

BEACH ZONING BOARD PROCEEDINGS
PUBLISHED SUBJECT TO THE BOARDS REVIEW AND REVISION

A regular meeting of the Beach Zoning Board was called to order by Chairperson Al Begger (via telephone) on Monday, September 16, 2024 at 8:00 a.m. Zoning Board members present when the meeting was called to order were Leann Allen (via telephone), Michelle Marman, Tracey Trask, Tony Wanner, Zoning Administrator Kimberly Gaugler and guests Tom Marman, Ken Bartz, Terry Mollender, Burt Cook, Rod & Diane Brown, Allison Stearns, Bruce Ross, Susan Davidson, Jack Schneider, Gary Howard, Ben Baker, and Pam Popiel.

Roll call was taken. All members were present.

Additions or Corrections to the Agenda & Approval

Trask moved to approve the agenda as presented, second by Wanner. Motion carried unanimously.

Minutes

Gaugler read minutes from the meeting on August 19, 2024. Marman moved to approve the minutes, second by Wanner. Motion carried unanimously.

Zoning Administrator's Report

Gaugler mentioned the City Attorney is working with a property owner who is non-compliant with zoning setbacks and/or use of property. The next Zoning Board meeting will be held on Monday, October 21, 2024.

Unfinished Business

Application for Building with Conditional Use at 67 S Central Avenue: A public hearing was held on August 19th at 8:15 am for comment on an Application for Building with Conditional Use at 67 S. Central Avenue submitted by Badlands Building Solutions, LLC & Bartz Engineering Services, Inc. A conditional use permit is necessary to install a radio transmission tower in a Commercial 1 zoning. Notice of the Public Hearing was mailed to 17 property owners who were within 150' of the area requesting the conditional use. After public comment, the board tabled a recommendation for City Council until additional information could be provided regarding regulations of tower proximity to electrical transformers, and the level of radiation that would be emitted by the tower. After the August 19th meeting, Ken Bartz emailed the requested information to the Zoning Administrator which was then provided to the Zoning Board prior to the September 16th meeting for their review.

At the September 16th meeting, Ken provided the board with maps showing the difference in coverage area from using the 3' antenna currently on the roof of the building, versus installing a 100' tower. (See attachments). Ken mentioned the license from FCC, which is required for broadcasting radio, allows up to 3 years for the construction of the radio tower. Board member Allen inquired if there is any intention to increase the Megawatts (MW) of the tower in the future. Ken stated that FCC does periodically offer a filing period for licensees to apply for an increase in MW.

Board member Marman had previously requested information on the level of radiation emitted. Radiation hazard is covered in a publication of the FCC which displays the different levels of radiation and types of radiation that we can be exposed to. (See attachment). Table 1 to § 1.1310(e)(1)—Limits for Maximum Permissible Exposure (MPE)
[https://drafting.ecfr.gov/current/title-47/section-1.1310#p-1.1310\(e\)\(1\)](https://drafting.ecfr.gov/current/title-47/section-1.1310#p-1.1310(e)(1))

- A high power broadcast antenna should not exceed 27.5 V/m for general population uncontrolled exposure. The attached graph shows 17.4 m from the antenna to get .0000004mW/cm of radiation, which is below the limit.

Consensus of the Board was to table a recommendation to City Council. Additional information requested by the board includes:

- The type of tower requesting to be installed, make and model info.
- Type of transmitter to be installed.
- Mhz number and kHz the tower will emit.
- What is the volts per meter or amperes per meter?

New Business

An Application for Building a new residential structure at 373 2nd Avenue NE was reviewed. Trask moved to approve, second by Wanner. Motion carried unanimously.

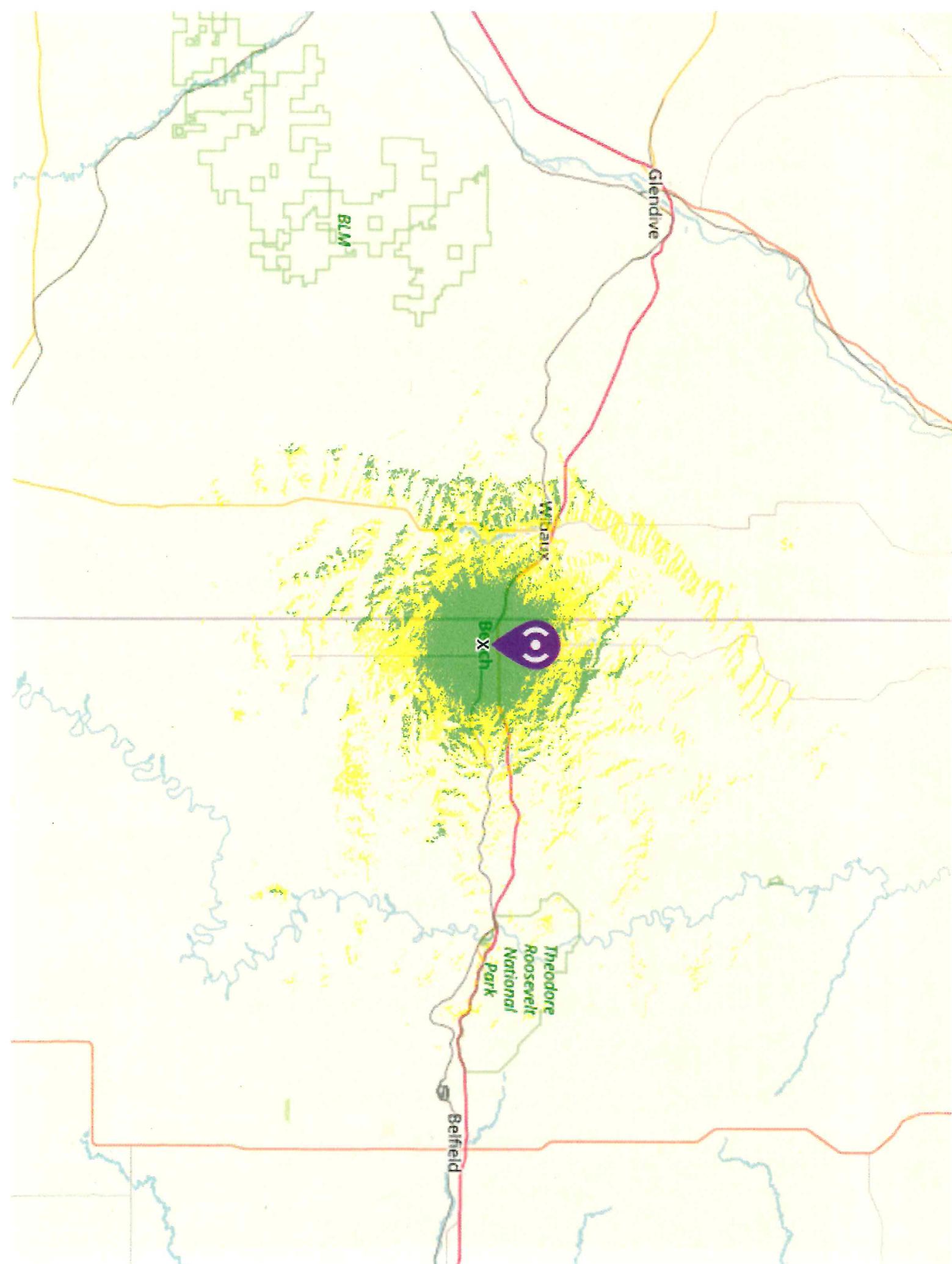
An Application for Building an addition at 601 E. Main Street was reviewed. Trask moved to approve, second by Wanner. Motion carried unanimously.

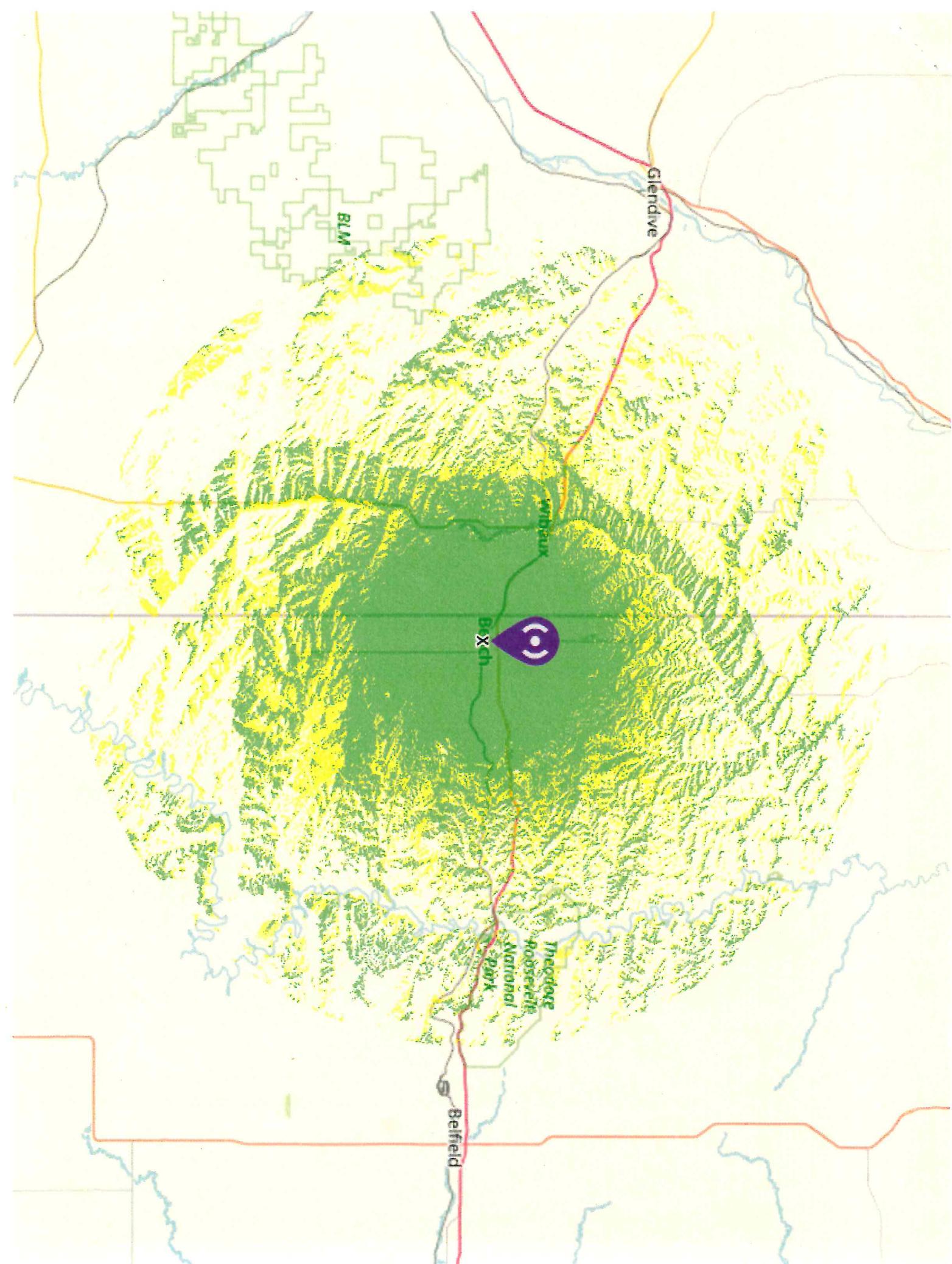
No other business was brought forward. Marman moved to adjourn, second by Wanner. Motion carried unanimously. Meeting adjourned at 9:20 a.m.

Attest:

Al Begger, Chairperson

Kimberly Gaugler, Zoning Administrator





Revised tower location diagram

7-10-2024

FM antennas

northside of
building

not to scale

no more than
40ft.

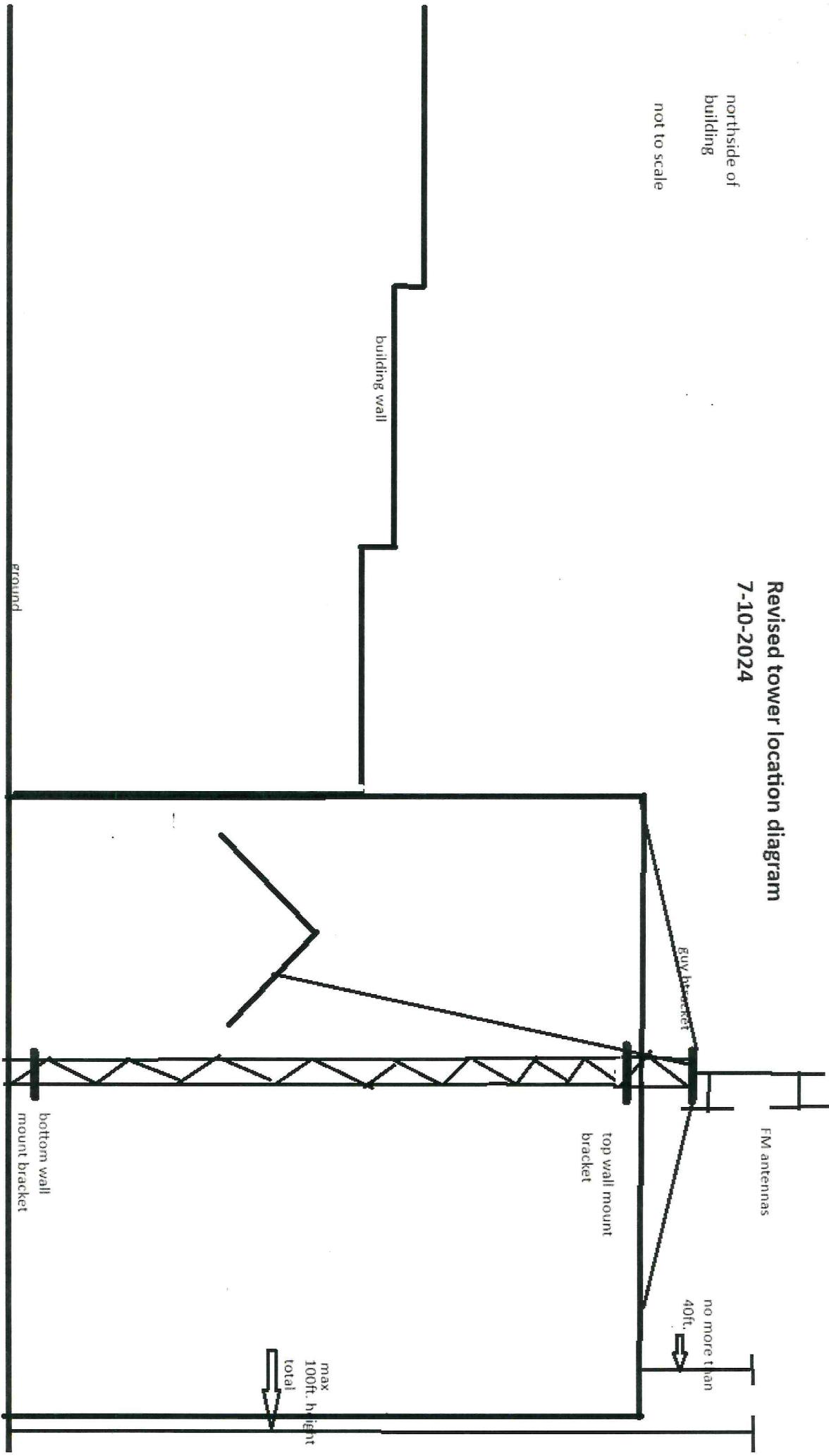
top wall mount
bracket

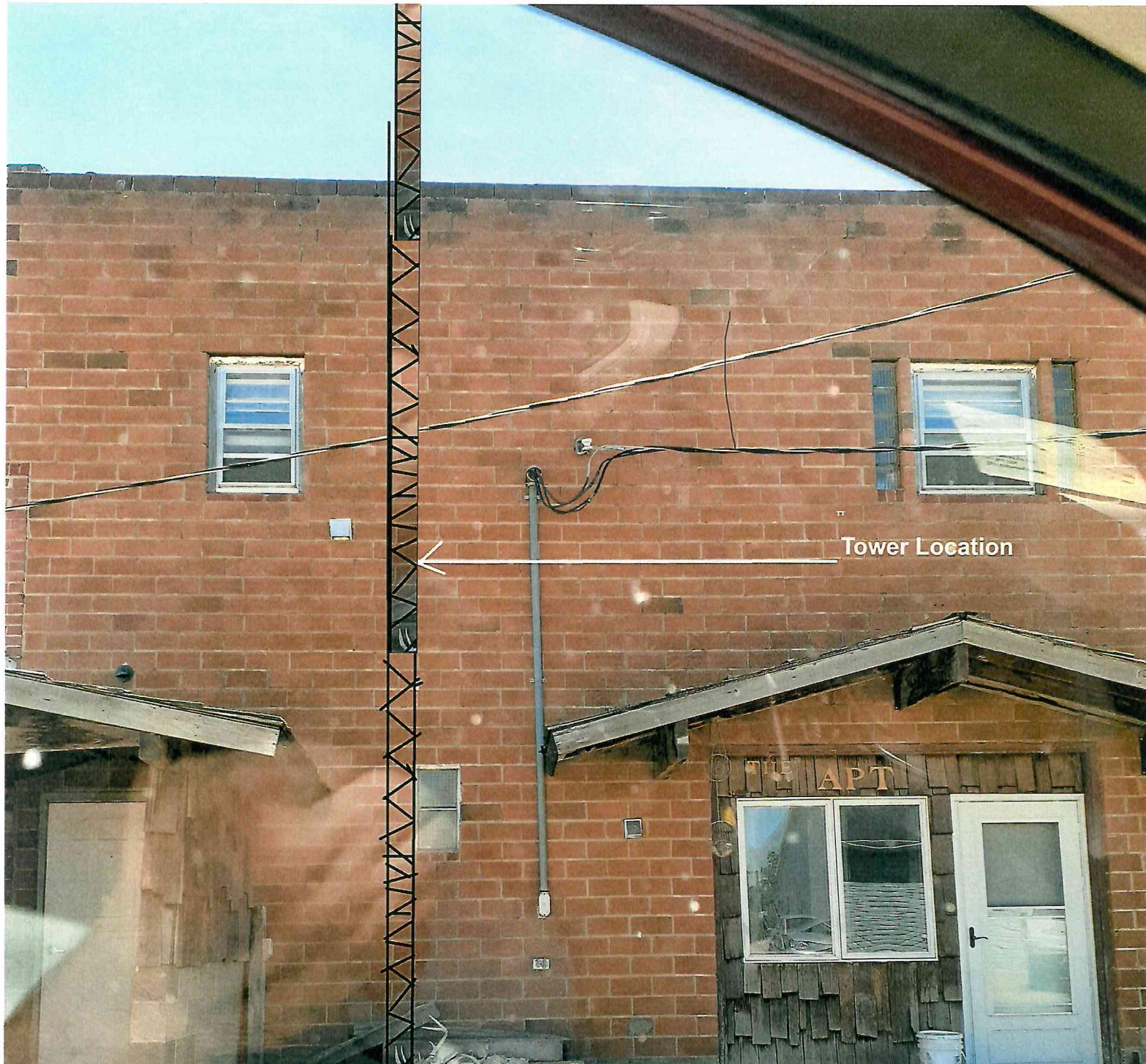
Guy bracket

building wall

bottom wall
mount bracket

max
100ft. height
total





Tower Location

 **Displaying title 47, up to date as of 10/11/2024. Title 47 was last amended 10/11/2024.** i

Title 47—Telecommunication

Chapter I—Federal Communications Commission

Subchapter A—General

Part 1—Practice and Procedure

Subpart I—Procedures Implementing the National Environmental Policy Act of 1969

EDITORIAL NOTE ON PART 1

Editorial Note: Nomenclature changes to part 1 appear at 63 FR 54077, Oct. 8, 1998.

 **§ 1.1310 Radiofrequency radiation exposure limits.**

(a) Specific absorption rate (SAR) shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in § 1.1307(b) of this part within the frequency range of 100 kHz to 6 GHz (inclusive).

(b) The SAR limits for occupational/controlled exposure are 0.4 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 8 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit for occupational/controlled exposure is 20 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 6 minutes to determine compliance with occupational/controlled SAR limits.

(c) The SAR limits for general population/uncontrolled exposure are 0.08 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 1.6 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit is 4 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 30 minutes to determine compliance with general population/uncontrolled SAR limits.

(d) (1) Evaluation with respect to the SAR limits in this section must demonstrate compliance with both the whole-body and peak spatial-average limits using technically supported measurement or computational methods and exposure conditions in advance of authorization (licensing or equipment certification) and in a manner that facilitates independent assessment and, if appropriate, enforcement. Numerical computation of SAR must be supported by adequate documentation showing that the numerical method as implemented in the

computational software has been fully validated; in addition, the equipment under test and exposure conditions must be modeled according to protocols established by FCC-accepted numerical computation standards or available FCC procedures for the specific computational method.

(2) For operations within the frequency range of 300 kHz and 6 GHz (inclusive), the limits for maximum permissible exposure (MPE), derived from whole-body SAR limits and listed in Table 1 in paragraph (e)(1) of this section, may be used instead of whole-body SAR limits as set forth in paragraphs (a) through (c) of this section to evaluate the environmental impact of human exposure to RF radiation as specified in § 1.1307(b) of this part, except for portable devices as defined in § 2.1093 of this chapter as these evaluations shall be performed according to the SAR provisions in § 2.1093.

(3) At operating frequencies above 6 GHz, the MPE limits listed in Table 1 in paragraph (e)(1) of this section shall be used in all cases to evaluate the environmental impact of human exposure to RF radiation as specified in § 1.1307(b) of this part.

(4) Both the MPE limits listed in Table 1 in paragraph (e)(1) of this section and the SAR limits as set forth in paragraphs (a) through (c) of this section are for continuous exposure, that is, for indefinite time periods. Exposure levels higher than the limits are permitted for shorter exposure times, as long as the average exposure over a period not more than the specified averaging time in Table 1 in paragraph (e)(1) is less than (or equal to) the exposure limits. Detailed information on our policies regarding procedures for evaluating compliance with all of these exposure limits can be found in the most recent edition of FCC's OET Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields," and its supplements, all available at the FCC's internet website: <https://www.fcc.gov/general/oet-bulletins-line>, and in the Office of Engineering and Technology (OET) Laboratory Division Knowledge Database (KDB) (<https://www.fcc.gov/kdb>).

NOTE TO PARAGRAPHS (a) THROUGH (d): SAR is a measure of the rate of energy absorption due to exposure to RF electromagnetic energy. These SAR limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized SAR in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE Std C95.1-1992, copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5, copyright 1986 by NCRP, Bethesda, Maryland 20814. Limits for whole body SAR and peak spatial-average SAR are based on recommendations made in both of these documents. The MPE limits in Table 1 are based generally on criteria published by the NCRP in "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," NCRP Report No. 86, Sections 17.4.1, 17.4.1.1, 17.4.2 and 17.4.3, copyright 1986 by NCRP, Bethesda, Maryland 20814. In the frequency range from 100 MHz to 1500 MHz, these MPE exposure limits for field strength and power density are also generally based on criteria recommended by the ANSI in Section 4.1 of "IEEE Standard for Safety Levels with Respect to Human

Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE Std C95.1-1992, copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017.

(e) (1) Table 1 to § 1.1310(e)(1) sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

TABLE 1 TO § 1.1310(e)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency range (MHz) | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm ²) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (i) LIMITS FOR OCCUPATIONAL/CONTROLLED EXPOSURE | | | | |
| 0.3-3.0 | 614 | 1.63 | *(100) | ≤6 |
| 3.0-30 | 1842/f | 4.89/f | *(900/f ²) | <6 |
| 30-300 | 61.4 | 0.163 | 1.0 | <6 |
| 300-1,500 | | | f/300 | <6 |
| 1,500-100,000 | | | 5 | <6 |
| (ii) LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE | | | | |
| 0.3-1.34 | 614 | 1.63 | *(100) | <30 |
| 1.34-30 | 824/f | 2.19/f | *(180/f ²) | <30 |
| 30-300 | 27.5 | 0.073 | 0.2 | <30 |
| 300-1,500 | | | f/1500 | <30 |
| 1,500-100,000 | | | 1.0 | <30 |

| Frequency range (MHz) | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm ²) | Averaging time (minutes) |
|-----------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
|-----------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|

f = frequency in MHz. * = Plane-wave equivalent power density.

(2) Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. The phrase *fully aware* in the context of applying these exposure limits means that an exposed person has received written and/or verbal information fully explaining the potential for RF exposure resulting from his or her employment. With the exception of transient persons, this phrase also means that an exposed person has received appropriate training regarding work practices relating to controlling or mitigating his or her exposure. In situations when an untrained person is transient through a location where occupational/controlled limits apply, he or she must be made aware of the potential for exposure and be supervised by trained personnel pursuant to § 1.1307(b)(2) of this part where use of time averaging is required to ensure compliance with the general population exposure limit. The phrase *exercise control* means that an exposed person is allowed and also knows how to reduce or avoid exposure by administrative or engineering work practices, such as use of personal protective equipment or time averaging of exposure.

(3) General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure. For example, RF sources intended for consumer use shall be subject to the limits for general population/uncontrolled exposure in this section.

[85 FR 18145, Apr. 1, 2020]

