

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of TIDEWATER TV, LLC, licensee of full-power digital television station WSKY-DT, Channel 9 in Manteo, North Carolina, in support of its Application for Construction Permit to specify operation on its post-repack channel, Channel 13. No change in site location, antenna azimuth pattern or antenna height is proposed herein.

It is proposed to mount an ERI omnidirectional horizontally-polarized slotted cylinder antenna at the 306-meter level of the existing 316-meter tower on which the present WSKY-DT antenna is mounted. The proposed effective radiated power for the facility is 70 kW, which is the allotted repack power level for WSKY-DT. Exhibit B is a map upon which the predicted service contours are plotted. As shown, the community of Manteo is completely encompassed by the proposed 43 dBu city-grade service contour.

Elevation pattern information for the proposed antenna are provided in Exhibit C. Since the facility proposed herein essentially specifies the repack allotment facility assigned to WSKY-DT, no interference study is included herein. A power density calculation appears as Exhibit D.

Since no change in the overall height or location of the existing WSKY-DT tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission issued Antenna Structure Registration Number 1252202 to this tower.

EXHIBIT A

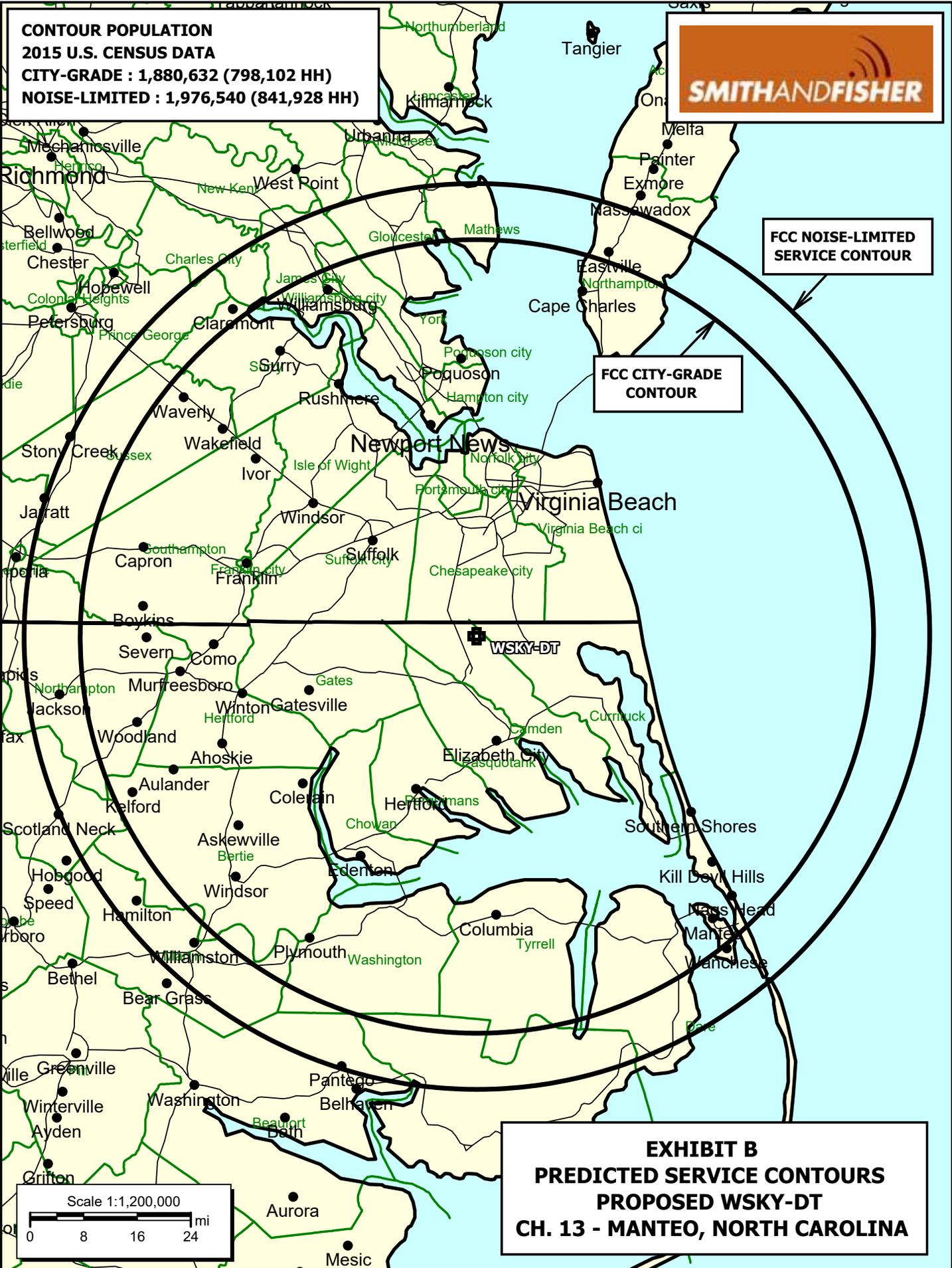
I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large "K" and "F".

KEVIN T. FISHER

July 4, 2017

**CONTOUR POPULATION**  
**2015 U.S. CENSUS DATA**  
**CITY-GRADE : 1,880,632 (798,102 HH)**  
**NOISE-LIMITED : 1,976,540 (841,928 HH)**



**FCC NOISE-LIMITED SERVICE CONTOUR**

**FCC CITY-GRADE CONTOUR**

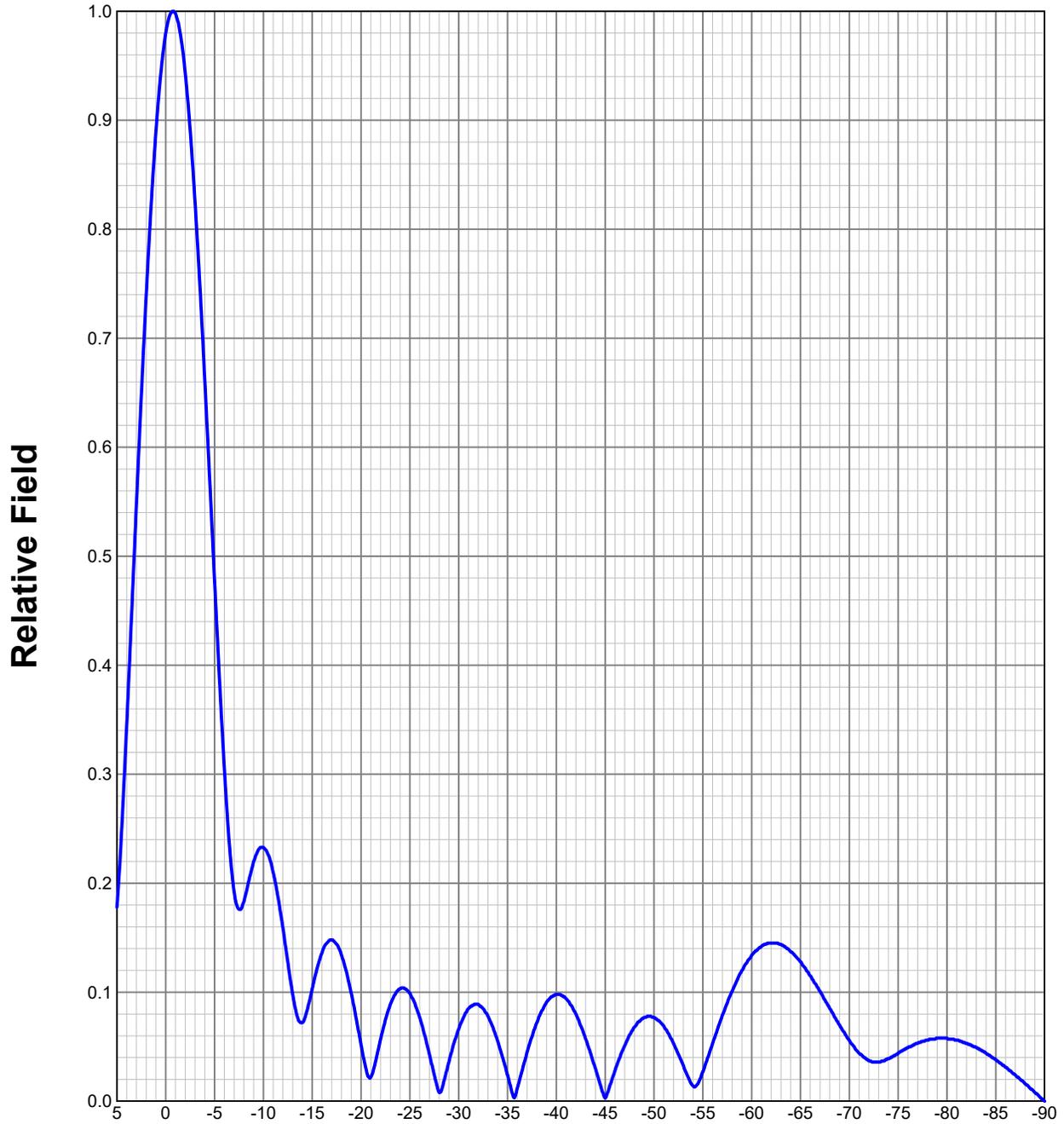
**WSKY-DT**

**EXHIBIT B**  
**PREDICTED SERVICE CONTOURS**  
**PROPOSED WSKY-DT**  
**CH. 13 - MANTEO, NORTH CAROLINA**



### ELEVATION PATTERN

Type:	<u>ATW9V3H</u>		Channel:	<u>13</u>
Directivity:	<u>Numeric</u>	<u>dBd</u>	Location:	<u>                    </u>
Main Lobe:	<u>9.00</u>	<u>9.54</u>	Beam Tilt:	<u>-0.75</u>
Horizontal:	<u>8.64</u>	<u>9.37</u>	Polarization:	<u>Horizontal</u>



Preliminary, subject to final design and review.

POWER DENSITY CALCULATION

PROPOSED WSKY-DT  
CHANNEL 13 – MANTEO, NORTH CAROLINA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Manteo facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 70 kW, an antenna radiation center 306 meters above ground, and the specific elevation pattern of the proposed ERI omnidirectional antenna, maximum power density two meters above ground of  $0.00042 \text{ mW/cm}^2$  is calculated to occur 158 meters from the base of the tower. Since this is only 0.2 percent of the  $0.2 \text{ mW/cm}^2$  reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 13 (210-216 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.