes and yield strength
- Grade of structure bolts
- Loading for antennas and mounts (height, quantity, model, number and size of lines)

Structural analysis shall include

- Basic wind speed (3 second gust, 50 year return period) without ice
- Basic wind speed (50 year return period) with ice
- Design ice thickness (50 year return period)
- Exposure category (B, C, or D) for the site specified
- Structure classification (K, II, or III) used to classify the structure
- Topography category (1, 2, 3, 4, or 5)
- Earthquake spectral response acceleration at short periods
- Foundation reactions for the loading combinations considered
- Soil design parameters or source of data

Supplemental reports

- Special inspections as directed by the engineer of record*
 - Foundation concrete test cylinders
 - Pull tests for anchor bolts and tower member bolts
 - Epoxy bolt installation
 - Welding

*Note: special inspection will be required when design values exceed IBC listed values

- Lighting requirements
 - Mandated by FCC

Inspections

At a minimum, a foundation and final inspection will be required. It is recommended that the final structure be photographed and placed on file. This practice will aid code compliance efforts. Utility permits and inspections are

regulated through the Division of Building Safety. Final inspection approval from DBS for utility installation will be required before a certificate of completion can be issued. Any special inspections indicated by the engineer of record or the building official will follow the provisions of IBC chapter 17.



Chase Clark
Building Official

3/29/18

Effective Date

Date Retired