

TECHNICAL EXHIBIT
AMENDMENT TO
APPLICATION FOR CONSTRUCTION PERMIT
CLEAR CHANNEL BROADCASTING LICENSES, INC.
RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA

February 24, 2004

1460 KHZ 2.4 KW-D; 4.2 W-N U DA-N

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Technical Narrative

The technical exhibit of which this narrative is part has been prepared on behalf of Clear Channel Broadcasting Licenses, Inc., licensee of AM broadcast station WTKT at Harrisburg, Pennsylvania. WTKT is licensed as a Class B station for operation fulltime on 1460 kilohertz with a power of 5.0 kilowatts, operating daytime with a non-directional antenna and nighttime with a directional antenna. By means of this present application, the licensee proposes to construct a new transmitter site to replace the licensed site from which the station was evicted. WTKT will continue to employ a nondirectional antenna during daytime hours and a directional antenna at night at the new site, but it will be necessary to reduce the daytime power to 2.4 kilowatts and the nighttime power to 4.2 kilowatts due to allocation constraints.

This exhibit serves to amend the original application for the proposed move, which has been assigned to File Number BP-20040109ACP by the FCC, to specify a slight change in tower height. The figures that have changed appear herein bearing the suffix "A". For convenience and clarity, an entire replacement exhibit is being provided.

The proposal is classified as a minor change according to 47 CFR 73.3571(a)(2). As a Class B station operating on one of the channels listed in 73.26(a), the proposal satisfies 47 CFR 73.21(a)(2) which permits operation with a nominal power of not less than 0.25 kilowatt nor more than 50 kilowatts at any time. The proposal is acceptable for filing under the criteria set forth in 47 CFR 73.37.

The proposed facility will not have a significant environmental impact with regard to potential radio frequency electromagnetic field exposure to humans as defined by 47 CFR 1.1307(b). The Federal Aviation Administration has been notified of the proposal, as new tower construction is proposed.

Directional Antenna System

Three new towers will be employed for the proposed nighttime directional antenna pattern while the daytime nondirectional operation will use one of the three towers. The towers that are not used for nondirectional operation will be detuned. As shown on Figure 1A, the radiating elements will be 56.4-meter (185-foot) towers with overall heights of 57.9 meters (190 feet) above ground level. Figure 2 shows a plat of the transmitter site. A summary of specifications for the nighttime directional antenna array is included herein as Figure 3A.

The nighttime directional antenna pattern has been calculated in accordance with 47 CFR 73.150 assuming a one-ohm lumped loss resistance at the current loop of each tower in the array. The nighttime standard radiation

pattern is shown herein as Figure 4A and is tabulated in Figure 5A.

Waiver of Section 73.24(g)

The provisions of 47 CFR 73.24(g) require that the population within the 1,000 mV/m contour not exceed 1 percent of the population within the 25 mV/m groundwave contour. The proposed 1,000 mV/m nighttime contour encompasses 775 persons, or 1.1 percent of the 71,172 persons in the proposed 25 mV/m contour. As this exceeds the standard of 73.24(g), a waiver is respectfully requested.

The requirements of 73.24(g) date from a time before the massive shift of urban populations to suburban areas, when cities were generally well defined population centers surrounded by rural areas where radio stations were encouraged to construct their transmitter sites. Such is generally not the case today, as the areas surrounding large and medium size towns where transmitter sites must be located to provide satisfactory coverage are often densely populated.

In a number of past requests for waiver of 73.24(g), it has been noted that the vast majority of receivers suffer no degradation in reception with field strengths significantly higher than 1,000 mV/m. In fact, a field strength of 7,000 mV/m has been shown to be necessary to cause blanketing interference of any consequence. The population within the predicted daytime 7,000 mV/m contour is 0 persons. Based on the history of previous waiver requests that have been granted, the blanketing interference potential for WTKT is minimal.

The applicant recognizes the responsibility to correct blanketing problems, if any occur.

The population within the proposed daytime 1000 mV/m contour is 261 persons. As this is less than 300 persons, the requirements of 73.24(g) are met in the daytime case.

Daytime Coverage

The proposed WTKT daytime field strength contours are depicted on Figure 6A and the existing daytime field strength contours are shown on Figure 7. As indicated on Figure 6A, the proposed daytime 5 mV/m contour completely encompasses the city limits of Harrisburg. The Harrisburg city limits depicted were obtained from a map contained in the TIGER 2000 U.S. census files.

Daytime Allocation Study

A daytime allocation study was made utilizing FCC Figure M-3 as shown on sheet 1 of Figure 8A. Sheet 2 of Figure 8A shows, in detail, that the only station with which the proposed WTKT nondirectional antenna pattern will have prohibited overlap is co-channel station WEMR in Tunkhannock, Pennsylvania. With the reduction in daytime power necessary to avoid an increase in overlap of the WTKT 0.5 mV/M contour with the WEMR 0.025 mV/M contour, there will be a reduction in the area over which the WTKT 0.025 mV/M contour overlaps the WEMR 0.5 mV/M contour. The daytime field strength contours were calculated in accordance with 47 CFR 73.183. Figure 9 is a tabulation of the data employed in the calculation of daytime contours. Based on this analysis, the proposed WTKT

facility will comply with all relevant allocation criteria.

City-of-License Coverage

The proposed WTKT daytime and nighttime field strength contours are depicted on Figures 6A and 10A, respectively. The proposed daytime 5 mV/m contour and the proposed nighttime 9.6 mV/m nighttime interference-free contour both completely encompass the city limits of Harrisburg.

Nighttime Allocation Study

The proposed WTKT facility will afford nighttime protection to all stations and international allotments operating on 1450 kHz, 1460 kHz, and 1470 kHz. Figure 12 contains pertinent calculation data to support a conclusion that this proposal comports with all nighttime interference protection requirements.

Waiver of Section 73.182(q)

As is the case with many fulltime stations that have occupied their channels for a number of years, the licensed WTKT nighttime facility produces skywave interference limits that enter into the 50-percent exclusion RSS values of several domestic stations. Six such instances are denoted on sheets 4 and 5 of Figure 12, the nighttime allocation study. Footnote 1 of Section 73.182(q) of the FCC's Rules requires that stations making facility changes reduce the radiation toward the other stations whose 50-percent exclusion RSS values they enter by either 10-percent or to a value that eliminates their

limit when 50-percent exclusion is applied, if higher. The purpose is to provide some degree of "interference reduction" whenever such a station chooses to make a change in its facilities. It is requested that the requirement be waived in this instance, as the proposed relocation is not by the WTKT licensee's choice.

WTKT was forced to cease operating with its licensed nighttime directional antenna approximately three years ago because of the loss of the right to use the land at the transmitter site due to circumstances beyond the licensee's control. When the station was evicted, operation was begun with reduced power under a special temporary authorization and a search for a suitable new transmitter site was initiated. The search was complicated by the need to provide interference-free service to the city of license using a nighttime directional antenna designed to provide the requisite protection to other stations and local land-use requirements in the suitable areas. After proposing another site for which a local building permit could not be obtained, the licensee identified the site proposed herein and took steps to obtain local approval for construction of the three towers before authorizing the preparation of this application. This site, which is 5.7 kilometers from the licensed site, represents what is believed to be the best option for preserving the licensed nighttime coverage of WTKT to the fullest extent possible.

It is necessary for WTKT to reduce nighttime power from 5 kilowatts to 4.2 kilowatts to provide at least the same degree of interference protection to other stations with the proposed directional antenna pattern as

is afforded by the licensed nighttime directional antenna pattern. An effort was made to design the pattern to reduce interference wherever it was possible to do so consistent with maintaining near-optimum local coverage from the proposed site. The proposed nighttime directional antenna will reduce the nighttime RSS contribution limits below those of the licensed pattern at the following stations:

| 50% RSS | | | |
|----------------|----------------|----------------|----------------|
| Station | Existing Limit | Proposed Limit | Percent Change |
| WBET | 9.22 | 9.15 | -0.8 |
| WEMD | 44.07 | 43.40 | -1.5 |
| WIFI | 39.51 | 39.10 | -1.0 |
| WEMR | 7.96 | 7.90 | -0.8 |
| WKDV | 13.79 | 13.40 | -2.8 |
| WKAP | 1.59 | 1.54 | -3.2 |

| 25% RSS | | | |
|----------------|----------------|----------------|----------------|
| Station | Existing Limit | Proposed Limit | Percent Change |
| WDDY | 2.60 | 1.12 | -132 |
| WHIC | 3.56 | 2.89 | -23.2 |
| WMBA | 4.20 | 2.43 | -72.8 |

Although it was possible to provide significant interference reduction in many cases, it was not practicable to provide a 10-percent radiation reduction toward all of the stations that receive 50-percent exclusion RSS contributions from WTKT without significantly compromising local coverage. As the six stations which receive 50-percent exclusion RSS contributions from the licensed WTKT directional antenna are located at various diverse azimuths, there cannot be a simultaneous 10-percent reduction in radiation toward them all without a significant further reduction in operating

power or construction of a much more complicated array. Since a larger array will not fit on the available property at the proposed site, a power reduction to significantly below the proposed 4.2 kilowatt level would be required for an across-the-board 10-percent radiation reduction toward all of the pertinent stations.

As the licensed WTKT transmitter site has been lost to eviction, the proposed site is the closest one to the licensed site for which local approval to construct the towers could be obtained, every effort was made to replicate the licensed nighttime service area to the fullest extent possible while materially reducing the interference levels at several other stations, and a greater power reduction than the one proposed herein would be required to further reduce radiation toward the pertinent stations, a waiver of the "10-percent reduction" requirement of Section 73.182(q) of the Rules is respectfully requested. Such a waiver would be consistent with others that have been granted by the FCC under circumstances where stations had to be moved due to circumstances beyond their licensees' control.

Site Coordinates

The proposed site coordinates were determined by a registered surveyor and verified with a handheld GPS. The NAD 27 coordinates are:

40-18-32 North
76-56-13 West

Site Location and Photographs

Figure 13 shows a topographical map with the exact location of the proposed facility. Figure 14 shows photographs taken in 8 directions every 45 degrees beginning at in the northerly direction.

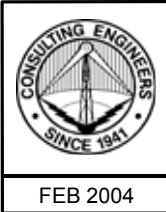
Environmental Considerations

The proposed WTKT operation, both daytime and nighttime, was evaluated in terms of both the electric and magnetic field components which will be present at the base of each tower. Using Figures 1 through 4 of Supplement A to OET Bulletin 65, the worst-case interpolated distance at which the electric and magnetic fields would fall below ANSI guidelines is 2 meters. The area surrounding the base of each tower will be appropriately restricted with a fence having a minimum radius of 2 meters (7 feet), unless data obtained after construction has been completed indicates otherwise. The fences should assure that persons on the property outside the fenced areas will not be exposed to radiofrequency field levels in excess of the standards specified in 47 CFR 1.1307(b) for human exposure to radiofrequency radiation.

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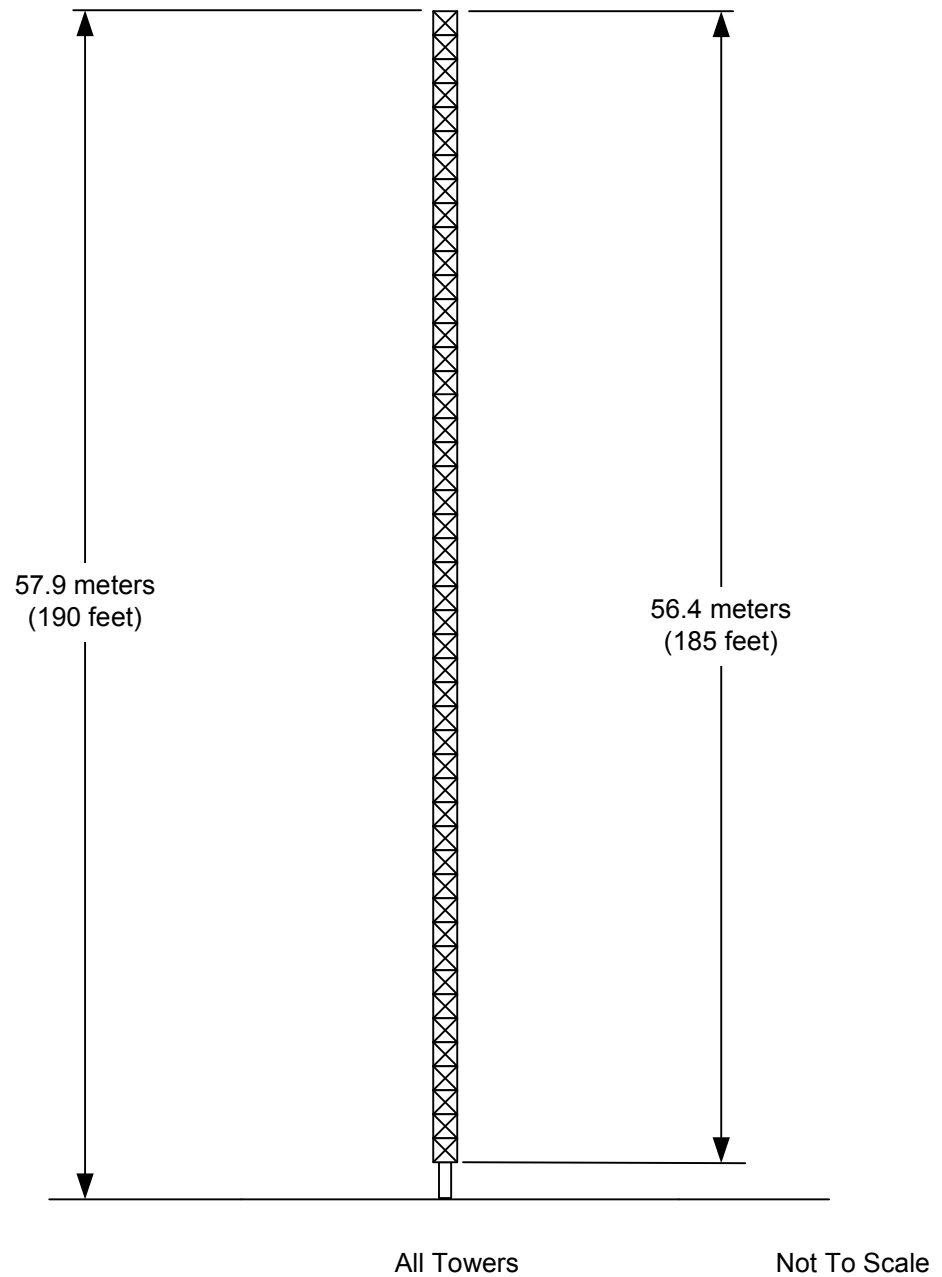
February 24, 2004



Site Coordinates(NAD 27)

40° 18' 32" N

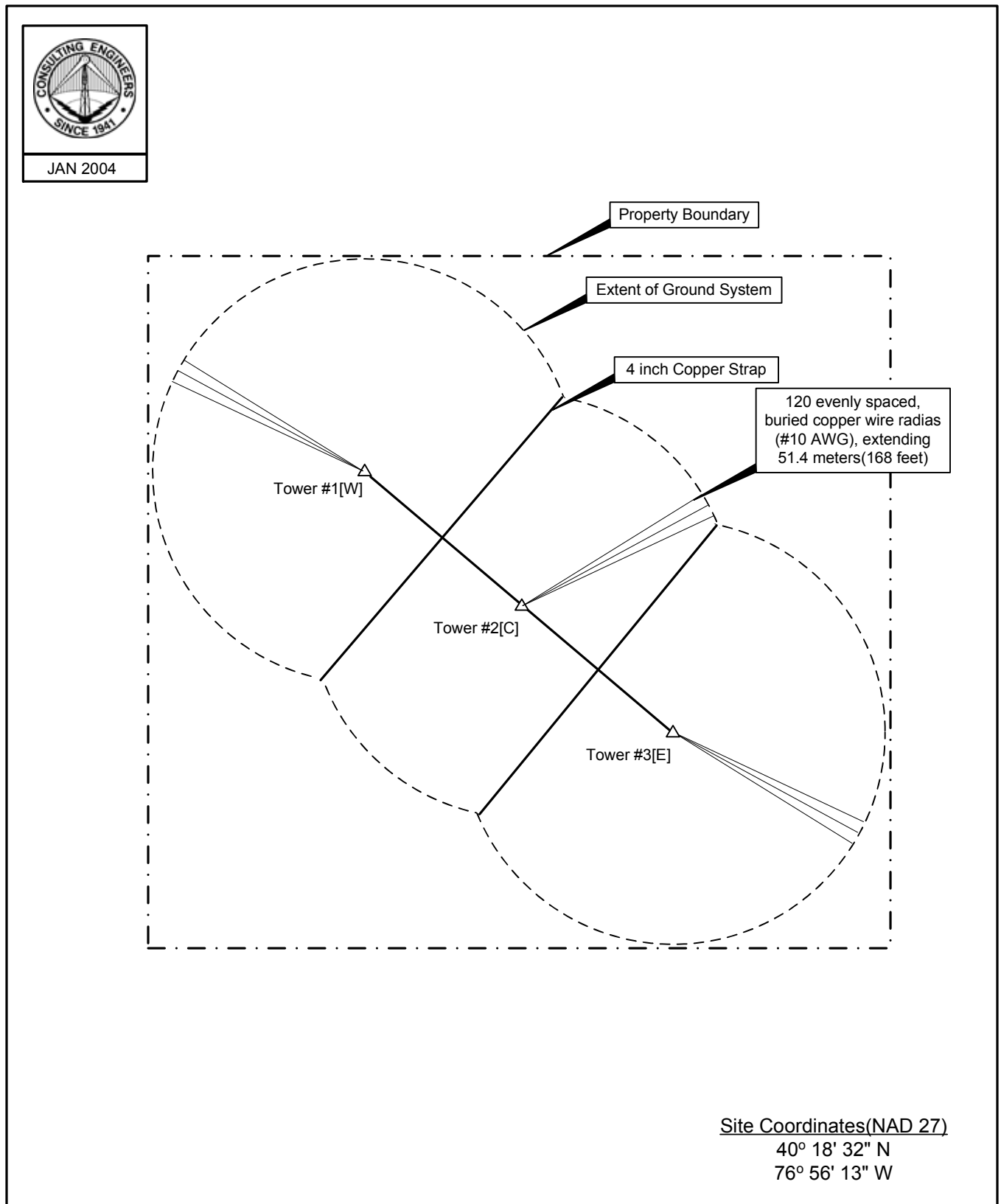
76° 56' 13" W



SKETCH OF ANTENNA ELEMENTS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



PLAT OF TRANSMITTER LOCATION

RADIO STATION WTKT
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du Treil, Lundin & Rackley, Inc. Sarasota, Florida

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1460 KHz 2.4 KW-D, 4.2 KW-N U DA-N

Specification for Nighttime
Directional Antenna System

Frequency: 1460 kHz

Hours of Operation: Unlimited

Power: 4.2 kW

Number of Towers: 3

Type of Tower: Guyed, Uniform Cross-section,
base-insulated

All Towers - height above
base insulator 56.4 m (185 ft)

All Towers - overall height 57.9 m (190 ft)

Tower Arrangement:

| Tower No. | Spacing (deg.) / (m) | Orientation (deg. True) |
|--------------|-------------------------|----------------------------|
| 1 (W) | 0.0/0.0 | 0.0 |
| 2 (C) | 88.9/50.7 | 130.2 |
| 3 (E) | 175.8/100.3 | 130.2 |

Element Field Parameters:

Nighttime:

| Tower No. | Field Ratio | Phase (degrees) |
|--------------|----------------|--------------------|
| 1 (W) | 1.000 | 0.0 |
| 2 (C) | 1.619 | -152.4 |
| 3 (E) | 0.986 | +55.4 |

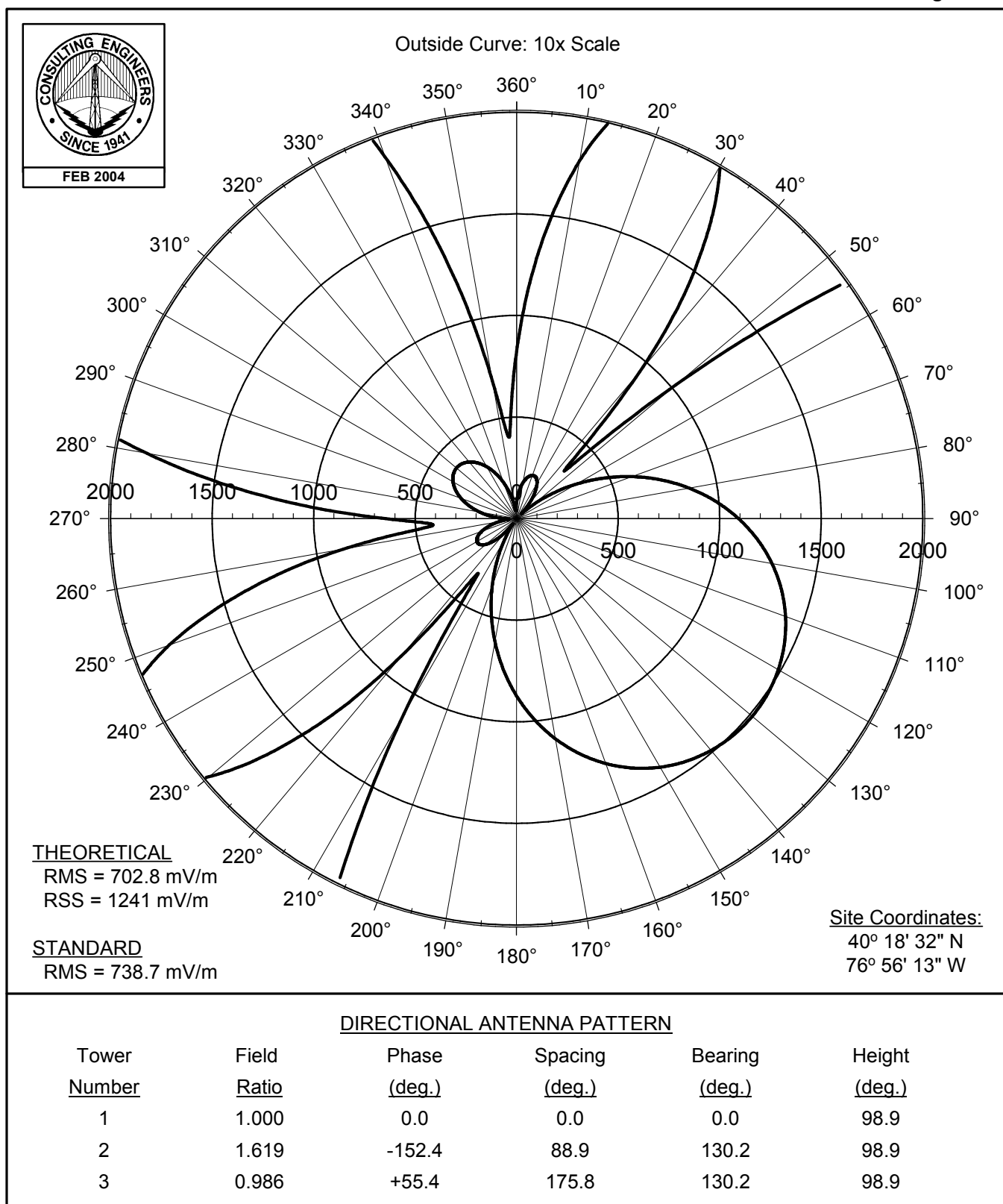
Ground System:

Installed about the base of each tower are 120 evenly spaced, buried copper wire radials (#10 AWG), extending 51.4 meters (168 ft) from all towers except where shortened and bonded to transverse copper strap between towers. In addition, 4 inch copper strap runs from the transmitter and down the line of towers and is bonded to ground at the base of each tower.

Geographic Coordinates of
Center of Antenna Array:

40° 18' 32" North Latitude
76° 56' 13" West Longitude

Figure 4A



PROPOSED NIGHTTIME HORIZONTAL PLANE STANDARD RADIATION PATTERN

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

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NIGHTTIME RADIATION PATTERN
(Radiation Values at One Kilometer)

| Tower <u>Number</u> | Field <u>Ratio</u> | Phase <u>(deg.)</u> | Spacing <u>(deg.)</u> | Bearing <u>(deg.)</u> | Height <u>(deg.)</u> |
|------------------------|-----------------------|------------------------|--------------------------|--------------------------|-------------------------|
| 1 | 1.000 | 0.0 | 0.0 | 0.0 | 98.9 |
| 2 | 1.619 | -152.4 | 88.9 | 130.2 | 98.9 |
| 3 | 0.986 | +55.4 | 175.8 | 130.2 | 98.9 |

| Input Power <u>(kW)</u> | Loop Loss <u>(ohms)</u> | Theo. RMS <u>(mV/m)</u> | Theo. RSS <u>(mV/m)</u> | Q Factor <u>(mV/m)</u> | Standard RMS <u>(mV/m)</u> |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|----------------------------------|
| 4.2 | 1.0 | 702.8 | 1241 | 31.0 | 738.7 |

Standard Radiation Pattern
(at One Kilometer)

| Azimuth Angle (deg) | Elevation Angle in Degrees | | | | | | |
|---------------------------|----------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| | 0 (mV/m) | 5 (mV/m) | 10 (mV/m) | 15 (mV/m) | 20 (mV/m) | 25 (mV/m) | 30 (mV/m) |
| 0 | 80.4 | 81.8 | 86.0 | 92.5 | 101 | 109 | 116 |
| 5 | 132 | 133 | 135 | 138 | 141 | 143 | 144 |
| 10 | 177 | 177 | 176 | 176 | 174 | 171 | 165 |
| 15 | 209 | 208 | 206 | 202 | 196 | 188 | 178 |
| 20 | 224 | 223 | 220 | 213 | 205 | 194 | 181 |
| 25 | 222 | 220 | 216 | 209 | 199 | 187 | 173 |
| 30 | 199 | 197 | 193 | 186 | 177 | 165 | 152 |
| 35 | 156 | 155 | 151 | 146 | 138 | 129 | 119 |
| 40 | 93.6 | 93.1 | 91.4 | 88.6 | 84.9 | 80.3 | 75.1 |
| 45 | 33.2 | 33.0 | 32.6 | 31.9 | 31.1 | 30.2 | 29.4 |
| 50 | 102 | 101 | 96.6 | 90.2 | 81.8 | 71.9 | 61.1 |
| 55 | 213 | 211 | 203 | 191 | 174 | 155 | 134 |
| 60 | 337 | 333 | 321 | 302 | 277 | 248 | 216 |
| 65 | 467 | 462 | 446 | 420 | 386 | 346 | 302 |
| 70 | 600 | 593 | 573 | 540 | 498 | 447 | 391 |
| 75 | 732 | 723 | 699 | 660 | 608 | 547 | 479 |
| 80 | 858 | 849 | 821 | 775 | 715 | 644 | 565 |
| 85 | 978 | 967 | 935 | 884 | 816 | 736 | 647 |
| 90 | 1087 | 1075 | 1040 | 984 | 910 | 821 | 723 |
| 95 | 1185 | 1172 | 1135 | 1074 | 994 | 898 | 791 |
| 100 | 1271 | 1257 | 1217 | 1153 | 1068 | 966 | 852 |
| 105 | 1343 | 1329 | 1287 | 1220 | 1131 | 1024 | 904 |
| 110 | 1402 | 1387 | 1344 | 1275 | 1183 | 1072 | 947 |
| 115 | 1448 | 1433 | 1389 | 1318 | 1223 | 1109 | 981 |
| 120 | 1480 | 1465 | 1420 | 1348 | 1252 | 1136 | 1005 |
| 125 | 1500 | 1485 | 1439 | 1366 | 1269 | 1152 | 1020 |
| 130 | 1507 | 1492 | 1446 | 1373 | 1275 | 1157 | 1025 |
| 135 | 1501 | 1486 | 1440 | 1367 | 1270 | 1153 | 1021 |
| 140 | 1482 | 1467 | 1422 | 1350 | 1253 | 1137 | 1007 |
| 145 | 1451 | 1436 | 1392 | 1320 | 1226 | 1111 | 983 |
| 150 | 1406 | 1392 | 1348 | 1279 | 1186 | 1075 | 950 |
| 155 | 1348 | 1334 | 1292 | 1225 | 1136 | 1028 | 908 |
| 160 | 1277 | 1263 | 1223 | 1159 | 1073 | 971 | 857 |
| 165 | 1192 | 1180 | 1142 | 1081 | 1000 | 904 | 797 |
| 170 | 1095 | 1083 | 1048 | 992 | 917 | 828 | 728 |
| 175 | 987 | 976 | 944 | 892 | 824 | 743 | 653 |

Standard Radiation Pattern
(at One Kilometer)

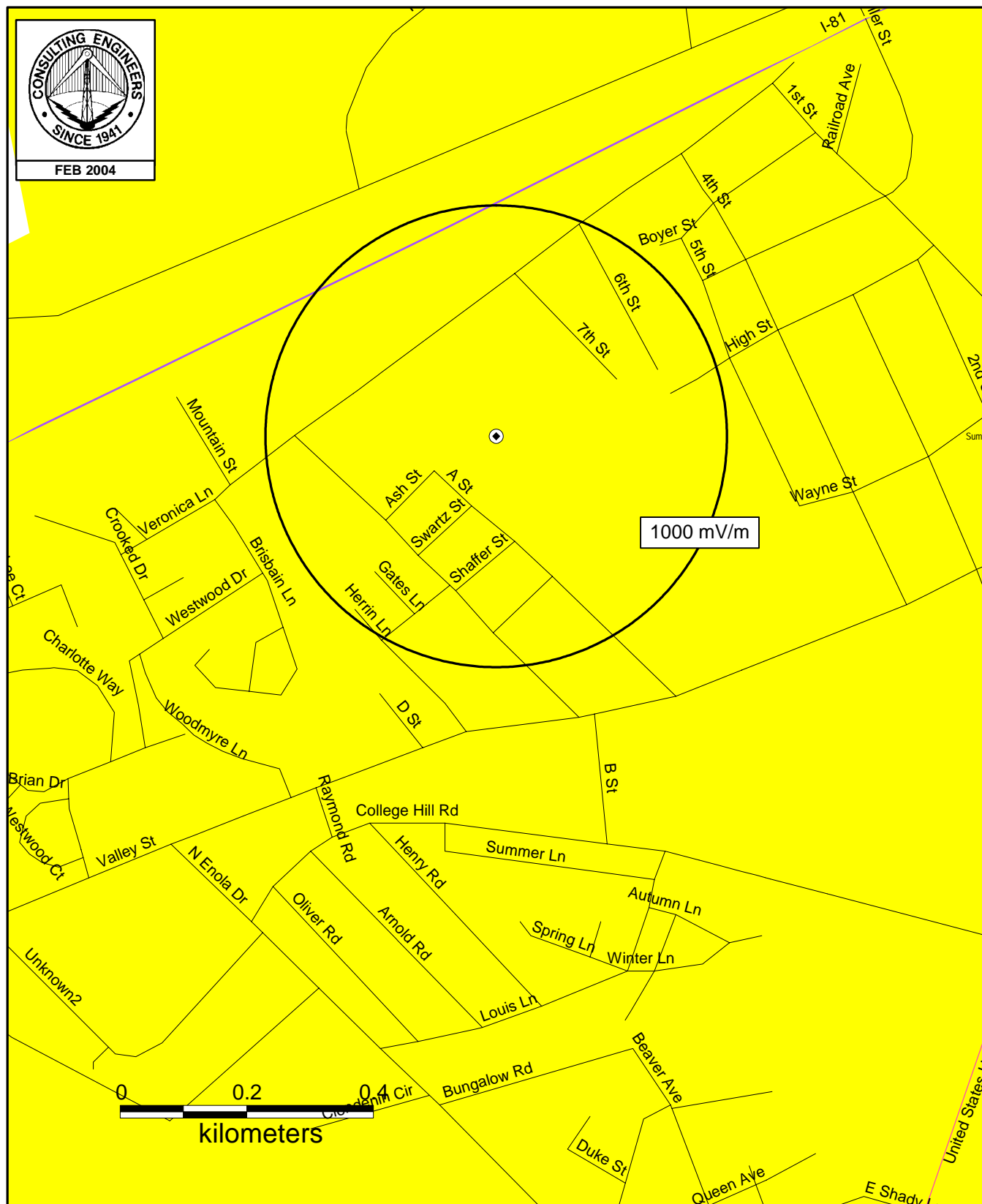
| Azimuth Angle (deg) | Elevation Angle in Degrees | | | | | | |
|---------------------------|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 35 (mV/m) | 40 (mV/m) | 45 (mV/m) | 50 (mV/m) | 55 (mV/m) | 60 (mV/m) | 65 (mV/m) |
| 0 | 121 | 123 | 121 | 114 | 104 | 90.1 | 73.7 |
| 5 | 142 | 138 | 130 | 120 | 106 | 89.7 | 72.1 |
| 10 | 158 | 148 | 136 | 122 | 105 | 87.8 | 69.6 |
| 15 | 167 | 153 | 137 | 121 | 103 | 84.2 | 66.0 |
| 20 | 167 | 151 | 133 | 115 | 96.9 | 78.8 | 61.3 |
| 25 | 157 | 141 | 123 | 106 | 88.1 | 71.2 | 55.3 |
| 30 | 138 | 123 | 107 | 91.4 | 76.2 | 61.7 | 48.1 |
| 35 | 108 | 96.4 | 84.5 | 72.7 | 61.1 | 50.1 | 39.7 |
| 40 | 69.3 | 63.1 | 56.6 | 50.0 | 43.4 | 36.8 | 30.4 |
| 45 | 28.6 | 27.8 | 26.9 | 25.8 | 24.5 | 22.7 | 20.5 |
| 50 | 50.2 | 39.6 | 30.0 | 22.1 | 16.3 | 13.2 | 12.1 |
| 55 | 112 | 90.4 | 69.9 | 51.3 | 35.2 | 22.3 | 13.2 |
| 60 | 182 | 149 | 117 | 87.4 | 61.8 | 40.3 | 23.6 |
| 65 | 256 | 210 | 166 | 126 | 90.5 | 60.5 | 36.5 |
| 70 | 332 | 274 | 218 | 166 | 120 | 81.3 | 50.1 |
| 75 | 408 | 337 | 269 | 206 | 150 | 102 | 63.9 |
| 80 | 482 | 399 | 319 | 245 | 179 | 123 | 77.5 |
| 85 | 553 | 458 | 367 | 283 | 207 | 143 | 90.7 |
| 90 | 619 | 514 | 412 | 318 | 234 | 162 | 103 |
| 95 | 678 | 564 | 454 | 351 | 259 | 179 | 115 |
| 100 | 732 | 610 | 491 | 380 | 281 | 195 | 125 |
| 105 | 777 | 648 | 523 | 406 | 300 | 209 | 134 |
| 110 | 815 | 681 | 550 | 427 | 316 | 220 | 142 |
| 115 | 845 | 706 | 571 | 444 | 329 | 230 | 148 |
| 120 | 866 | 725 | 586 | 456 | 338 | 236 | 152 |
| 125 | 879 | 736 | 596 | 463 | 344 | 240 | 155 |
| 130 | 884 | 740 | 599 | 466 | 346 | 242 | 156 |
| 135 | 880 | 737 | 596 | 464 | 344 | 241 | 155 |
| 140 | 868 | 726 | 587 | 457 | 339 | 237 | 153 |
| 145 | 847 | 708 | 572 | 445 | 330 | 230 | 148 |
| 150 | 818 | 683 | 552 | 428 | 317 | 221 | 142 |
| 155 | 781 | 651 | 525 | 407 | 301 | 210 | 135 |
| 160 | 736 | 613 | 494 | 382 | 282 | 196 | 126 |
| 165 | 683 | 568 | 457 | 353 | 260 | 181 | 116 |
| 170 | 624 | 518 | 416 | 321 | 236 | 163 | 104 |
| 175 | 558 | 463 | 371 | 286 | 210 | 145 | 91.7 |

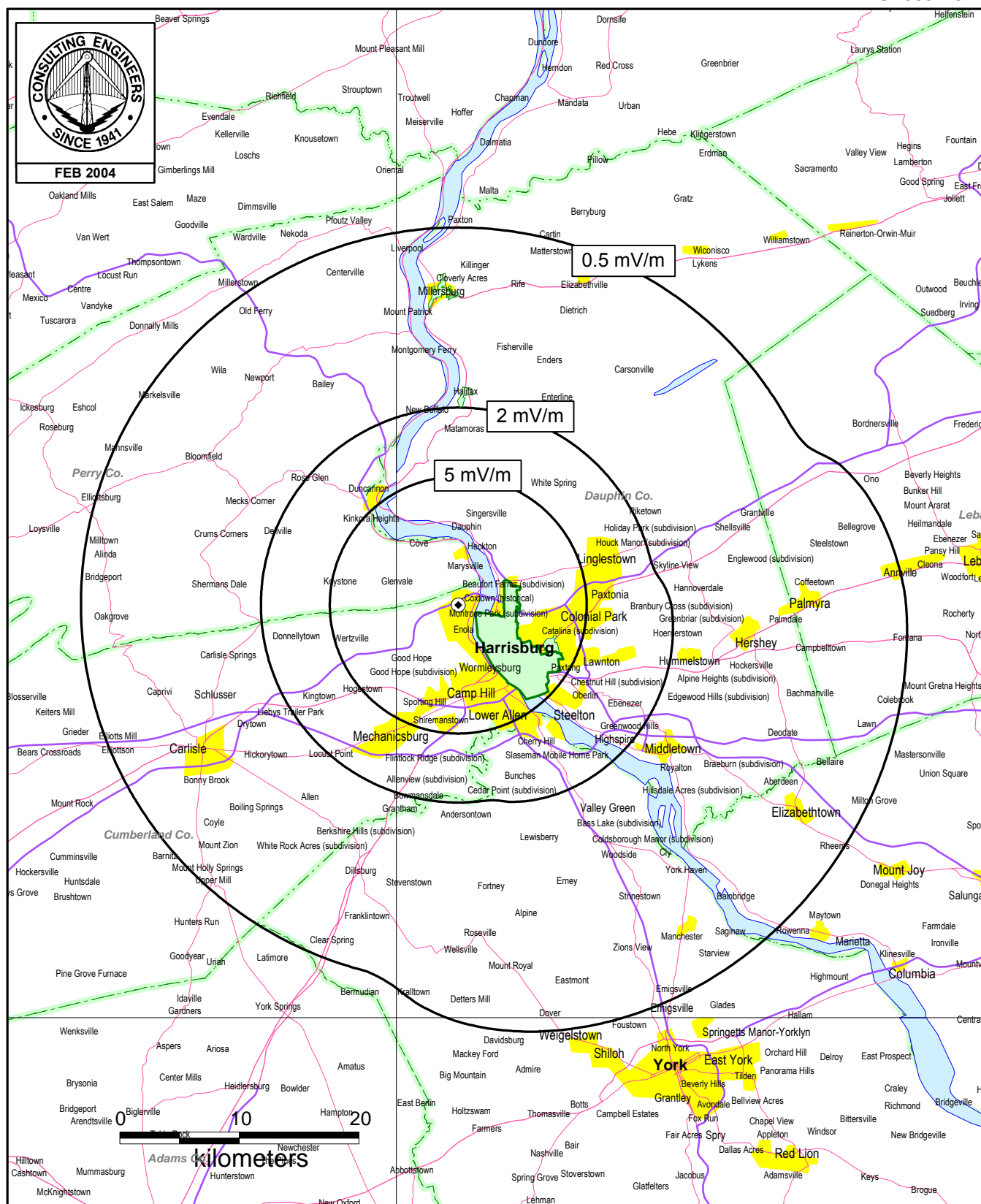
Standard Radiation Pattern
(at One Kilometer)

| Azimuth Angle (deg) | Elevation Angle in Degrees | | | | | | |
|---------------------------|----------------------------|-------------|--------------|--------------|--------------|--------------|--------------|
| | 0 (mV/m) | 5 (mV/m) | 10 (mV/m) | 15 (mV/m) | 20 (mV/m) | 25 (mV/m) | 30 (mV/m) |
| 180 | 868 | 859 | 830 | 784 | 724 | 652 | 572 |
| 185 | 742 | 734 | 709 | 669 | 617 | 555 | 486 |
| 190 | 611 | 604 | 583 | 550 | 507 | 455 | 398 |
| 195 | 478 | 472 | 456 | 430 | 395 | 354 | 309 |
| 200 | 347 | 343 | 331 | 312 | 286 | 256 | 223 |
| 205 | 223 | 220 | 212 | 199 | 182 | 162 | 140 |
| 210 | 110 | 109 | 104 | 97.6 | 88.6 | 78.0 | 66.4 |
| 215 | 33.1 | 32.9 | 32.2 | 31.2 | 30.0 | 28.7 | 27.6 |
| 220 | 88.0 | 87.5 | 86.0 | 83.5 | 80.1 | 76.0 | 71.2 |
| 225 | 151 | 150 | 147 | 142 | 135 | 126 | 116 |
| 230 | 196 | 195 | 191 | 184 | 174 | 163 | 150 |
| 235 | 221 | 219 | 215 | 208 | 198 | 186 | 172 |
| 240 | 225 | 224 | 220 | 214 | 205 | 194 | 181 |
| 245 | 211 | 210 | 207 | 203 | 197 | 189 | 179 |
| 250 | 180 | 180 | 179 | 178 | 176 | 172 | 167 |
| 255 | 136 | 137 | 139 | 141 | 144 | 146 | 146 |
| 260 | 84.6 | 86.0 | 90.1 | 96.3 | 104 | 112 | 118 |
| 265 | 40.1 | 40.8 | 43.9 | 50.6 | 61.0 | 73.8 | 86.8 |
| 270 | 64.4 | 61.3 | 52.7 | 41.5 | 34.2 | 39.5 | 54.5 |
| 275 | 124 | 119 | 106 | 86 | 62.1 | 39.1 | 31.5 |
| 280 | 185 | 179 | 163 | 138 | 107 | 72.6 | 41.1 |
| 285 | 242 | 235 | 217 | 188 | 151 | 110 | 68.2 |
| 290 | 291 | 284 | 263 | 231 | 190 | 143 | 95.4 |
| 295 | 331 | 324 | 302 | 267 | 222 | 171 | 118 |
| 300 | 361 | 353 | 330 | 293 | 246 | 192 | 136 |
| 305 | 380 | 372 | 347 | 309 | 261 | 205 | 147 |
| 310 | 386 | 378 | 354 | 315 | 266 | 210 | 151 |
| 315 | 381 | 373 | 348 | 310 | 261 | 206 | 147 |
| 320 | 363 | 355 | 332 | 295 | 247 | 193 | 137 |
| 325 | 334 | 327 | 304 | 269 | 224 | 173 | 120 |
| 330 | 295 | 287 | 267 | 234 | 193 | 146 | 97.4 |
| 335 | 246 | 239 | 221 | 191 | 154 | 112 | 70.5 |
| 340 | 190 | 184 | 168 | 142 | 111 | 75.6 | 43.0 |
| 345 | 129 | 124 | 111 | 90.4 | 65.5 | 41.2 | 30.8 |
| 350 | 68.7 | 65.5 | 56.4 | 44.0 | 34.5 | 37.6 | 52.1 |
| 355 | 38.6 | 39.1 | 41.5 | 47.5 | 57.8 | 70.7 | 84.2 |

Standard Radiation Pattern
(at One Kilometer)

| Azimuth Angle (deg) | Elevation Angle in Degrees | | | | | | |
|---------------------------|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 35 (mV/m) | 40 (mV/m) | 45 (mV/m) | 50 (mV/m) | 55 (mV/m) | 60 (mV/m) | 65 (mV/m) |
| 180 | 488 | 404 | 323 | 248 | 182 | 125 | 78.6 |
| 185 | 414 | 342 | 273 | 209 | 152 | 104 | 65.0 |
| 190 | 338 | 279 | 222 | 169 | 123 | 83.0 | 51.2 |
| 195 | 262 | 215 | 170 | 129 | 92.8 | 62.1 | 37.6 |
| 200 | 188 | 153 | 121 | 90.4 | 64.0 | 41.9 | 24.6 |
| 205 | 118 | 94.9 | 73.4 | 54.0 | 37.2 | 23.6 | 13.8 |
| 210 | 54.6 | 43.1 | 32.6 | 23.7 | 17.1 | 13.2 | 11.7 |
| 215 | 26.6 | 25.7 | 25.0 | 24.1 | 23.1 | 21.7 | 19.7 |
| 220 | 65.8 | 60.1 | 54.2 | 48.1 | 41.9 | 35.7 | 29.6 |
| 225 | 105 | 94.0 | 82.5 | 71.0 | 59.8 | 49.1 | 39.0 |
| 230 | 136 | 121 | 105 | 90.0 | 75.1 | 60.8 | 47.5 |
| 235 | 156 | 139 | 122 | 105 | 87.3 | 70.5 | 54.8 |
| 240 | 166 | 150 | 133 | 115 | 96.3 | 78.2 | 60.9 |
| 245 | 167 | 153 | 137 | 120 | 102 | 83.9 | 65.7 |
| 250 | 159 | 149 | 137 | 122 | 105 | 87.6 | 69.4 |
| 255 | 144 | 139 | 131 | 120 | 106 | 89.6 | 72.0 |
| 260 | 123 | 124 | 122 | 115 | 104 | 90.1 | 73.6 |
| 265 | 98.1 | 106 | 109 | 108 | 101 | 89.4 | 74.4 |
| 270 | 71.4 | 85.7 | 95.2 | 98.7 | 96.1 | 87.7 | 74.5 |
| 275 | 45.8 | 64.9 | 80.2 | 89.0 | 90.6 | 85.3 | 74.1 |
| 280 | 29.0 | 45.6 | 65.4 | 79.0 | 84.8 | 82.5 | 73.4 |
| 285 | 34.1 | 30.8 | 51.7 | 69.5 | 79.0 | 79.7 | 72.4 |
| 290 | 51.5 | 25.6 | 40.3 | 61.1 | 73.8 | 77.0 | 71.5 |
| 295 | 68.7 | 30.3 | 31.8 | 54.1 | 69.3 | 74.6 | 70.6 |
| 300 | 82.3 | 37.6 | 26.8 | 48.9 | 66.0 | 72.8 | 69.9 |
| 305 | 90.9 | 43.1 | 24.5 | 45.7 | 63.9 | 71.7 | 69.4 |
| 310 | 93.9 | 45.1 | 23.9 | 44.5 | 63.1 | 71.3 | 69.2 |
| 315 | 91.3 | 43.4 | 24.4 | 45.5 | 63.7 | 71.6 | 69.4 |
| 320 | 83.1 | 38.1 | 26.5 | 48.5 | 65.8 | 72.7 | 69.8 |
| 325 | 70.0 | 30.9 | 31.3 | 53.6 | 69.0 | 74.5 | 70.5 |
| 330 | 52.9 | 25.7 | 39.5 | 60.4 | 73.4 | 76.8 | 71.4 |
| 335 | 35.3 | 30.0 | 50.7 | 68.8 | 78.6 | 79.5 | 72.4 |
| 340 | 28.5 | 44.2 | 64.2 | 78.3 | 84.3 | 82.3 | 73.3 |
| 345 | 44.0 | 63.3 | 79.0 | 88.2 | 90.1 | 85.1 | 74.0 |
| 350 | 69.2 | 84.0 | 94.0 | 98.0 | 95.7 | 87.5 | 74.5 |
| 355 | 96.0 | 104 | 108 | 107 | 100 | 89.3 | 74.4 |

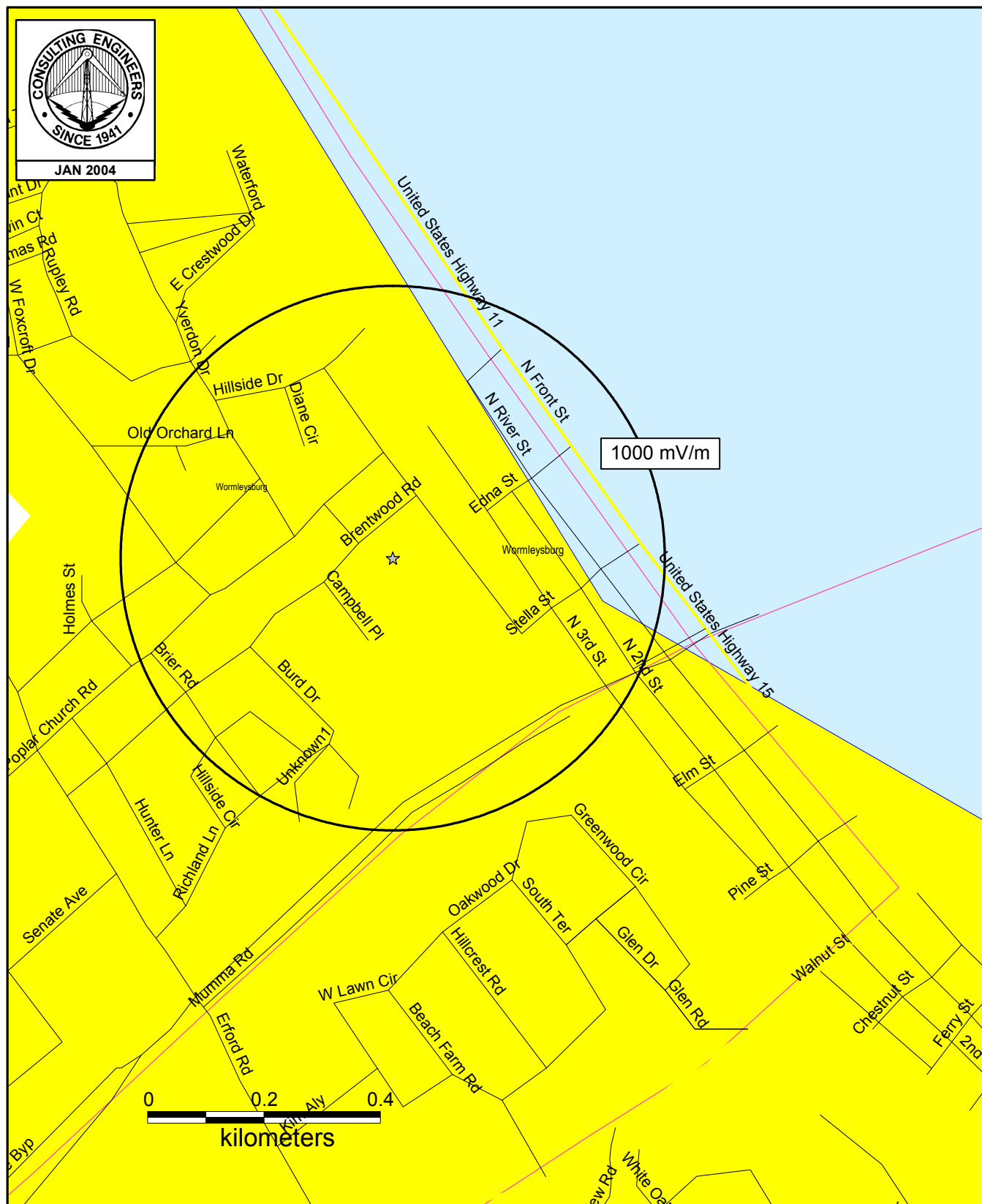




PROPOSED DAYTIME FIELD STRENGTH CONTOURS

RADIO STATION WKAT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

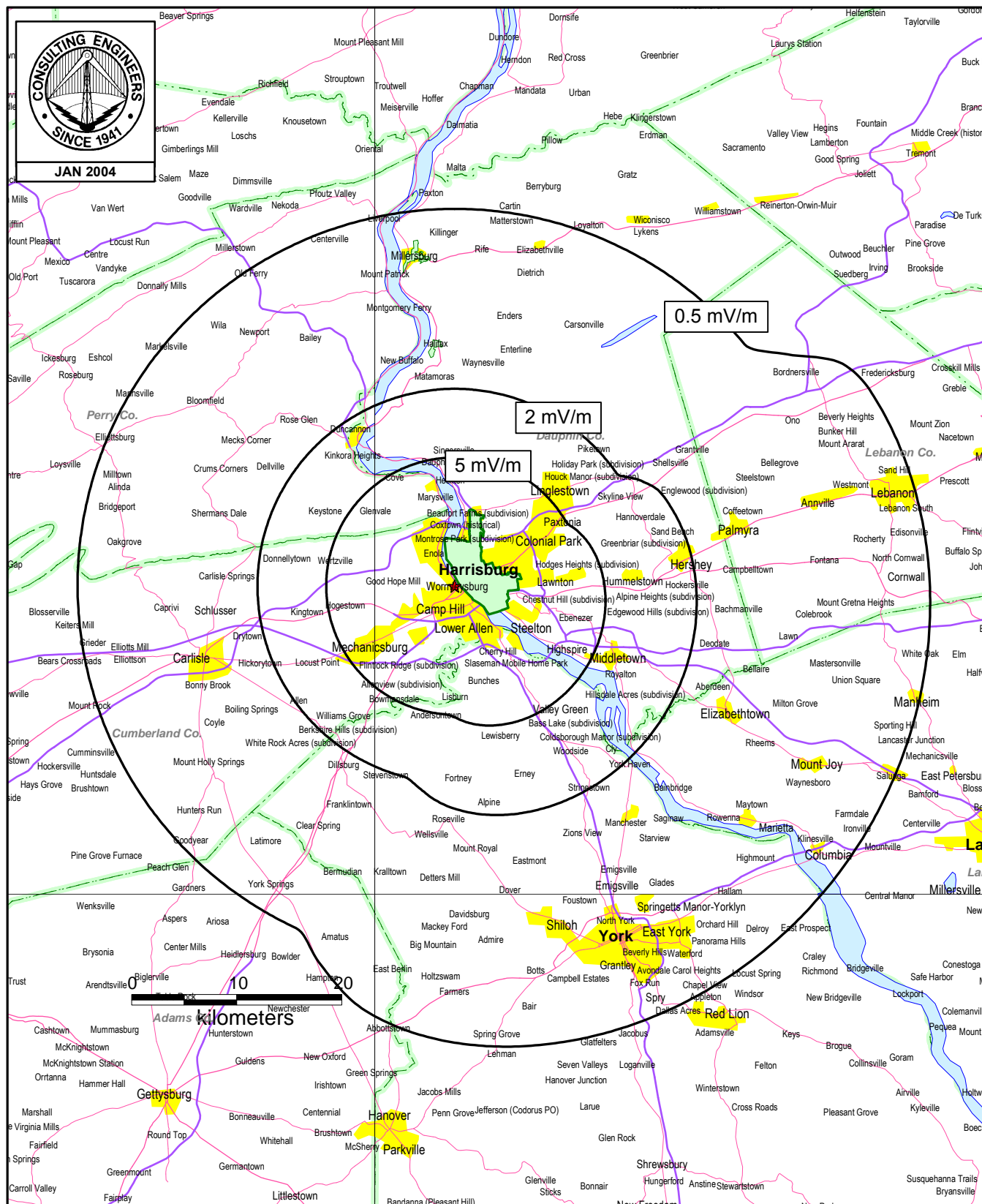
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



EXISTING DAYTIME FIELD STRENGTH CONTOURS

RADIO STATION WWTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

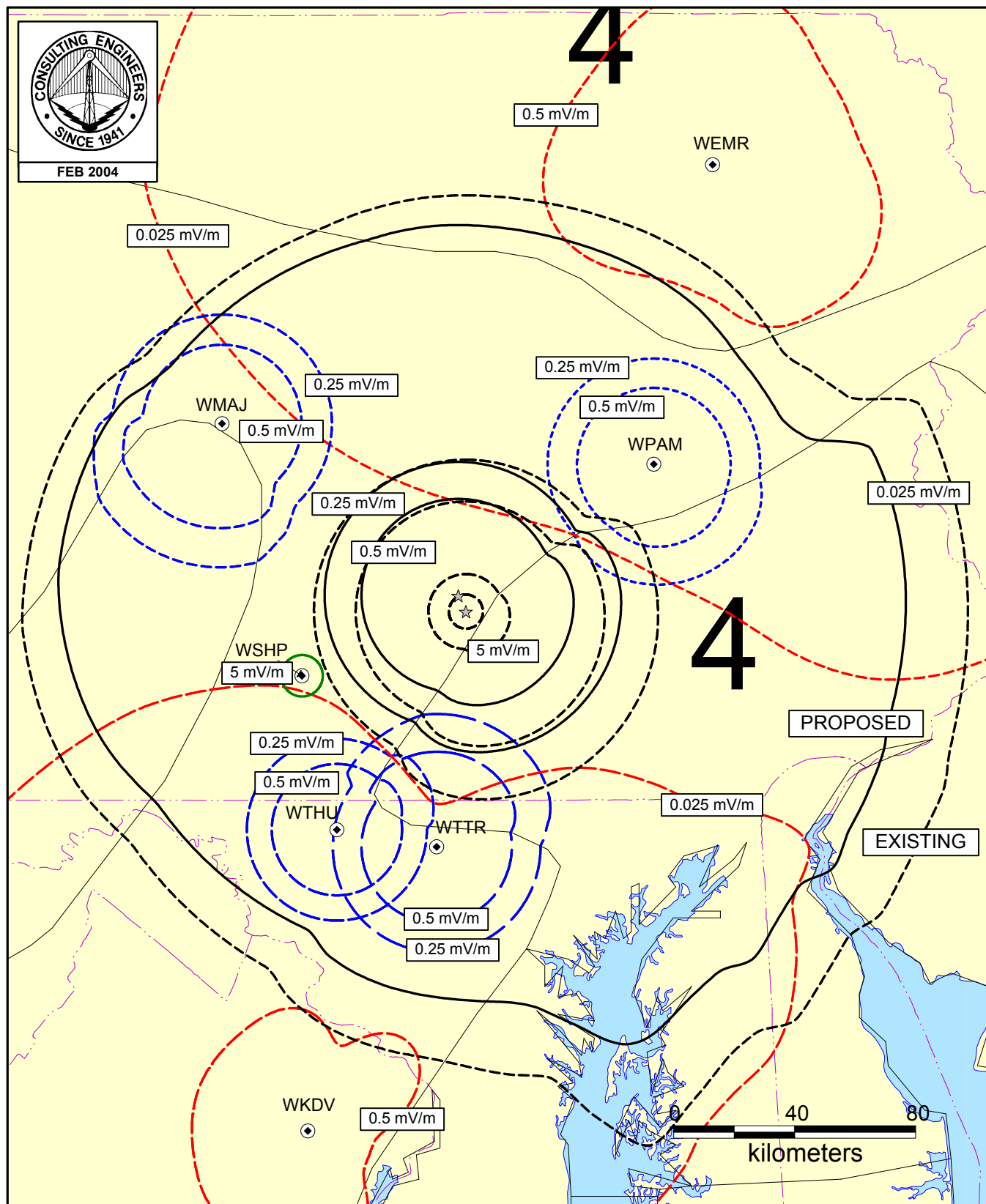
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



EXISTING DAYTIME FIELD STRENGTH CONTOURS

RADIO STATION WKTT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

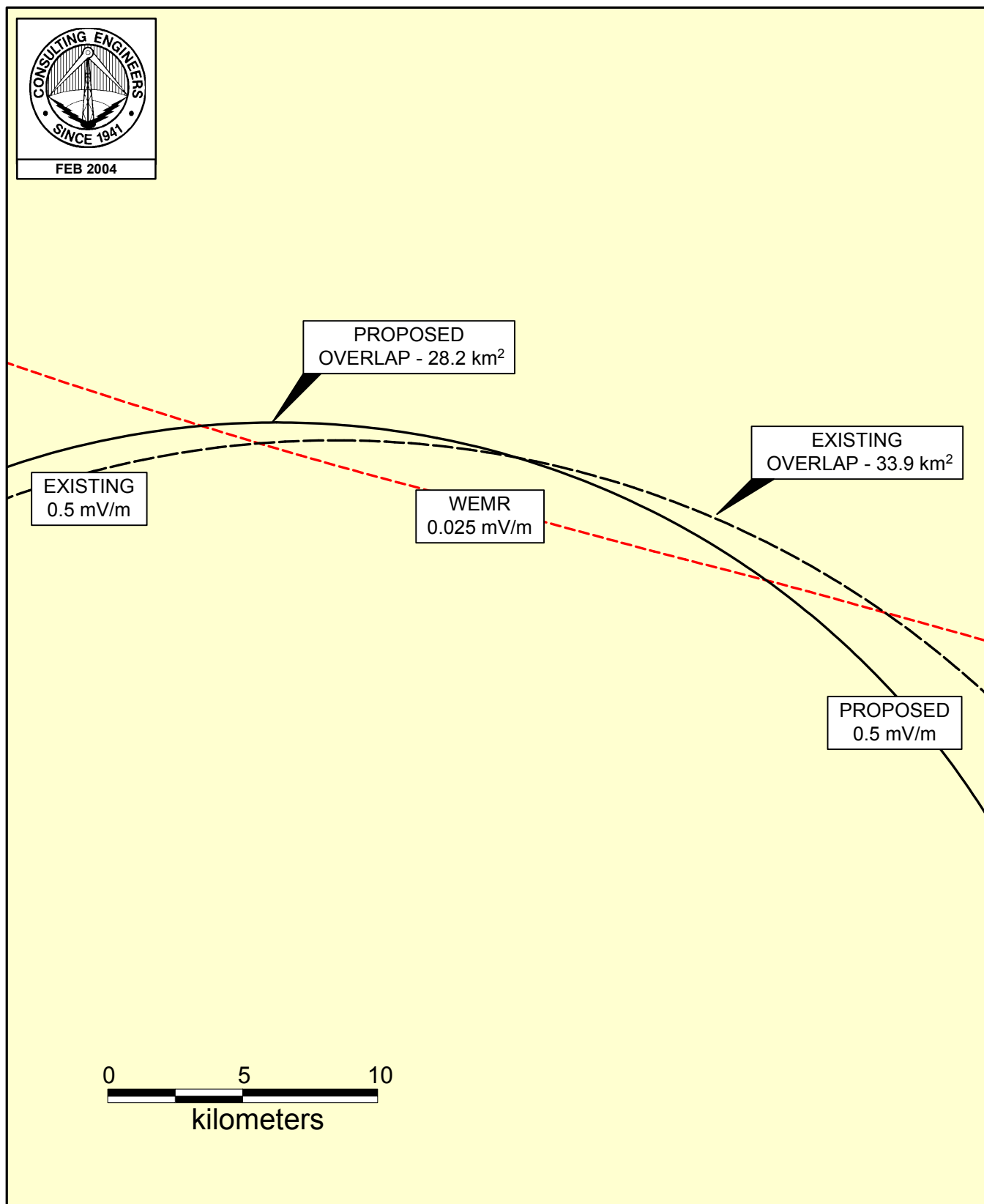
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DAYTIME ALLOCATION STUDY

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



DAYTIME ALLOCATION STUDY

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA

1460 KHZ 2.4 KW-D; 4.2 W-N U DA-N

Tabulation of Data Employed in
Calculation of Groundwave Contours

Call: WTKT - Proposed
Harrisburg, PA
Coordinates: 40-18-32 North 76-56-13 West
Frequency: 1460 kHz

FCC M3 conductivity employed along all azimuths

Call: WTKT - License
Harrisburg, PA
Coordinates: 40-15-42 North 76-54-40 West
Frequency: 1460 kHz

FCC M3 conductivity employed along all azimuths

Call: WEMR - License
Tunkhannock, PA
Coordinates: 41-33-46 North 75-58-11 West
Frequency: 1460 kHz

FCC M3 conductivity employed along all azimuths

Call: WKDV - License
Manassas, VA
Coordinates: 38-45-00 North 77-30-49 West
Frequency: 1460 kHz

FCC M3 conductivity employed along all azimuths

Call: WPAM - License
Pottsville, PA
Coordinates: 40-41-27 North 76-11-39 West
Frequency: 1450 kHz

FCC M3 conductivity employed along all azimuths

Call: WMAJ - License
State College, PA
Coordinates: 40-48-32 North 77-50-28 West
Frequency: 1450 kHz

FCC M3 conductivity employed along all azimuths

Call: WTHU - License
Thurmont, MD
Coordinates: 39-37-37 North 77-24-11 West
Frequency: 1450 kHz

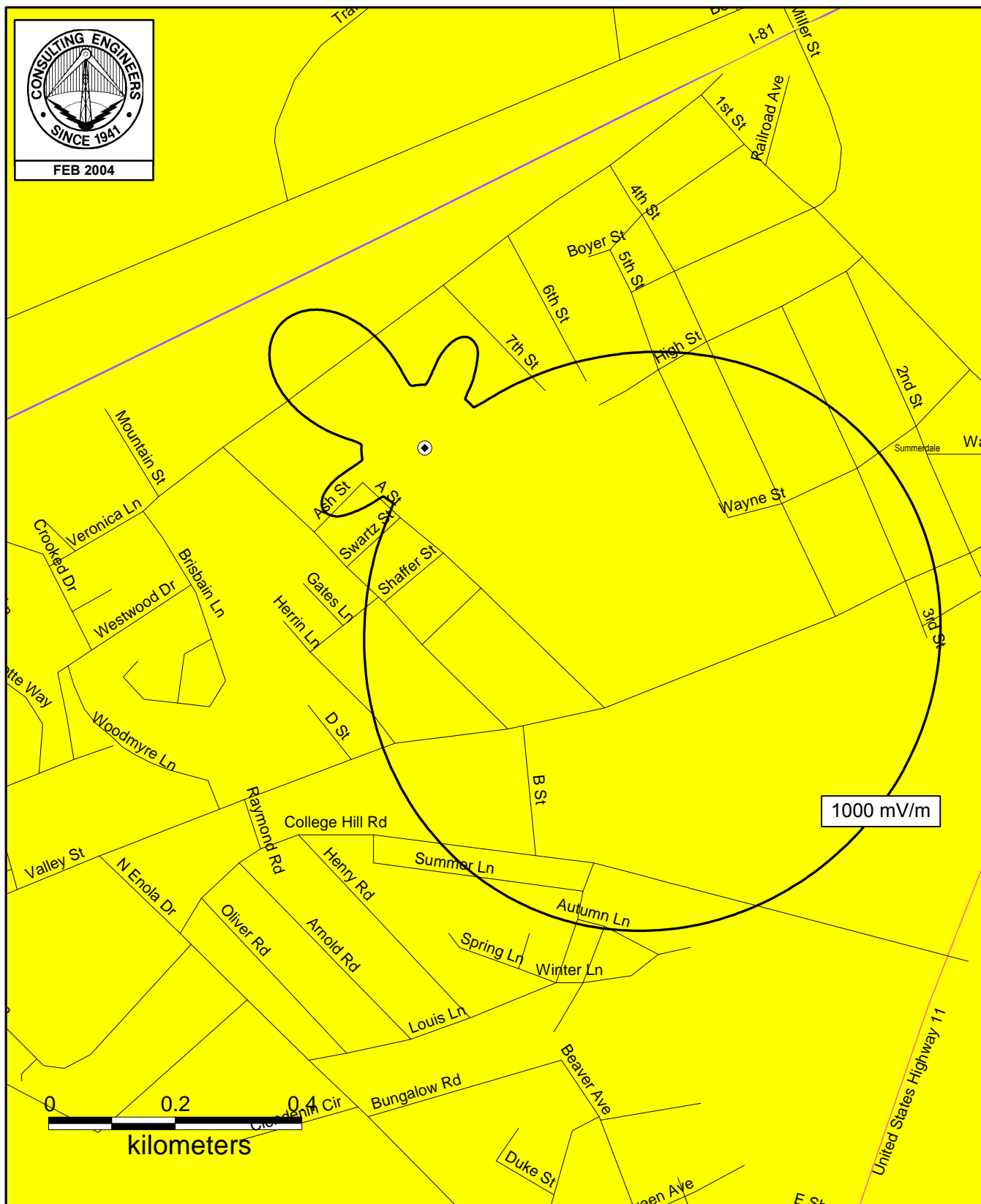
FCC M3 conductivity employed along all azimuths

Call: WTTR - License
Westminster, MD
Coordinates: 39-34-37 North 77-01-21 West
Frequency: 1470 kHz

FCC M3 conductivity employed along all azimuths

Call: WSHP - License
Shippensburg, PA
Coordinates: 40-04-30 North 77-32-09 West
Frequency: 1480 kHz

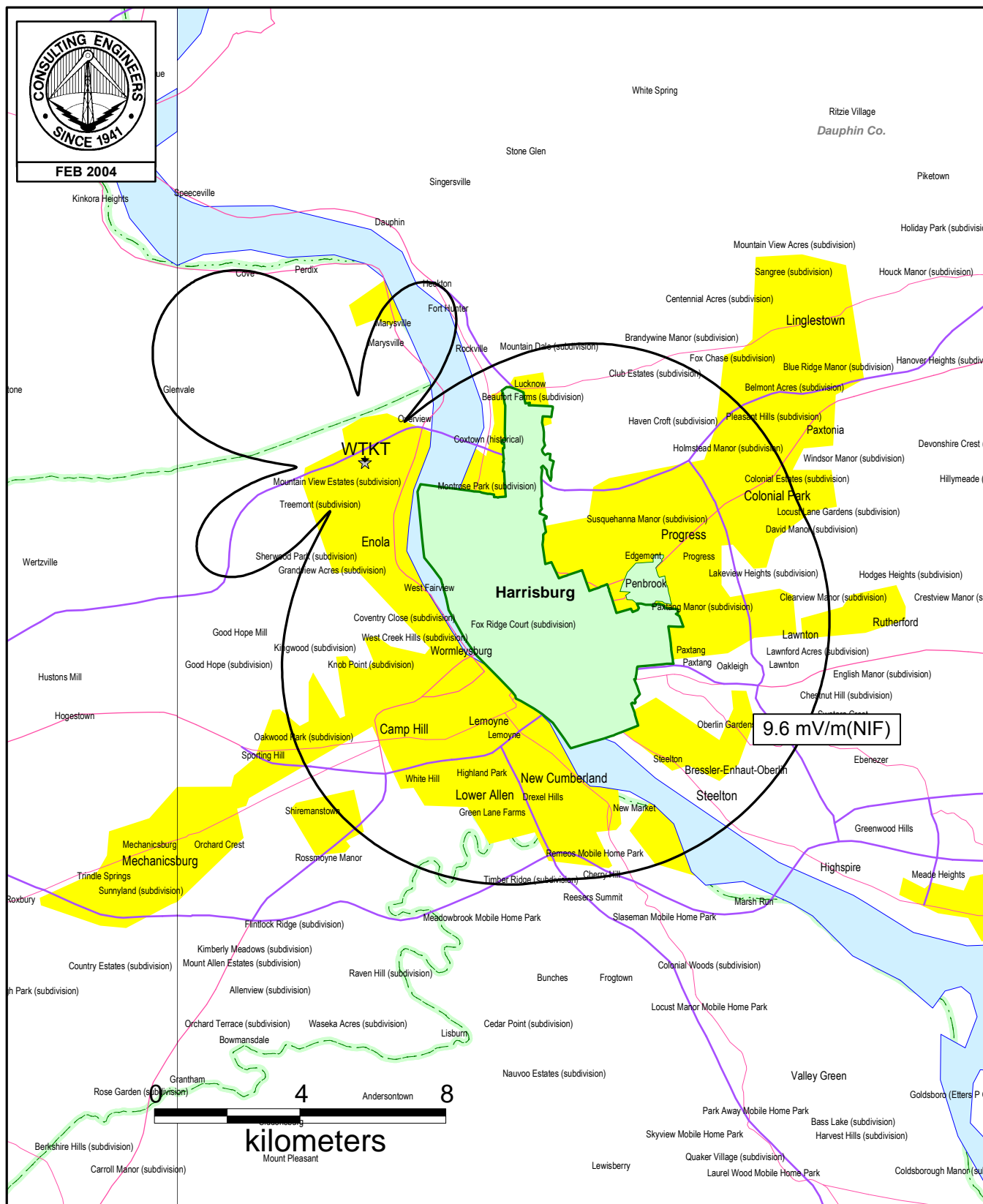
FCC M3 conductivity employed along all azimuths



PROPOSED NIGHTTIME FIELD STRENGTH CONTOURS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

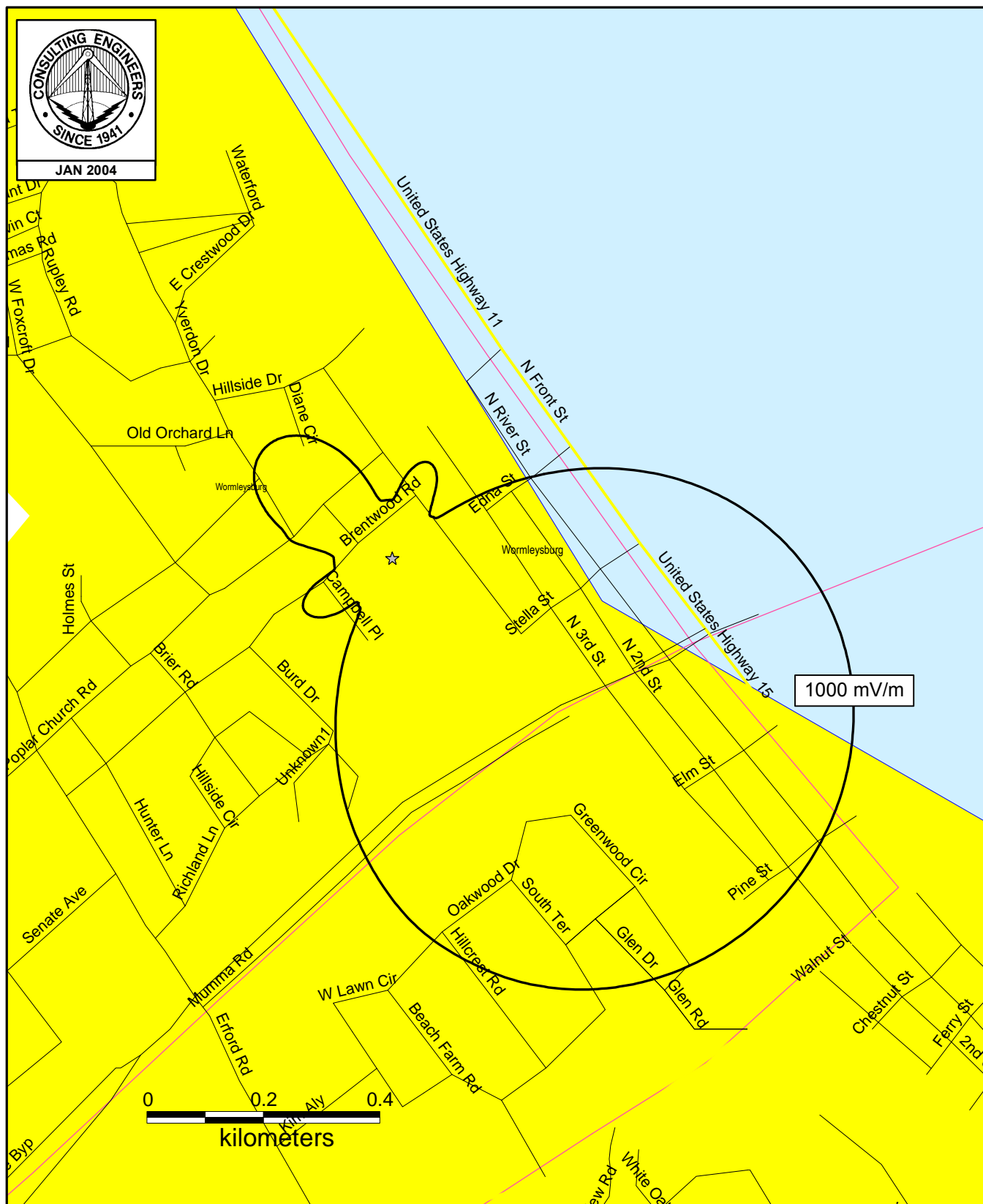
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



PROPOSED NIGHTTIME FIELD STRENGTH CONTOURS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

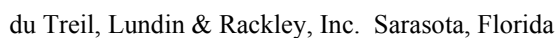
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EXISTING NIGHTTIME FIELD STRENGTH CONTOURS

RADIO STATION WKTK
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA

1460 KHZ 2.4 KW-D; 4.2 W-N U DA-N

Nighttime Allocation Study

RSS Calculation To WTKT

| To Station (Call) WTKT | 40-18-32 | 076-56-13 | | | | | |
|------------------------|----------|-----------|----------|----------|----------|----------|----------|
| From Station(Call) | WHIC | WIFI | WEMR | WBNS | WEMD | WKDV | WMBA |
| Frequency(kHz) | 1460.000 | 1460.000 | 1460.000 | 1460.000 | 1460.000 | 1460.000 | 1460.000 |
| G.C. Distance(km) | 315.800 | 183.700 | 161.300 | 508.900 | 186.100 | 180.200 | 278.000 |
| Slant Distance (km) | 373.802 | 271.548 | 256.965 | 546.786 | 273.200 | 269.230 | 342.496 |
| Bearing degrees | 170.174 | 278.605 | 210.545 | 83.604 | 337.069 | 15.746 | 95.290 |
| Mid-Pt Latitude(deg) | 41.710 | 40.200 | 40.940 | 40.170 | 39.540 | 39.530 | 40.460 |
| Geo. M.P. Lat. | 53.060 | 51.600 | 52.320 | 51.410 | 50.920 | 50.890 | 51.760 |
| Min-Angle(deg) | 23.790 | 37.660 | 41.370 | 14.640 | 37.290 | 38.200 | 26.740 |
| Max-Angle(deg) | 36.400 | 52.030 | 55.600 | 24.000 | 51.660 | 52.560 | 40.050 |
| Horiz. Rad (mV/m) | 147.780 | 41.760 | 144.540 | 287.210 | 119.290 | 84.960 | 144.350 |
| Max Vert. Rad. (mV/m) | 134.071 | 78.861 | 71.409 | 211.312 | 64.998 | 59.783 | 73.621 |
| Skywave Mult. | 187.602 | 307.708 | 330.172 | 107.544 | 307.156 | 313.660 | 219.207 |
| Night Limit (mV/m) | 5.030 | 4.853 | 4.715 | 4.545 | 3.993 | 3.750 | 3.228 |

| | | | | | | | |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|
| From Station(Call) | WZNZ | WDDY | WBCU | WRAD | CJOY | WKAM | WPON |
| Frequency(kHz) | 1460.000 | 1460.000 | 1460.000 | 1460.000 | 1460.000 | 1460.000 | 1460.000 |
| G.C. Distance(km) | 1191.900 | 366.500 | 747.900 | 472.800 | 446.800 | 758.700 | 600.600 |
| Slant Distance (km) | 1208.550 | 417.525 | 774.220 | 513.319 | 489.538 | 784.602 | 633.061 |
| Bearing degrees | 20.106 | 226.481 | 32.429 | 40.768 | 141.102 | 97.881 | 112.230 |
| Mid-Pt Latitude(deg) | 35.340 | 41.480 | 37.540 | 38.740 | 41.910 | 41.030 | 41.470 |
| Geo. M.P. Lat. | 46.610 | 52.890 | 48.810 | 50.040 | 53.210 | 52.210 | 52.710 |
| Min-Angle(deg) | 4.200 | 20.610 | 9.210 | 15.870 | 16.850 | 9.030 | 12.120 |
| Max-Angle(deg) | 8.650 | 32.270 | 16.030 | 25.740 | 27.130 | 15.770 | 20.340 |
| Horiz. Rad (mV/m) | 439.190 | 93.980 | 168.570 | 105.360 | 33.820 | 173.070 | 114.240 |
| Max Vert. Rad. (mV/m) | 435.969 | 87.024 | 161.263 | 84.350 | 80.395 | 162.843 | 110.463 |
| Skywave Mult. | 32.285 | 158.790 | 65.080 | 122.282 | 122.421 | 57.484 | 81.493 |
| Night Limit (mV/m) | 2.815 | 2.764 | 2.099 | 2.063 | 1.968 | 1.872 | 1.800 |

RSS Night Limit to station

50 % Exclusion = 09.578 mV/m from WHIC WIFI WEMR WBNS
 25 % Exclusion = 11.496 mV/m from WHIC WIFI WEMR WBNS WEMD WKDV WMBA
 0 % Exclusion = 15.239

Night Permissible Vertical Radiation From Station:WTKT
Coordinates: 40-18-32 076-56-13

| Toward Station | Freq. (kHz) | GC Dist. (km) | Bear (degT) | Angles (deg) | | Skywav Mult. (mV/m) | 50% Ex-RSS (mV/m) | 25% Ex-RSS (mV/m) | Req. Prot. (mV/m) | Perm. Vert-Rad mV/m@1km |
|----------------|-------------|---------------|-------------|--------------|------|---------------------|-------------------|-------------------|-------------------|-------------------------|
| | | | | Min | Max | | | | | |
| MEDIC | 1460 | 2821.3 | 303.7 | 0.0 | 0.0 | 4.17 | 2.93 | 4.07 | 1.46 | 1756.8 |
| * CJOY | 1460 | 446.8 | 323.3 | 22.2 | 22.2 | 133.43 | 14.49 | 17.39 | 7.25 | 271.6 |
| * CJOY | 1460 | 446.8 | 323.3 | 22.2 | 22.2 | 133.43 | 14.49 | 17.39 | 7.25 | 271.6 |
| CKRB | 1460 | 822. | 35.7 | 11.3 | 11.3 | 84.05 | 37.49 | 39.92 | 18.74 | 1115.1 |
| HJMN | 1460 | 3577.3 | 179.4 | 0.0 | 0.0 | .95 | 8.69 | 10.92 | 4.34 | 22786.4 |
| HJJH | 1460 | 3983. | 177.9 | 0.0 | 0.0 | .76 | 8.22 | 10.79 | 4.11 | 27162.7 |
| HJJW | 1460 | 3976.7 | 175.1 | 0.0 | 0.0 | .76 | 10.56 | 11.89 | 5.28 | 34790.1 |
| HJZU | 1460 | 4351.9 | 180.5 | 0.0 | 0.0 | .63 | 7.38 | 8.61 | 3.69 | 29506.1 |
| HJFL | 1460 | 4274.4 | 179. | 0.0 | 0.0 | .65 | 10.6 | 11.4 | 5.30 | 40769.5 |
| HJAL | 1460 | 3450.8 | 177.1 | 0.0 | 0.0 | 1.03 | 8.64 | 10.64 | 4.32 | 20881.1 |
| HJTF | 1460 | 3803.4 | 179.5 | 0.0 | 0.0 | .83 | 9.15 | 11.69 | 4.57 | 27591.4 |
| HJMY | 1460 | 3643.5 | 171.5 | 0.0 | 0.0 | .91 | 8.79 | 11.16 | 4.39 | 24061.2 |
| TILX | 1460 | 3415.2 | 194.5 | 0.0 | 0.0 | 1.06 | 3.58 | 4.54 | 1.79 | 8448.9 |
| CMHZ | 1460 | 2074. | 182.4 | 0.6 | 0.6 | 3.74 | 4.76 | 5. | 2.38 | 3179.6 |
| HIAN | 1460 | 2507. | 160.7 | 0.0 | 0.0 | 2.24 | 6.43 | 7.4 | 3.22 | 7171.2 |
| HIAR | 1460 | 2520. | 163. | 0.0 | 0.0 | 2.21 | 6.47 | 7.45 | 3.23 | 7310.1 |
| TGRN | 1460 | 2884.4 | 209.4 | 0.0 | 0.0 | 1.57 | 4.5 | 5.45 | 2.25 | 7155.3 |
| 4VEA | 1460 | 2330.1 | 167.4 | 0.0 | 0.0 | 2.72 | 7.47 | 8.17 | 3.73 | 6875.7 |
| HRQX | 1460 | 3064.9 | 202.6 | 0.0 | 0.0 | 1.36 | 3.68 | 3.86 | 1.84 | 6748.5 |
| HRIC | 1460 | 2919.5 | 204.5 | 0.0 | 0.0 | 1.53 | 4.19 | 4.36 | 2.09 | 6862.8 |
| XE | 1460 | 2952.5 | 248.9 | 0.0 | 0.0 | 3.73 | 12.23 | 14.27 | 6.12 | 8195.5 |
| XEYC | 1460 | 2804.6 | 259.4 | 0.0 | 0.0 | 4.23 | 7.73 | 10.93 | 3.86 | 4569.4 |
| XEYC | 1460 | 2804.6 | 259.4 | 0.0 | 0.0 | 4.23 | 7.73 | 10.93 | 3.86 | 4569.4 |
| XEPD | 1460 | 2616.9 | 245.8 | 0.0 | 0.0 | 5.02 | 10.48 | 14.55 | 5.24 | 5221.1 |
| XEUJ | 1460 | 2798.5 | 214.9 | 0.0 | 0.0 | 4.25 | 10.4 | 11.98 | 5.20 | 6113.7 |
| XE | 1460 | 3080.8 | 243.4 | 0.0 | 0.0 | 3.39 | 14.89 | 16.8 | 7.45 | 10990.6 |
| XEGRA | 1460 | 3407.3 | 226.9 | 0.0 | 0.0 | 2.67 | 33.32 | 33.32 | 16.66 | 31154.6 |
| XEHE | 1460 | 3268.8 | 235.4 | 0.0 | 0.0 | 2.95 | 27.11 | 28.45 | 13.55 | 22973.7 |
| XELX | 1460 | 3187. | 231.2 | 0.0 | 0.0 | 3.12 | 14.17 | 17.83 | 7.09 | 11352.5 |
| XE0023 | 1460 | 3359.6 | 240. | 0.0 | 0.0 | 2.77 | 21.39 | 23.64 | 10.70 | 19329.6 |
| XEKC | 1460 | 3207.6 | 222. | 0.0 | 0.0 | 3.07 | 17.81 | 21.68 | 8.91 | 14485.2 |
| XECPQ | 1460 | 2538.6 | 207.9 | 0.0 | 0.0 | 5.45 | 9.74 | 11.14 | 4.87 | 4471.5 |
| XEXQ | 1460 | 3030.5 | 235.5 | 0.0 | 0.0 | 3.51 | 14.36 | 18.02 | 7.18 | 10222.5 |
| XEHX | 1460 | 3331.8 | 255.2 | 0.0 | 0.0 | 2.82 | 9.46 | 12.58 | 4.73 | 8378.4 |
| XEARF | 1460 | 3147.3 | 259.8 | 0.0 | 0.0 | 3.22 | 8.79 | 12.32 | 4.40 | 6826.1 |
| XEOLA | 1460 | 2809.9 | 230.7 | 0.0 | 0.0 | 4.21 | 13.37 | 15.83 | 6.68 | 7938.7 |
| XEJH | 1460 | 2991. | 225.3 | 0.0 | 0.0 | 3.62 | 13.89 | 17.32 | 6.94 | 9596.9 |
| YNRV1 | 1460 | 3249.5 | 200.2 | 0.0 | 0.0 | 1.19 | 2.89 | 3.73 | 1.44 | 6070.1 |
| HOO 42 | 1460 | 3491.6 | 190.4 | 0.0 | 0.0 | 1.01 | 5.16 | 6.28 | 2.58 | 12819.8 |
| GRDTK | 1460 | 2168.6 | 163.7 | 0.2 | 0.2 | 3.31 | 3.66 | 5.09 | 1.83 | 2763.9 |
| WMCJ | 1460 | 1110.6 | 235.3 | 4.9 | 9.6 | 34.51 | 9.72 | 12.83 | 3.21 | 464.7 |
| WHAL | 1460 | 1130.7 | 221.8 | 4.7 | 9.4 | 34.35 | 9.41 | 12.13 | 3.03 | 441.5 |
| KTYM | 1460 | 3702.3 | 272.5 | 0.0 | 0.0 | 2.95 | 7.13 | 8.03 | 2.01 | 3404.2 |
| KTYM | 1460 | 3702.3 | 272.5 | 0.0 | 0.0 | 2.95 | 7.13 | 8.03 | 2.01 | 3404.2 |
| KION | 1460 | 3863.3 | 278.8 | 0.0 | 0.0 | 2.34 | 3.16 | 4.82 | 1.20 | 2579.3 |
| KCNR | 1460 | 3802. | 285.6 | 0.0 | 0.0 | 1.98 | 6.61 | 6.82 | 1.70 | 4297.4 |
| KZNT | 1460 | 2378.7 | 275.1 | 0.0 | 0.4 | 6.95 | 8.58 | 11.83 | 2.96 | 2127.8 |
| WZNZ | 1460 | 1191.7 | 202.9 | 4.2 | 8.7 | 32.29 | 7.68 | 9.13 | 2.28 | 353.4 |
| WXEM | 1460 | 927.5 | 224.4 | 6.7 | 12.4 | 46.66 | 14.13 | 16.86 | 4.21 | 451.6 |
| KHRA | 1460 | 7747.8 | 281.2 | 0.0 | 0.0 | .63 | 1.8 | 2.02 | .50 | 3984.6 |
| KXNO | 1460 | 1398.9 | 281.5 | 2.7 | 6.5 | 19.23 | 3.53 | 4.7 | 1.17 | 305.4 |
| WKAM | 1460 | 758.5 | 283.7 | 9.0 | 15.8 | 57.51 | 10.99 | 12.99 | 3.25 | 282.5 |
| WXOK | 1460 | 1689.9 | 234.1 | 1.1 | 4.2 | 17.35 | 7.77 | 10.07 | 2.52 | 725.2 |

* - enters the 25% RSS calculation
** - enters the 50% RSS calculation

Figure 12
Sheet 4 of 5

Night Permissible Vertical Radiation From Station:WTKT
Coordinates: 40-18-32 076-56-13

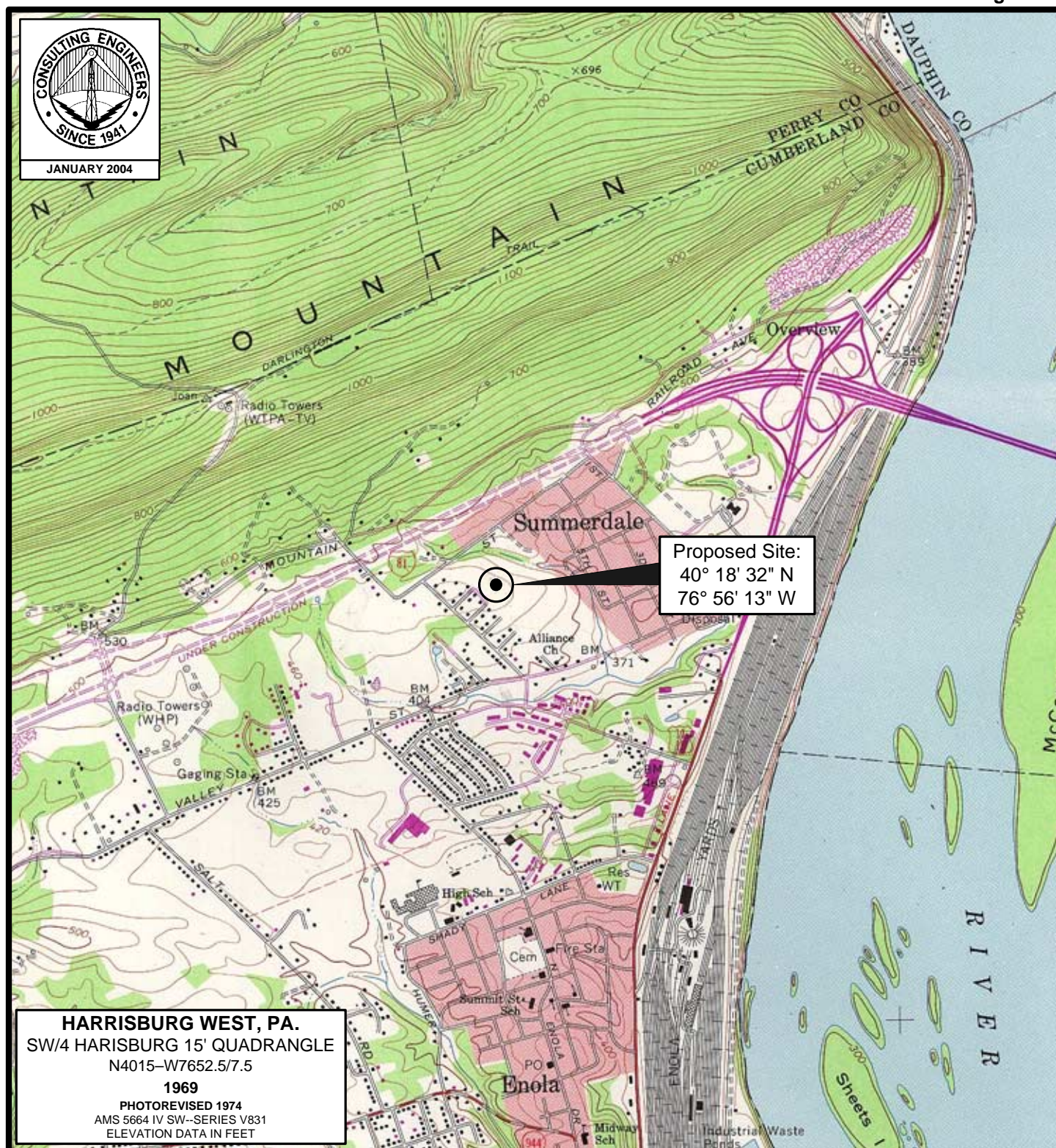
| Toward Station | Freq. (kHz) | GC Dist. (km) | Bear (degT) | Angles Min Max (deg) (deg) | | Skywav Mult. (mV/m) | 50% Ex-RSS (mV/m) | 25% Ex-RSS (mV/m) | Req. Prot. (mV/m) | Perm. Vert-Rad mV/m@1km |
|----------------|-------------|---------------|-------------|----------------------------------|------|---------------------|-------------------|-------------------|-------------------|-------------------------|
| KBSF | 1460 | 1679.7 | 246.3 | 1.1 | 4.3 | 16.72 | 10.42 | 12.43 | 3.11 | 928.7 |
| **WBET | 1460 | 528.9 | 66.6 | 14.0 | 23.1 | 98.45 | 17.8 | 20.04 | 9.22 | 468.4 |
| **WEMD | 1460 | 186.1 | 156.5 | 37.3 | 51.7 | 307.17 | 44.07 | 48.68 | 44.07 | 717.3 |
| WBRN | 1460 | 798.1 | 300.7 | 8.4 | 14.9 | 50.66 | 25.24 | 26.17 | 6.54 | 645.8 |
| WPON | 1460 | 600.5 | 296.6 | 12.1 | 20.3 | 81.55 | 16.8 | 20.96 | 5.24 | 321.3 |
| KDMA | 1460 | 1618. | 294.7 | 1.4 | 4.8 | 12.79 | 12.59 | 13.91 | 3.48 | 1359.1 |
| WEWO | 1460 | 654.6 | 201.1 | 10.9 | 18.6 | 79.41 | 21.39 | 24.26 | 6.07 | 381.9 |
| KLTC | 1460 | 2196.4 | 297.9 | 0.0 | 1.3 | 5.87 | 4.97 | 5.37 | 1.34 | 1145. |
| **WIFI | 1460 | 183.9 | 97.2 | 37.6 | 52.0 | 307.51 | 39.51 | 42.4 | 39.51 | 642.4 |
| KENO | 1460 | 3343.6 | 274.6 | 0.0 | 0.0 | 3.47 | 5.33 | 6.57 | 1.64 | 2368.4 |
| * WDDY | 1460 | 366.7 | 44.4 | 20.6 | 32.3 | 158.69 | 7.05 | 8.89 | 2.60 | 82. |
| * WHIC | 1460 | 315.9 | 350.6 | 23.8 | 36.4 | 187.57 | 8.42 | 10.51 | 3.56 | 95. |
| WBNS | 1460 | 508.7 | 267.5 | 14.7 | 24.0 | 107.61 | 5.56 | 7.72 | 1.93 | 89.7 |
| **WBKC | 1460 | 393.9 | 295.2 | 19.2 | 30.4 | 147.36 | 11.74 | 14.09 | 6.81 | 230.9 |
| * WMBA | 1460 | 277.8 | 277.4 | 26.8 | 40.1 | 219.37 | 9.22 | 12.91 | 4.20 | 95.8 |
| WTKT | 1460 | 5.4 | . | 0.0 | 0.0 | . | 9.67 | 11.58 | 2.89 | 95.8 |
| **WEMR | 1460 | 161.5 | 30. | 41.3 | 55.6 | 329.96 | 13.03 | 15.56 | 7.96 | 120.7 |
| WRRE | 1460 | 2673.8 | 153.5 | 0.0 | 0.0 | 8.66 | 15.33 | 18.28 | 4.57 | 2638.3 |
| WLRP | 1460 | 2620.5 | 155.8 | 0.0 | 0.0 | 8.99 | 14.7 | 18.78 | 4.69 | 2610.1 |
| WBCU | 1460 | 747.7 | 215.3 | 9.2 | 16.0 | 65.11 | 14.15 | 16.23 | 4.06 | 311.6 |
| KTFW | 1460 | 2005.7 | 251.1 | 0.0 | 2.3 | 11.97 | 16.93 | 19.01 | 4.75 | 1985.2 |
| KBRZ | 1460 | 2094.2 | 238.8 | 0.0 | 1.8 | 11.86 | 23.74 | 23.74 | 5.94 | 2503.4 |
| KCWM | 1460 | 2352.4 | 245.8 | 0.0 | 0.5 | 9.35 | 10.34 | 13.65 | 3.41 | 1825.3 |
| KBZO | 1460 | 2326.5 | 259.1 | 0.0 | 0.6 | 8.63 | 14.53 | 16.73 | 4.18 | 2423.6 |
| KTFW | 1460 | 2055.7 | 248. | 0.0 | 2.0 | 11.67 | 15.87 | 18.33 | 4.58 | 1963.2 |
| **WKDV | 1460 | 180.1 | 196. | 38.2 | 52.6 | 313.83 | 13.79 | 17.01 | 13.79 | 219.7 |
| WRAD | 1460 | 472.5 | 223. | 15.9 | 25.8 | 122.36 | 13.08 | 16.01 | 4.00 | 163.6 |
| KARR | 1460 | 3654.6 | 298.3 | 0.0 | 0.0 | 1.36 | 37.08 | 37.08 | 9.27 | 34102.3 |
| KUTI | 1460 | 3534.4 | 296. | 0.0 | 0.0 | 1.65 | 2.79 | 3.64 | .91 | 2764.7 |
| YVRJ | 1460 | 3515.8 | 167.3 | 0.0 | 0.0 | .99 | 5.92 | 7.48 | 2.96 | 14954.6 |
| CMHZ | 1460 | 2074. | 182.4 | 0.6 | 0.6 | 3.74 | 4.76 | 5. | 2.38 | 3179.6 |
| CMHZ | 1460 | 2074. | 182.4 | 0.6 | 0.6 | 3.74 | 4.76 | 5. | 2.38 | 3179.6 |
| NEW | 1470 | 3082.8 | 270.5 | 0.0 | 0.0 | 4.39 | 14.49 | 16.69 | 4.17 | 47498.5 |
| KUTY | 1470 | 3644.1 | 273.5 | 0.0 | 0.0 | 2.98 | 27.62 | 27.62 | 6.91 | 115713. |
| KIID | 1470 | 3786.6 | 281.9 | 0.0 | 0.0 | 2.24 | 9.61 | 11.18 | 2.79 | 62409.4 |
| WMMW | 1470 | 374.1 | 66.9 | 20.2 | 31.7 | 156.8 | 9.35 | 11.82 | 2.95 | 942.2 |
| WLVU | 1470 | 1461.9 | 203.1 | 2.3 | 6.0 | 23.36 | 21.03 | 21.76 | 5.44 | 11643.5 |
| WNNN | 1470 | 1599.8 | 191.9 | 1.5 | 4.9 | 20.39 | 13.99 | 15.06 | 3.77 | 9233.5 |
| WBIT | 1470 | 1173.5 | 211.7 | 4.4 | 8.9 | 32.81 | 37.14 | 37.14 | 9.29 | 14151.2 |
| WCLA | 1470 | 1007.7 | 207.7 | 5.9 | 11.1 | 41.76 | 33.3 | 34.91 | 8.73 | 10449.5 |
| WRGA | 1470 | 986. | 230. | 6.1 | 11.4 | 42.11 | 10.55 | 13.25 | 3.31 | 3933.9 |
| KWSL | 1470 | 1639.1 | 284.6 | 1.3 | 4.6 | 13.64 | 8. | 9.13 | 2.28 | 8362.7 |
| WCFJ | 1470 | 907.7 | 281.3 | 7.0 | 12.7 | 42.74 | 37.12 | 37.12 | 9.28 | 10857.4 |
| WMBD | 1470 | 1065.2 | 275.7 | 5.3 | 10.2 | 32.91 | 3.22 | 4.91 | 1.23 | 1865.3 |
| KAIR | 1470 | 1537.5 | 273. | 1.9 | 5.4 | 16.93 | 8.09 | 9.19 | 2.30 | 6784.4 |
| KLCL | 1470 | 1850.8 | 238. | 0.3 | 3.2 | 14.68 | 5.35 | 7.72 | 1.93 | 6572.7 |
| WAZN | 1470 | 502.9 | 61.2 | 14.8 | 24.3 | 105.28 | 9.18 | 10.37 | 2.59 | 1231.9 |
| WAZN | 1470 | 532.1 | 62. | 13.9 | 23.0 | 97.06 | 11.29 | 12.07 | 3.02 | 1554.8 |
| WTTR | 1470 | 81.6 | 184.9 | 60.3 | 71.0 | 424.92 | 9.55 | 9.92 | 2.48 | 291.9 |
| WLAM | 1470 | 691. | 50.6 | 10.2 | 17.5 | 63.06 | 4.93 | 7.04 | 1.76 | 1396.3 |
| WFNT | 1470 | 630.4 | 300.2 | 11.4 | 19.3 | 75.14 | 6.09 | 8.86 | 2.22 | 1474.1 |
| WKLZ | 1470 | 752.5 | 289.4 | 9.1 | 15.9 | 57.55 | 16.31 | 17.12 | 4.28 | 3719.1 |
| KLBP | 1470 | 1441.6 | 297. | 2.5 | 6.2 | 16.18 | 33.25 | 36.08 | 9.02 | 27878.1 |
| WNAU | 1470 | 1245.2 | 242.6 | 3.8 | 8.1 | 28.14 | 10.95 | 12.45 | 3.11 | 5531.8 |

* - enters the 25% RSS calculation
** - enters the 50% RSS calculation

Night Permissible Vertical Radiation From Station:WTKT
Coordinates: 40-18-32 076-56-13

| Toward Station | Freq. (kHz) | GC Dist. (km) | Bear (degT) | Angles Min Max (deg) (deg) | | Skywav Mult. (mV/m) | 50% Ex-RSS (mV/m) | 25% Ex-RSS (mV/m) | Req. Prot. (mV/m) | Perm. Vert-Rad mV/m@1km |
|-------------------|----------------|---------------------|----------------|----------------------------------|------|---------------------------|-------------------------|-------------------------|-------------------------|-------------------------------|
| WWBG | 1470 | 530.1 | 210.3 | 14.0 | 23.1 | 105.79 | 4.91 | 6.53 | 1.63 | 772. |
| WTKO | 1470 | 234.9 | 9.3 | 31.0 | 45.0 | 251.86 | 12.91 | 13.79 | 3.45 | 684.3 |
| WLQR | 1470 | 568. | 287.1 | 12.9 | 21.5 | 89.86 | 8.87 | 10.11 | 2.53 | 1406.8 |
| *WKAP | 1470 | 128.3 | 73. | 48.0 | 61.5 | 370.62 | 3.31 | 4.69 | 1.59 | 214. |
| WLOA | 1470 | 317.6 | 289.3 | 23.7 | 36.2 | 190.17 | 9.24 | 11.52 | 2.88 | 757.1 |
| WKCK | 1470 | 2650.3 | 154.6 | 0.0 | 0.0 | 8.81 | 13.37 | 14.77 | 3.69 | 20966.9 |
| WVOL | 1470 | 972.1 | 245.1 | 6.2 | 11.6 | 41.91 | 10.38 | 13.17 | 3.29 | 3929.3 |
| KVVZ | 1470 | 2210.4 | 254.1 | 0.0 | 1.2 | 9.86 | 6.18 | 7.84 | 1.96 | 9941. |
| KUOL | 1470 | 2222.7 | 245.2 | 0.0 | 1.1 | 10.35 | 18.3 | 19.93 | 4.98 | 24062.4 |
| KUOL | 1470 | 2222.6 | 245.1 | 0.0 | 1.1 | 10.36 | 18.24 | 19.88 | 4.97 | 23993.1 |
| KACE | 1470 | 2935.7 | 284.4 | 0.0 | 0.0 | 3.75 | 6.8 | 8.01 | 2.00 | 26721.6 |
| KELA | 1470 | 3723.5 | 296.6 | 0.0 | 0.0 | 1.39 | 5.5 | 5.7 | 1.43 | 51474.1 |
| KBSN | 1470 | 3442.4 | 297. | 0.0 | 0.0 | 1.72 | 11.17 | 11.17 | 2.79 | 81392.1 |
| WBKV | 1470 | 989.3 | 293.8 | 6.1 | 11.3 | 35.11 | 39.61 | 45.65 | 11.41 | 16251.9 |
| KKTY | 1470 | 2372.2 | 286. | 0.0 | 0.4 | 5.96 | 3.21 | 4.43 | 1.11 | 9307.5 |

* - enters the 25% RSS calculation
** - enters the 50% RSS calculation





VIEW LOOKING NORTH

SITE PHOTOGRAPHS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



VIEW LOOKING NORTHEAST

SITE PHOTOGRAPHS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



VIEW LOOKING EAST

SITE PHOTOGRAPHS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



VIEW LOOKING SOUTHEAST

SITE PHOTOGRAPHS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



VIEW LOOKING SOUTH

SITE PHOTOGRAPHS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



VIEW LOOKING SOUTHWEST

SITE PHOTOGRAPHS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.5 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



VIEW LOOKING WEST

SITE PHOTOGRAPHS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



VIEW LOOKING NORTHWEST

SITE PHOTOGRAPHS

RADIO STATION WTKT
HARRISBURG, PENNSYLVANIA
1460 KHZ 2.4 KW-D, 4.2 KW-N U DA-N

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