

TECHNICAL NARRATIVE

February 12, 2021

This Technical Statement and attached exhibits were prepared on behalf of Stereo 93, Inc. (“Stereo 93”), licensee of station KISR, Channel 229C, Fort Smith, Arkansas with pending construction permit BPH-20160817AAE which would modify KISR to Channel 229C1. Stereo 93 herein is re-filing for a new construction permit to replace BPH-20160817AAE. Stereo 93 has been precluded from constructing so far since the grant of the CP due to (1) the TV repack construction and (2) the unavailability of supervisory personnel to oversee the necessary structural rebuild of the KNWA/KFTA-DT tower. The KISR construction permit to move to the KNWA/KFTA-DT tower was granted after the TV repack started. Nexstar, who owns that tower, had numerous and continuous tower rebuilds under the repack, and did not have personnel to properly supervise an additional rebuild. This made it impossible to complete construction before the current construction permit expires. When the repack construction for co-located KFTA-DT, Facility ID No.

29560, Fort Smith, AR was finished, Nexstar allowed AT&T to begin a structural rebuild of the tower to hold numerous new cellular antennas. That construction is now complete and Nexstar has notified Stereo 93 that construction of the KISR construction permit can begin. However, due to no fault of our Stereo 93 construction cannot be built within the construction permit period.

The KISR application site is an existing tower registered with Antenna Structure Registration ("ASR") number 1038012. The proposed KISR facility would operate with 88.0 kW at 316 meters HAAT and 145.4 meters height above ground level.

The proposed KISR Channel 229C1 application site and the licensed KISR Channel 229C site are mutually exclusive. The Application Site Channel Study for KISR Channel 229C1 is located at 35 degrees 42 minutes 36.0 seconds North Latitude, 94 degrees 8 minutes 16.0 seconds West Longitude (NAD 83) and is fully spaced to all full power FM stations. The Application Site FCC F(50,50) 70 dBu city grade contour easily covers 100% of the Fort Smith, Arkansas corporate boundaries.

The licensed KISR(FM) 229C facility serves within the FCC F(50,50) 60 dBu contour an area of 19,426.0 sq. km and 547,527 persons (2010 U.S. Census). The proposed KISR(FM) 229C1 facility would serve within the FCC F(50,50) 60 dBu contour an area of 16,722.3 sq. km. and 610,717 persons (2010 U.S. Census). Thus granting of this instant application will create a net loss in area of 2,703.7 sq. km and a net gain population served of 63,190 persons.

Class C1 Channel Study

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REFERENCE                                     DISPLAY DATES
35 42 36.0 N.                                CLASS = C1 Int = C1          DATA 02-08-21
94 08 16.0 W.                                Current Spacings to 3rd Adj. SEARCH 02-08-21
----- Channel 229 - 93.7 MHz -----
Call      Channel  Location      Azi      Dist      FCC      Margin
   Lat.    Lng.      Ant      Power
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KISR      LIC      229C      Fort Smith      AR      228.0      31.0      269.5      -238.5
  35 31 22.3  94 23 32.7  CN      100.000 kW      381 M
    Stereo 93 Inc.      BLH19800714AG

KISR      CP      229C1     Fort Smith      AR      0.0        0.0        244.5      -244.5
  35 42 36.0  94 08 16.0  CN      88.000 kW      316 M
    Stereo 93 Inc.      BPH20160817AAE

K226BS    LIC      226D      Fort Smith      AR      214.0      47.6        73.5      -25.9
  35 21 15.8  94 25 54.1  CN      0.250 kW      165 M
    The Baker Family Trust      BLFT20141209AAE

K231BS    LIC      231D      Fort Smith      AR      214.0      47.6        73.5      -25.9
  35 21 15.8  94 25 54.1  CN      0.250 kW      165 M
    The Baker Family Trust      BLFT20141209AAU

KIGL      LIC      227C1     Seligman      MO      357.8      84.1        81.5        2.6
  36 28 03.2  94 10 25.7  CN      100.000 kW      150 M
    Ihm Licenses, LLC      BLH19940601KB

K229DL    CP -D 229D  Reeds Spring      MO      30.9      136.3      132.5        3.8
  36 45 38.2  93 21 05.9  DCN     0.250 kW      0 M
    Bott Communications, Inc.      BNPFT20180502AAE

KAMO-FM   LIC-N 232C2  Rogers      AR      10.2        82.5        78.5        4.0
  36 26 30.2  93 58 26.7  NCN     25.000 kW      211 M
    Cumulus Licensing LLC      BLH19951206KC

KOMT      LIC-N 228C2  Lakeview      AR      59.2      171.3      157.5        13.8
  36 29 13.2  92 29 39.6  NCN     16.000 kW      188 M
    John M. Dowdy      BLH20130923ACT

KJMK      LIC      230C2     Webb City      MO      349.2      173.3      157.5        15.8
  37 14 34.2  94 30 21.8  CN      48.000 kW      154 M
    Zimmer Radio, Inc.      BLH19890208KB

K227DG    LIC      227D      Muskogee      OK      279.5      95.0        73.5        21.5
  35 50 48.4  95 10 29.4  CN      0.015 kW      0 M
    Payne 5 Communications, LL      0000131781

K226CU    LIC-D 226D  Russellville      AR      123.6      96.3        73.5        22.8
  35 13 41.3  93 15 20.6  DCN     0.250 kW      0 M
    Eab Of Russellville, LLC      BLFT20190405AAR

KPWA      LIC-N 228C3  Bismarck      AR      154.3      181.8      143.5        38.3
  34 13 52.6  93 16 46.7  NCN     11.500 kW      147 M
    Houston Christian Broadcas      BMLED20161219AAV

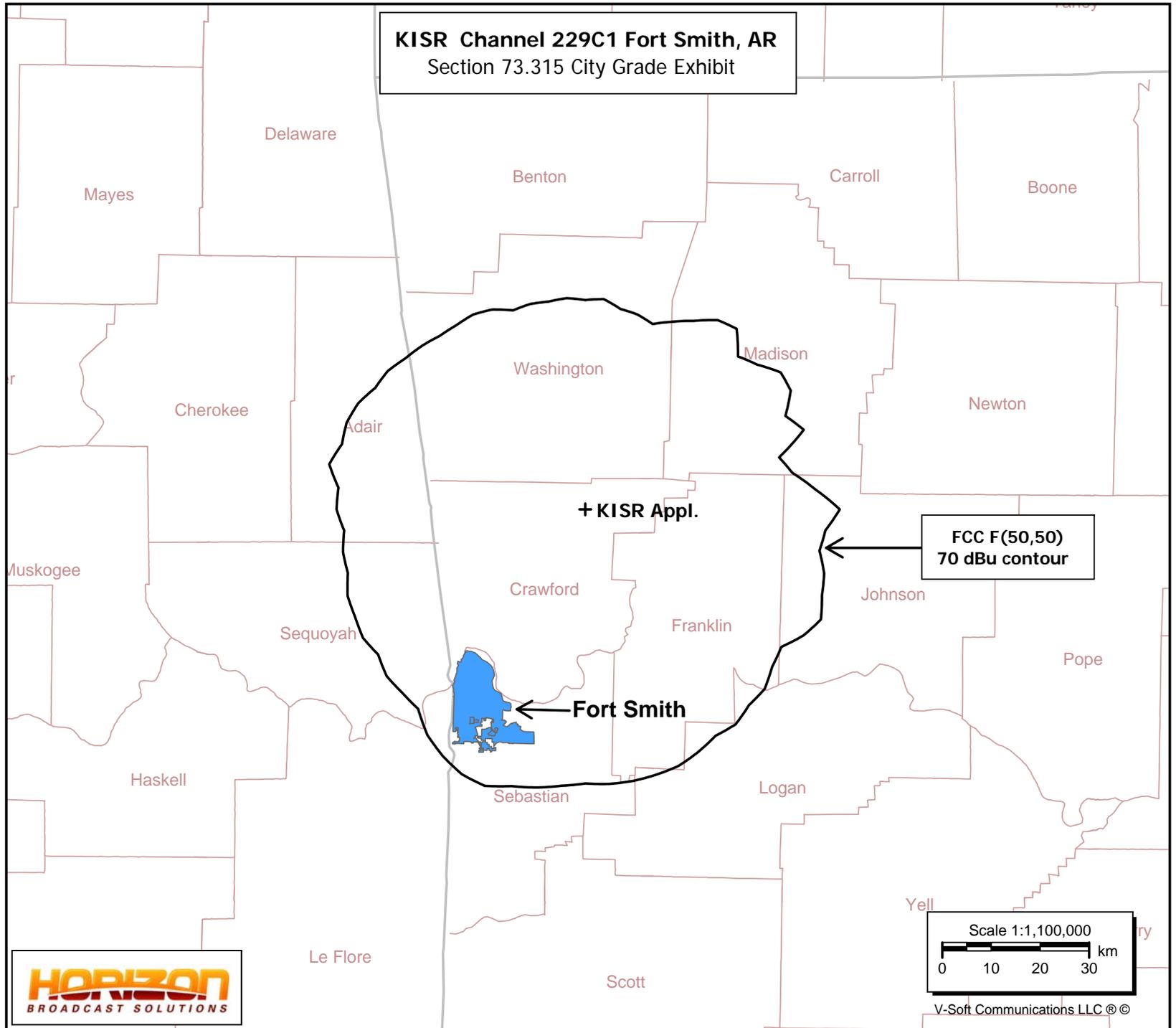
KENJ-LP   LIC      283L1     Lowell      AR      0.1        60.9        19.5        41.4
  36 15 30.5  94 08 10.3  CN      0.078 kW      34 M
    Iglesia Ciudad De Refugio      BLL20190703ADC

K229AE    LIC      229D      Springfield      MO      24.4      183.2      132.5        50.7
  37 12 33.1  93 16 56.6  CN      0.140 kW      104 M
    David Ingles Ministries, I      BLFT19980624TH
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KISR Appl.
Fort Smith, AR
Latitude: 35-42-35.70 N
Longitude: 094-08-15.30 W
ERP: 88.00 kW
HAAT: 316 m
Channel: 229
Frequency: 93.7 MHz
AMSL Height: 744.0 m
Elevation: 599.5 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: FCC Model
Loc. Variability: 50.0%
Time Variability: 50.0%
HAAT Mthd: FCC

KISR Channel 229C1 Fort Smith, AR
Section 73.315 City Grade Exhibit



**Human Exposure to Radiofrequency Electromagnetic Field
&
Section 106 Compliance
(Environmental)**

Stereo 93, Inc, (“Stereo 93”), is the licensee of KISR Channel 229C, Facility ID# 63336, licensed to Fort Smith, Arkansas. Stereo 93 is filing this minor modification change application to replace KISR construction permit BPH-20160817AAE. KISR will operate with a 5 bay full wave side mounted ERI Model SHPX-5E antenna with a center of radiation of 145.4 meters AGL. KISR will operate with 88.0 kW at 316 meters HAAT.

The application site tower is registered with Antenna Structure Registration "ASR" No. 1038012 and is 153 meters (501.8 feet) above ground level. Because no modification or increase in height is being made to the tower, it is believed this proposal is exempt from a Section 106 review by the SHPO/THPO.

The proposed KISR operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission’s OET Bulletin Number 65. Using the FM Model for Windows the maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 21.63 $\mu\text{W}/\text{cm}^2$, at 50.4 meters, which is 10.82 percent of the general population/uncontrolled maximum permitted exposure limit and 2.16 percent of the limit for “controlled” environments.

The following broadcast station operates from this tower:

KFTA-DT Channel 27 Fort Smith, AR Facility ID# 29560

KFTA-DT operates with 1000 kilowatts at 305 meters HAAT. KFTA-DT broadcasts with a Dielectric TFU-29JSC O4A elliptically polarized antenna with a center of radiation of 124 meters AGL.

The proposed KFTA-DT Channel 27 facility will have no significant environmental impact as defined in §1.1307 of the FCC Rules. The digital transmitter, transmission line and antenna system shall produce a horizontally polarized ERP of 1,000 kW and a vertically polarized ERP of 250 kW (E-pol). It was determined that the maximum lobe of radiation will occur at 302.0 feet from the base of the tower (501.9 ft radial distance from the antenna center). At 302.0 feet from the base of the tower, the depression angle of the main lobe will be approximately 53° below the horizontal. At that point, the relative field is 0.071 and the power density six feet above the ground will be 0.008998 mW/cm². This equates to only 0.49% of the Maximum Permissible Exposure (MPE) limits for Occupational/Controlled Exposure and only 2.45% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (ANSI).

<u>CALL</u>	<u>Channel/Class</u>	<u>Polarity</u>	<u>Antenna AGL</u>	<u>ERP kW</u>	<u>% of Uncontrolled Limit</u>
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KISR	229C1	H&V	144.0 meters	89.0	10.82
KFTA-DT	27	E-pol	124.5	1000.0	2.45
Total of ANSI "Uncontrolled" value					13.27

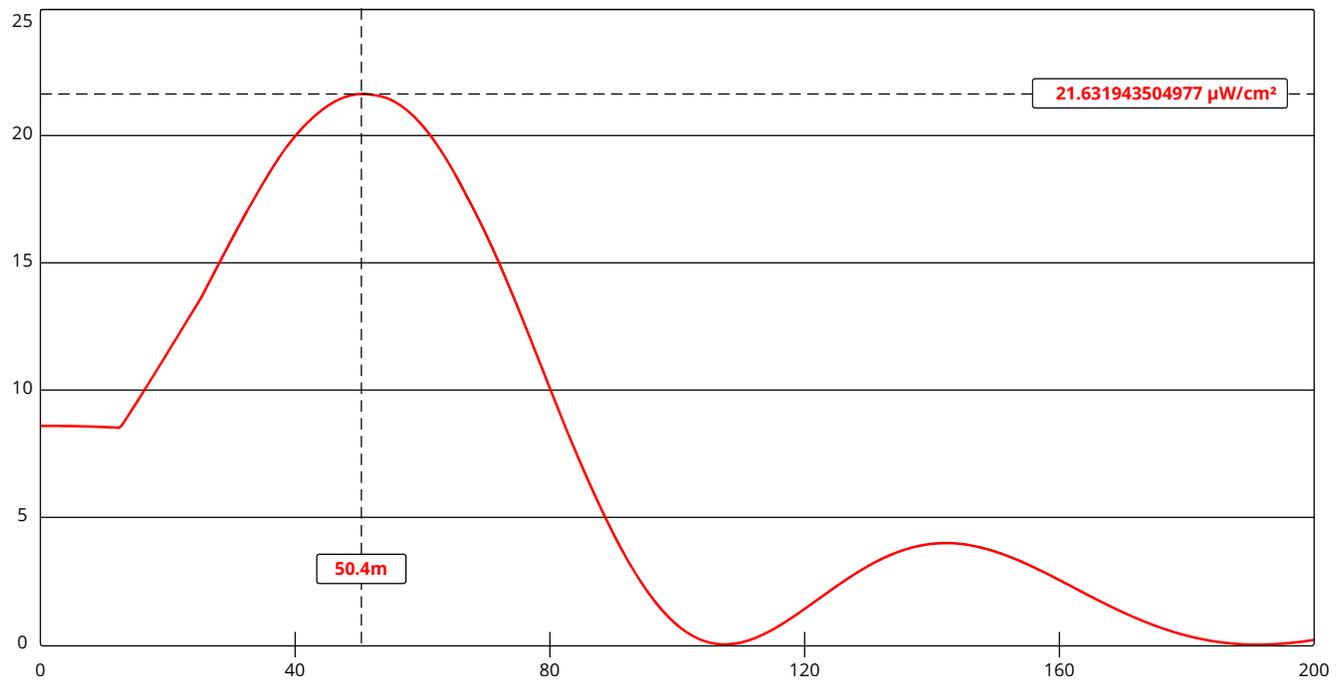
The applicant will see that signs are posted at all entry points onto the property and in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.



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FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data [published in 1985 by the EPA](#) (<http://nepis.epa.gov/Exe/ZyNET.exe/2000ED2W.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1981+Thru+1985&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&OField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntOFieldOp=0&ExtOFieldOp=0&XmlQuery=&File=D%3A\zyfiles\Index%20Data\81thru85\Txl\00000003\2000ED2W.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h|-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p|f&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL>). [▼ Show More....](#)



[View Tabular Results +](#)

Channel Selection	Channel 229 (93.7 MHz) ▼		
Antenna Type +	EPA Type 3: Opposed U Dipole ▼		
Height (m)	<input type="text" value="145.4"/>	Distance (m)	<input type="text" value="200"/>
ERP-H (W)	<input type="text" value="88000"/>	ERP-V (W)	<input type="text" value="88000"/>
Num of Elements	<input type="text" value="5"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	Apply	