ENGINEERING STATEMENT
IN SUPPORT OF LONG-FORM (349) APPLICATION
FOR A NEW FM TRANSLATOR (AUCTION WINDOW 100)
BNPFT-20180129AEU
SALISBURY, MARYLAND

APRIL 2018

This engineering statement and attached exhibits have been prepared on behalf of The Voice Radio, LLC ("Voice Radio") for a new FM translator at Salisbury, Maryland. In January 2018, in Auction Window 100, Voice Radio filed its application (BNPFT-20180129AEU) for a new fill-in FM Translator which has been determined a Singleton proposal by the Commission. Voice Radio is now filing a long form (FCC Form 349) application for its previously filed "Tech Box" proposal.

The new FM translator will provide fill-in FM service for AM station WICO, Salisbury, Maryland. WICO currently operates on 1320 kHz with 1.0 kW day and 0.028 kW nighttime power using a non-directional antenna. In its previous "Tech Box" proposal the FM translator operation was specified on Channel 275D (102.9 MHz) with 0.05 kW (H+V) non-directional effective radiated power (ERP) and 91 meters antenna radiation center above mean sea level. It is now proposed to operate on Channel 275D (102.9 MHz) with 0.25 kW (H+V) ERP and 91 meters antenna radiation center above mean sea level using a non-directional FM antenna. The attached map (Figure 1) shows the computed 1.0 mV/m (60 dBu) contour of the proposed FM translator would be wholly inside the computed 2.0 mV/m contour and 40 km circle from the WICO site.

The following data provides detail information concerning the proposed FM translator operation at Georgetown, Delaware:

Name of the licensee:	The Voice Radio, LLC
Principal community to be served:	MD-Salisbury
Primary Station:	WICO(AM)

Via:	Direct off-the-air
Channel:	275D (102.9 MHz)
Hours of operation:	Unlimited
Antenna Coordinates (NAD-27):	North latitude: 38 deg 21 min 39 sec West Longitude: 75 deg 37 min 00 sec
Transmitter:	Type Accepted
Antenna type:	Shively, 2-Bay, Model 6014

	Horizontally Polarized Antenna	Vertically Polarized Antenna
Effective radiated power in the horizontal plane (kW):	0.25	0.25
Height of radiation center above ground (meters):	85.0	85.0
Ground elevation above mean sea level:	6.0	6.0
Height of radiation center above means sea level (meters)	91.0	91.0
Antenna structure registration number:	1037731	

Interference

The attached map (Figure 2) shows the proposed FM translator operation on Channel 275D will comply with Section 74.1204 of the Commission's rules with respect to any prohibited overlap of contours to any existing or proposed FM stations and translators except FM station WBOC-FM. Figure 3 shows the lack of overlap in more detail with respect to FM station WESR-FM. The attached Figure 4 shows the WBOC-FM (Channel 273B) will have a 73 dBu signal level at the Salisbury FM Translator site. The interfering contour (113 dBu = 73+40) from the proposed Salisbury FM Translator would extend less than 450 feet from its antenna radiation center based on 0.495 relative field in the downward direction from the Shively 2-bay antenna. The applicant advises

there are no houses within 1000 feet of the proposed Salisbury FM Translator site. Therefore, it is believed the proposed Salisbury FM Translator operation complies with Section 74.1204(d) of the Commission's rules.

Since the proposed FM translator will not be operating on Channels 201-220, Section 74.1205 is not pertinent.

Unattended Operation

It is proposed to operate the proposed FM translator unattended in accordance with Section 74.1234 of the Commission's rules.

Multiple Translators

The applicant does not have any interest in an FM translator or application which serves the same area and re-broadcast the same signals as the proposed FM translator.

Environmental Protection Act

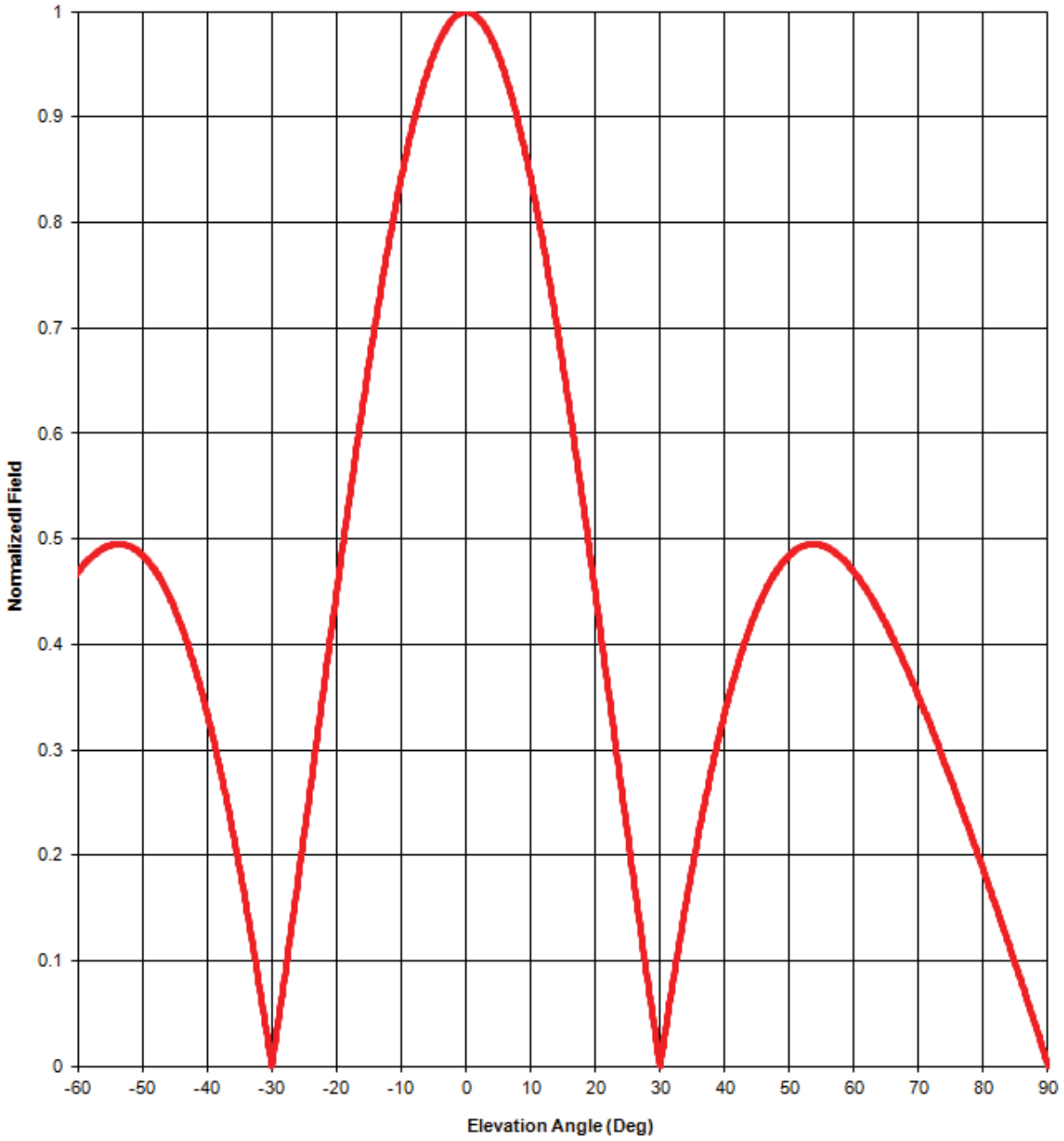
Since the proposed FM translator antenna would be side-mounted on an existing tower (ASR Number 1037731), the environmental issues listed in Section 1.1307(a) are not pertinent; therefore, those issues have not been addressed.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the FCC OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 0.5 kW and a radiation center of 85 meters above ground level, the proposed FM Translator operation would have a less than 1 microwatts per square centimeter ($\mu W/cm^2$) RF field at 2 meters above the base of the supporting structure assuming 0.495 antenna relative field in the downward direction. The Commission's guidelines for the FM band are 1,000 $\mu W/cm^2$

for the occupational/controlled and 200 μW/cm^2 for the general population/uncontrolled environment.

Therefore, members of the public and personnel working around the proposed FM translator operation would not be exposed to RF fields exceeding the Commission's guidelines. With respect to work performed on the tower, Voice Radio will establish procedures to ensure that workers are not exposed to RF fields above the Commission's guidelines, by reducing or turning off the power, as appropriate.

Elevation pattern



Antenna models: 6014, 6015, 6020, 6510, 6513, 6600, 68xx except 6832, & Versa2une, 2-bay full-wave-spaced

Test frequency: 98.1 MHz

Gain (maximum):

	Power	dB
6014, 6015, 68xx:	0.99	-0.04 dB
6510, 6513, 6600:	1.98	2.96 dB

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Degrees	Rel. Field
1	0.998
2	0.993
3	0.985
4	0.974
5	0.959
6	0.942
7	0.921
8	0.898
9	0.871
10	0.843
11	0.811
12	0.778
13	0.742
14	0.704
15	0.665
16	0.624
17	0.582
18	0.538

Degrees	Rel. Field
19	0.494
20	0.449
21	0.403
22	0.357
23	0.311
24	0.265
25	0.220
26	0.174
27	0.130
28	0.086
29	0.043
30	0.001
31	0.040
32	0.079
33	0.117
34	0.154
35	0.188
36	0.221

Degrees	Rel. Field
37	0.253
38	0.282
39	0.309
40	0.335
41	0.359
42	0.380
43	0.400
44	0.418
45	0.434
46	0.448
47	0.460
48	0.470
49	0.478
50	0.485
51	0.490
52	0.493
53	0.495
54	0.495

Degrees	Rel. Field
55	0.494
56	0.491
57	0.488
58	0.482
59	0.476
60	0.469
61	0.461
62	0.451
63	0.441
64	0.430
65	0.418
66	0.406
67	0.393
68	0.379
69	0.365
70	0.351
71	0.335
72	0.320

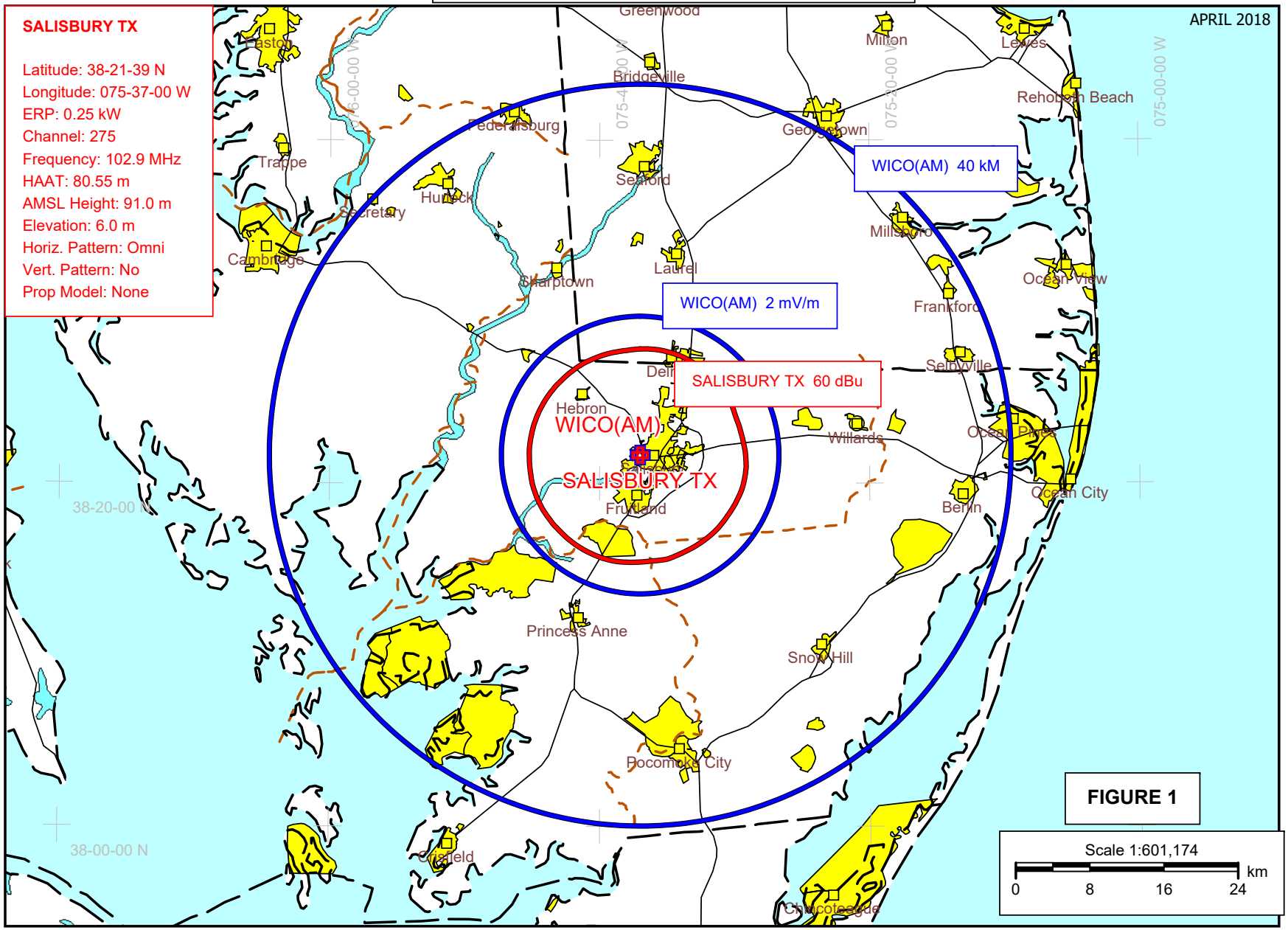
Degrees	Rel. Field
73	0.304
74	0.288
75	0.272
76	0.255
77	0.238
78	0.221
79	0.204
80	0.186
81	0.168
82	0.151
83	0.133
84	0.114
85	0.096
86	0.078
87	0.059
88	0.040
89	0.021
90	0.000

Elevation Pattern Tabulation

Antenna models: 6014, 6015, 6020, 6510, 6513, 6600, 68xx except 6832, & VersaTune, 2-bay full-wave-spaced.

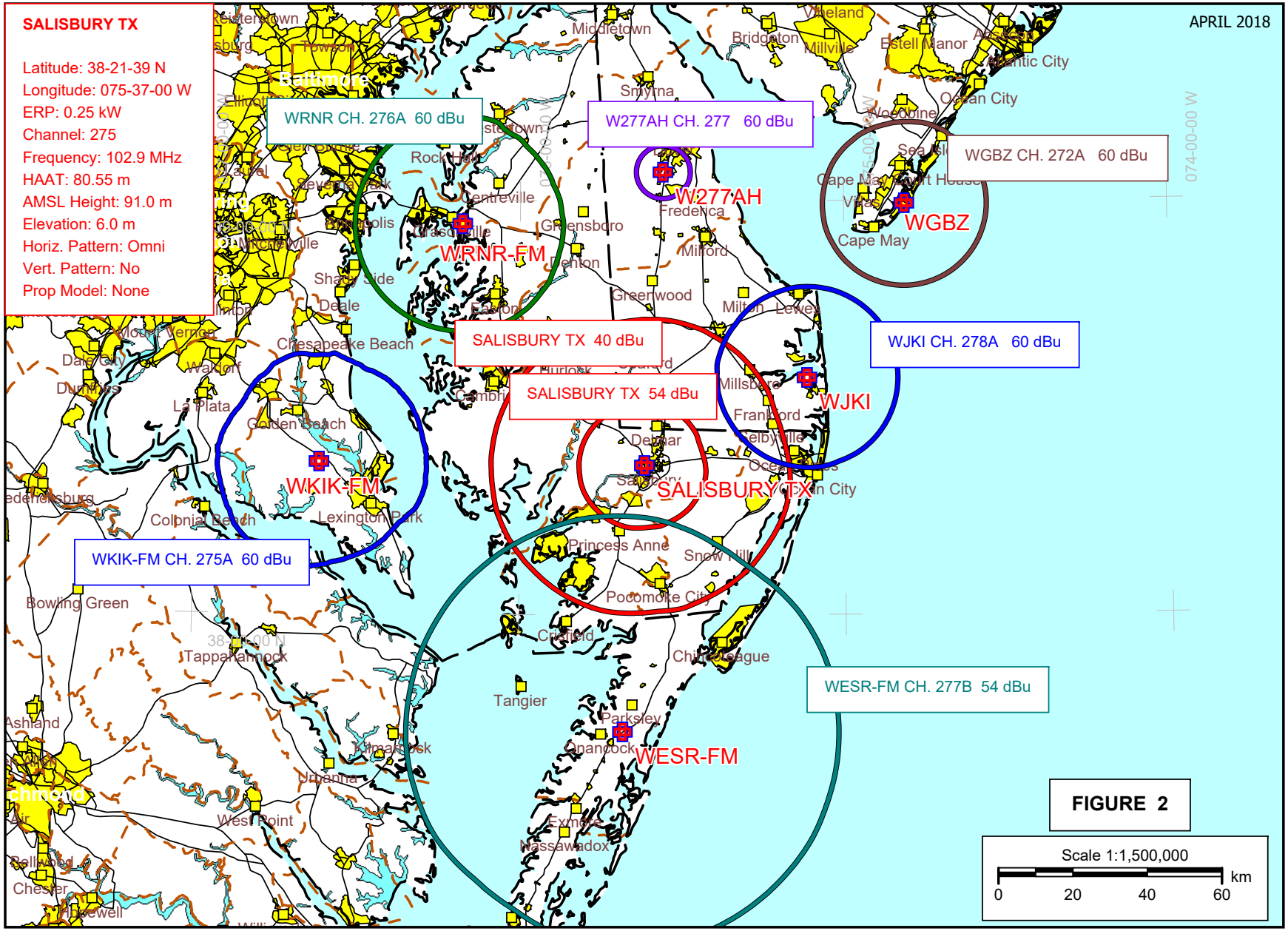
Relative Field at 0° Depression = 1.000

SMITH KHANNA & GUILL, Inc. - Consulting Engineers



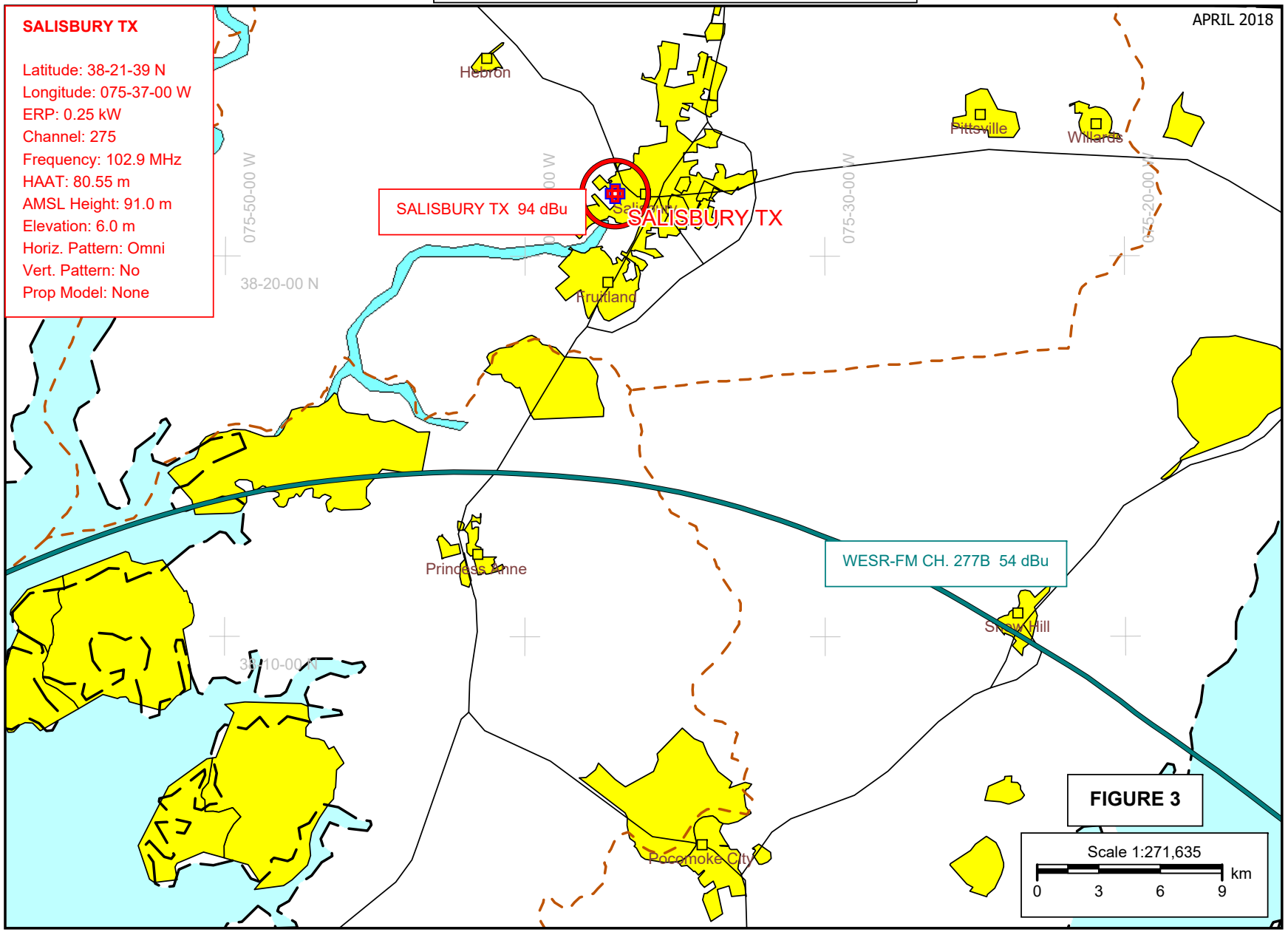
COMPUTED 2.0 mV/M CONTOUR AND 40 kM CIRCLE FROM WICO(AM) IN RELATION TO 60 dBu CONTOUR OF SALISBURY TRANSLATOR

SMITH KHANNA & GUILL, Inc. - Consulting Engineers



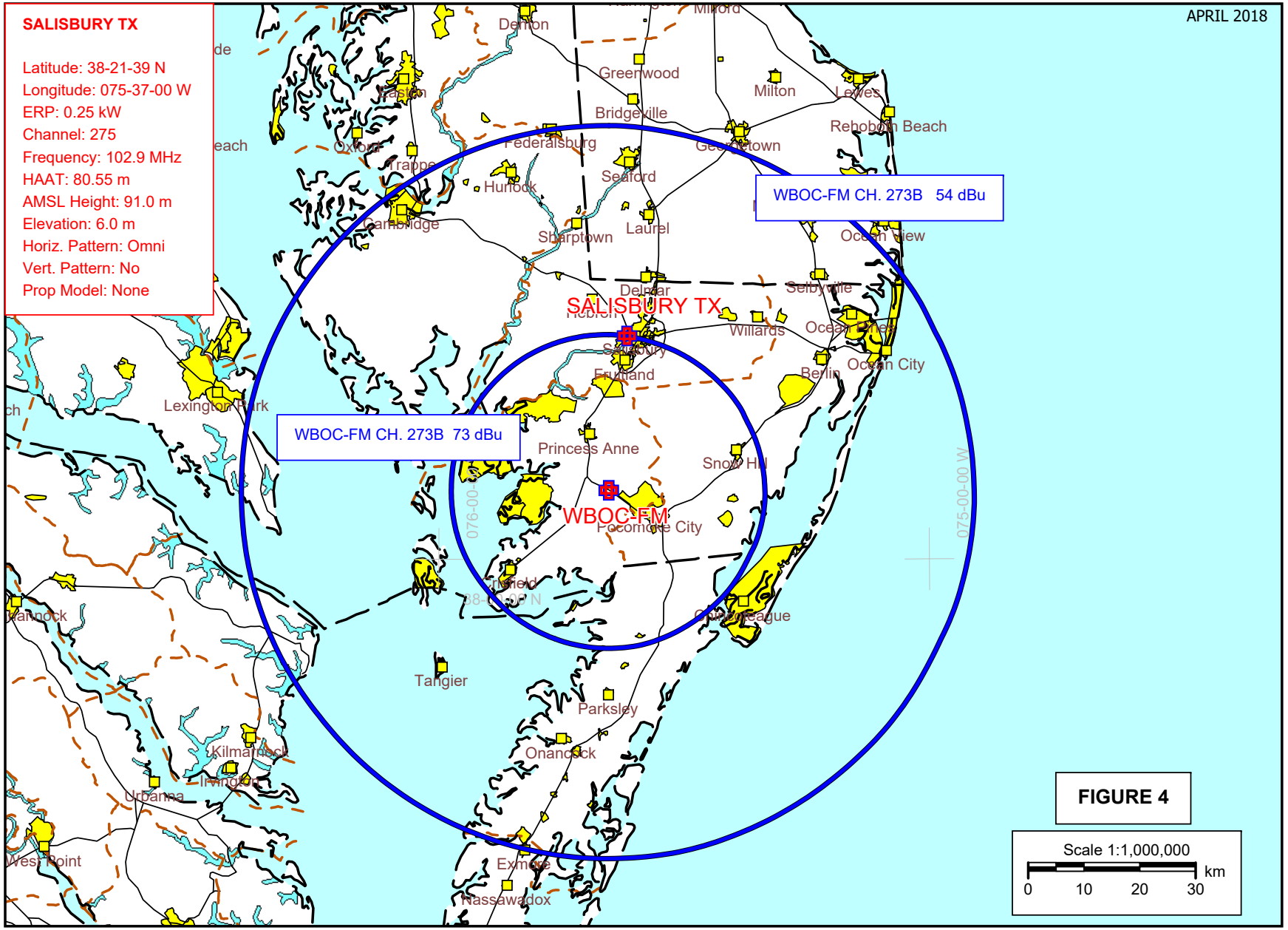
PROTECTED CONTOURS OF FM STATIONS IN RELATION TO INTERFEREING CONTOURS OF SALISBURY FM TRANSLATOR

SMITH KHANNA & GUILL, Inc. - Consulting Engineers



PROTECTED CONTOUR OF WESR-FM IN RELATION TO INTERFERING CONTOUR OF SALISBURY TRANSLATOR

SMITH KHANNA & GUILL, Inc. - Consulting Engineers



PROTECTED CONTOURS OF WBOC-FM IN RELATION TO THE PROPOSED SALISBURY TRANSLATOR SITE