



United States of America  
**FEDERAL COMMUNICATIONS COMMISSION**  
**FM BROADCAST STATION CONSTRUCTION PERMIT**

Authorizing Official:

Official Mailing Address:

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BD OF REGENTS, NEW MEXICO ST. UNIV.  
NEW MEXICO STATE UNIVERSITY  
BOX 30004 CORBET CENTER  
LAS CRUCES NM 88003

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Rodolfo F. Bonacci  
Assistant Chief  
Audio Division  
Media Bureau

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Facility ID: 4209

Grant Date: July 11, 2017

Call Sign: KRUX

The authority granted herein has no effect on the expiration date of the underlying construction permit.

Permit File Number: BMPED-20170609AAZ

This permit modifies permit no.: BPED-20141126APH  
as modified by permit no.: BMPED-20160429ABH

Subject to the provisions of the Communications Act of 1934, as amended, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this permit, the permittee is hereby authorized to construct the radio transmitting apparatus herein described. Installation and adjustment of equipment not specifically set forth herein shall be in accordance with representations contained in the permittee's application for construction permit except for such modifications as are presently permitted, without application, by the Commission's Rules.

Commission rules which became effective on February 16, 1999, have a bearing on this construction permit. See Report & Order, Streamlining of Mass Media Applications, MM Docket No. 98-43, 13 FCC RCD 23056, Para. 77-90 (November 25, 1998); 63 Fed. Reg. 70039 (December 18, 1998). Pursuant to these rules, this construction permit will be subject to automatic forfeiture unless construction is complete and an application for license to cover is filed prior to expiration. See Section 73.3598.

Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission's Rules.

Name of Permittee: BD OF REGENTS, NEW MEXICO ST. UNIV.

Station Location: NM-LAS CRUCES

Frequency (MHz): 91.5

Channel: 218

Class: A

Hours of Operation: Unlimited

Transmitter: Type Accepted. See Sections 73.1660, 73.1665 and 73.1670 of the Commission's Rules.

Transmitter output power: As required to achieve authorized ERP.

Antenna type: Directional

Antenna Coordinates: North Latitude: 32 deg 16 min 59 sec

West Longitude: 106 deg 44 min 50 sec

|  | Horizontally<br>Polarized<br>Antenna | Vertically<br>Polarized<br>Antenna |
|--|--------------------------------------|------------------------------------|
| Effective radiated power in the Horizontal Plane (kW):     | 1.90                                 | 1.90                               |
| Height of radiation center above ground (Meters):          | 28                                   | 28                                 |
| Height of radiation center above mean sea level (Meters):  | 1235                                 | 1235                               |
| Height of radiation center above average terrain (Meters): | -42                                  | -42                                |

Antenna structure registration number: Not Required

Overall height of antenna structure above ground: 30 Meters

Obstruction marking and lighting specifications for antenna structure:

It is to be expressly understood that the issuance of these specifications is in no way to be considered as precluding additional or modified marking or lighting as may hereafter be required under the provisions of Section 303(q) of the Communications Act of 1934, as amended.

None Required

## Special operating conditions or restrictions:

- 1 BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee shall submit the results of a complete proof-of-performance to establish the horizontal plane radiation patterns for both the horizontally and vertically polarized radiation components. This proof-of-performance may be accomplished using the complete full size antenna, or individual bays therefrom, mounted on a supporting structure of identical dimensions and configuration as the proposed structure, including all braces, ladders, conduits, coaxial lines, and other appurtenances; or using a carefully manufactured scale model of the entire antenna, or individual bays therefrom, mounted on an equally scaled model of the proposed supporting structure, including all appurtenances. Engineering exhibits should include a description of the antenna testing facilities and equipment employed, including appropriate photographs or sketches and a description of the testing procedures, including scale factor, measurements frequency, and equipment calibration.
- 2 BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee must submit a certification executed by a licensed surveyor showing that the FM directional antenna system has been oriented at the azimuth(s) specified in the directional antenna proof of performance. This certification must include a description of the method used by the surveyor to determine the azimuth(s) of the installed directional antenna system and the accuracy of that determination.
- 3 BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee/licensee shall submit an affidavit that the installation of the directional antenna system was overseen by a qualified engineer. This affidavit shall include a certification by the engineer that the antenna was installed pursuant to the manufacturer's instructions and list the qualifications of the certifying engineer.
- 4 The relative field strength of neither the measured horizontally nor vertically polarized radiation component shall exceed at any azimuth the value indicated on the composite radiation pattern authorized by this construction permit.

A relative field strength of 1.0 on the composite radiation pattern herein authorized corresponds to the following effective radiated power:

1.90 kilowatts.

Principal minima and their associated field strength limits:

050 degrees True: 0.78 kilowatt.

- 5 BEFORE PROGRAM TESTS ARE AUTHORIZED, the permittee must submit an exhibit demonstrating that the measured directional antenna pattern complies with the appropriate community coverage provisions of 47 C.F.R. Sections 73.315 or 73.515 (See 47 C.F.R. Section 73.316(c) (2) (ix) (B)).

## Special operating conditions or restrictions:

- 6 Permittee has specified use of the antenna listed below to demonstrate compliance with the FCC radiofrequency electromagnetic field exposure guidelines. If any other type or size of antenna is to be used with the facilities authorized herein, THE AUTOMATIC PROGRAM TEST PROVISIONS OF 47 C.F.R. SECTION 73.1620 WILL NOT APPLY. In this case, a FORMAL REQUEST FOR PROGRAM TEST AUTHORITY must be filed in conjunction with FCC Form 302-FM, application for license, BEFORE program tests will be authorized. The request must include a revised RF field showing to demonstrate continued compliance with the FCC guidelines.

Jampro "Double V" (EPA Type 2), 2 sections

- 7 The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

\*\*\* END OF AUTHORIZATION \*\*\*