

***COMPREHENSIVE TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT***

**WMEC - MACOMB, ILLINOIS
FACILITY ID: 70537**

WEST CENTRAL ILLINOIS EDUC. TELECOMM. CORP.

JUNE 2017

APPLICATION FOR CONSTRUCTION PERMIT

The following engineering statement and attached exhibits have been prepared for **West Central Illinois Educational Telecommunications Corp.** ("Network Knowledge"), licensee of digital television station WMEC at Macomb, Illinois, and are in support of their application for construction permit.¹ This application is the initial construction permit application for WMEC following the incentive auction, and specifies technical parameters in close agreement with those provided in the Commission's table of allotments for the post-repack environment.

WMEC currently operates on television channel 21 with a maximum effective radiated power of 75 kilowatts, horizontally polarized, at a center of radiation of 325 meters above mean sea level utilizing a non-directional antenna. WMEC has been assigned channel 36 in the post repack environment. It is proposed that the facility operate with a maximum effective radiated power of 100 kilowatts elliptically polarized, also utilizing a non-directional antenna.

The antenna proposed for WMEC is slightly shorter due to the increase in the channel of operation. The resulting center of radiation 327.0 meters above mean sea level.² In addition, due to the increase in the center of radiation above mean sea level relative to the parameters in the repack table of allotments, the maximum effective radiated power is reduced slightly to 100 kilowatts to prevent the proposed noise limited contour from extending beyond the radius described by the allotment parameters.

¹ The Facility ID for WMEC at Macomb, Illinois 70537.

² This elevation corresponds to a center of radiation of 129.1 meters above average terrain based on an eight radial sample of the Commission's 30-meter terrain database.

JEREMY RUCK & ASSOCIATES, INC.

P.O. Box 415
221 S. 1st Avenue
Canton, IL 61520

Tel: 309.647.1200
Fax: 855.332.9537
jeremyruck.com

The antenna proposed for use by WMEC is a Dielectric elliptically polarized model TFU-24DSB-A. This antenna has a vertical component that is 30 percent of the horizontal component. Thus, the non-directional effective radiated power horizontal polarized component is 100 kW, while the vertical polarization component is 30 kW.

Exhibit E-1 provides an illustration of the noise limited service contours for the licensed, allocated, and proposed WMEC facilities. The noise limited contour for the licensed facilities on channel 21 has a field strength of 39.46 dBu F(50,90). The allocated and proposed facilities on channel 36 have a field strength value of 40.86 dBu F(50,90). Terrain elevations used to calculate the contour are based on a sample of the Commission's 30-meter terrain database. This map also illustrates the predicted 48 dBu F(50,90) service contour for the proposed facility, and demonstrates that this contour fully encompasses Macomb, Illinois, the community of license.

The closest FCC monitoring station to the proposed facility is at Allegan, Michigan, and is 467 kilometers from the proposed site. This distance exceeds by a significant margin the suggested notification distances in Section 73.1030(c)(3) of the Commission's Rules. Additionally, the existing WMEC site is not located within any area where coordination with the specified quiet zones would be required.

Network Knowledge has previously been granted a waiver of Section 73.1125 of the Commission's Rules to operate with the main studio for WMEC at Chatham, Illinois. This location is near Springfield, Illinois. Network Knowledge will continue to operate under the provisions of this waiver, and will abide by all applicable representations.

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6.26.2017

The proposed facility would not constitute a significant environmental impact, and is excluded from environmental processing. Implementation of the construction permit resulting from the proposed technical parameters would not increase the existing environmental impact already present from the WMEC facility. The tower utilized by WMEC is a registered structure, and has been assigned 1018309 as its Antenna Structure Registration Number.

Additionally, the proposed facilities for WMEC would not constitute an RF exposure hazard for persons in the vicinity of the site. Using the equations in Supplement A of *OET Bulletin 65*, and assuming a relative field value of 0.117 for downward angles, the calculated power density at two meters above ground is $2.94 \mu\text{W}/\text{cm}^2$. The relative field value of 0.117 occurs at a depression angle of 68 degrees, and represents the worst case for determining the power density at the site elevation. The tower utilized by WMEC also supports the antenna system for FM station WGNX at Colchester, Illinois.³ Using *FM Model*, and the licensed parameters, the calculated power density from that FM station is $1.08 \mu\text{W}/\text{cm}^2$ at a distance of 54 meters from the tower base.

For the purposes of this analysis, it is assumed that the maximum calculated power density for both facilities occurs at all locations in the vicinity of the tower. The aggregate power density is therefore $4.02 \mu\text{W}/\text{cm}^2$. This value complies with the upper limit of the uncontrolled environment condition of the Commission's safety standard under both frequency ranges by a wide margin. Network Knowledge certifies that it will coordinate with all users of the site to ensure that workers and other persons are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards.

³ The Facility ID for WGNX at Colchester, Illinois is 164225.

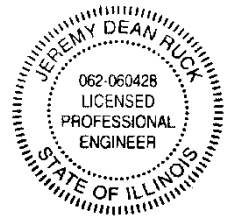
JEREMY RUCK & ASSOCIATES, INC.

P.O. Box 415
221 S. 1st Avenue
Canton, IL 61520

Tel: 309.647.1200
Fax: 855.332.9537
jeremyruck.com

Exhibit E-2 is also attached to this technical exhibit. This exhibit provides antenna technical data for the proposed antenna system to be utilized by WMEC.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2017

Jeremy D. Ruck, PE
June 26, 2017

JEREMY RUCK & ASSOCIATES, INC.

P.O. Box 415
221 S. 1st Avenue
Canton, IL 61520

Tel: 309.647.1200
Fax: 855.332.9537
jeremyruck.com

6.26.2017

WMEC.PROP

DTVBL70537
Latitude: 40-23-54 N
Longitude: 090-43-55 W
ERP: 99.50 kW
Channel: 36
Frequency: 605.0 MHz
AMSL Height: 327.0 m
Horiz. Pattern: Omni

WMEC.LIC

BLEDT20031031ADO
Latitude: 40-23-54 N
Longitude: 090-43-55 W
ERP: 75.00 kW
Channel: 21
Frequency: 515.0 MHz
AMSL Height: 325.0 m
Horiz. Pattern: Omni

WMEC.ALLOC

DTVBL70537
Latitude: 40-23-54 N
Longitude: 090-43-55 W
ERP: 103.00 kW
Channel: 36
Frequency: 605.0 MHz
AMSL Height: 325.0 m
Horiz. Pattern: Omni

Exhibit E-1

Noise Limited Contour Comparison
WMEC - Macomb, Illinois
West Central IL Educ. Telecom. Corp.
June, 2017

Jeremy Ruck & Associates, Inc.

- Proposed 40.86 dBu F(50,90) Contour
- Allocation 40.86 dBu F(50,90) Contour
- Licensed 39.46 dBu F(50,90) Contour
- Proposed 48 dBu F(50,90) Contour
- City of License Boundaries

City of License
Macomb, Illinois

WMEC Transmitter
Site Location

PROP 40.86 dBu F(50,90)
LIC 39.46 dBu F(50,90)
ALLOC 40.86 dBu F(50,90)

Scale 1:900,000

0 10 20 30 km

Horizontal Polarization AZIMUTH PATTERN

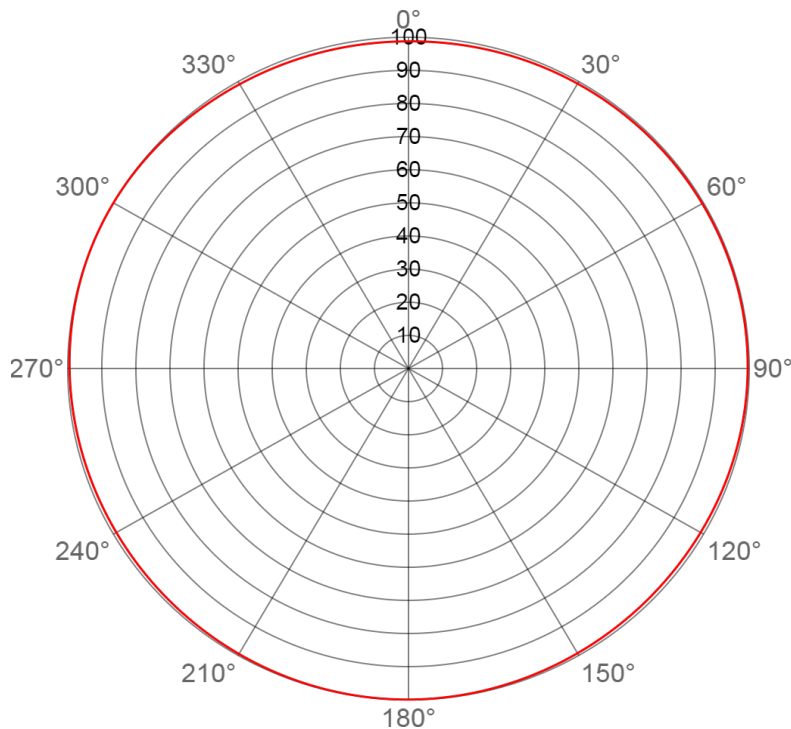
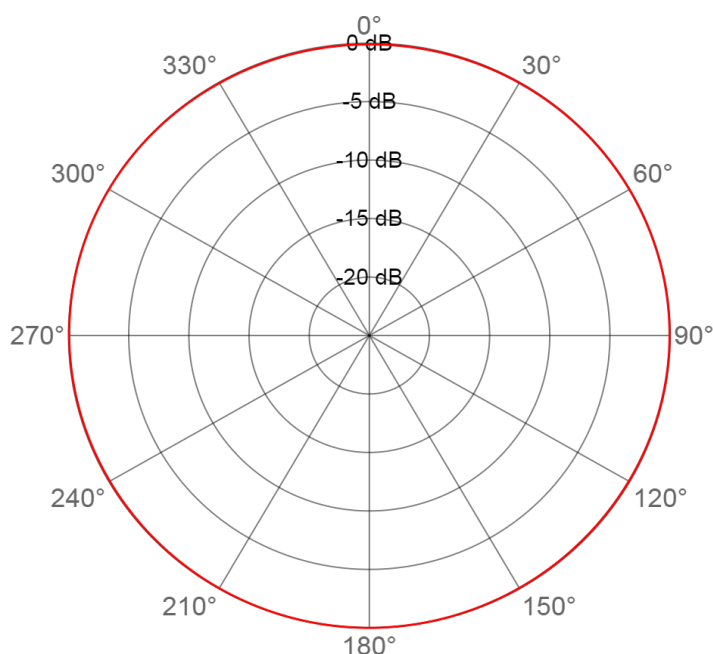


Exhibit No. **E-2A**
Date **26 Jun 2017**
Call Letters **WMEC**
Channel **36**
Antenna Type **TFU-24DSB-A-R**
Location **Macomb, IL**
Customer **Network Knowledge**

Gain **1.0 (0.00 dB)**
Calculated
Drawing # **DSB-A**

| Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value |
|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| 0 | 0.987 | 36 | 0.994 | 72 | 0.996 | 108 | 0.992 | 144 | 0.991 | 180 | 0.999 | 216 | 0.994 | 252 | 0.991 | 288 | 0.999 | 324 | 0.993 |
| 1 | 0.988 | 37 | 0.994 | 73 | 0.996 | 109 | 0.992 | 145 | 0.991 | 181 | 0.999 | 217 | 0.993 | 253 | 0.991 | 289 | 0.999 | 325 | 0.992 |
| 2 | 0.988 | 38 | 0.994 | 74 | 0.996 | 110 | 0.992 | 146 | 0.991 | 182 | 1.000 | 218 | 0.993 | 254 | 0.991 | 290 | 1.000 | 326 | 0.992 |
| 3 | 0.988 | 39 | 0.994 | 75 | 0.996 | 111 | 0.992 | 147 | 0.992 | 183 | 1.000 | 219 | 0.993 | 255 | 0.991 | 291 | 1.000 | 327 | 0.992 |
| 4 | 0.988 | 40 | 0.994 | 76 | 0.996 | 112 | 0.991 | 148 | 0.992 | 184 | 1.000 | 220 | 0.993 | 256 | 0.991 | 292 | 1.000 | 328 | 0.992 |
| 5 | 0.988 | 41 | 0.994 | 77 | 0.996 | 113 | 0.991 | 149 | 0.992 | 185 | 1.000 | 221 | 0.992 | 257 | 0.992 | 293 | 1.000 | 329 | 0.991 |
| 6 | 0.989 | 42 | 0.994 | 78 | 0.996 | 114 | 0.991 | 150 | 0.992 | 186 | 0.999 | 222 | 0.992 | 258 | 0.992 | 294 | 1.000 | 330 | 0.991 |
| 7 | 0.989 | 43 | 0.994 | 79 | 0.996 | 115 | 0.991 | 151 | 0.993 | 187 | 0.999 | 223 | 0.992 | 259 | 0.992 | 295 | 1.000 | 331 | 0.991 |
| 8 | 0.989 | 44 | 0.994 | 80 | 0.996 | 116 | 0.991 | 152 | 0.993 | 188 | 0.999 | 224 | 0.992 | 260 | 0.992 | 296 | 1.000 | 332 | 0.990 |
| 9 | 0.989 | 45 | 0.995 | 81 | 0.996 | 117 | 0.991 | 153 | 0.993 | 189 | 0.999 | 225 | 0.992 | 261 | 0.992 | 297 | 1.000 | 333 | 0.990 |
| 10 | 0.989 | 46 | 0.995 | 82 | 0.996 | 118 | 0.990 | 154 | 0.993 | 190 | 0.999 | 226 | 0.991 | 262 | 0.993 | 298 | 1.000 | 334 | 0.990 |
| 11 | 0.990 | 47 | 0.995 | 83 | 0.996 | 119 | 0.990 | 155 | 0.994 | 191 | 0.999 | 227 | 0.991 | 263 | 0.993 | 299 | 1.000 | 335 | 0.990 |
| 12 | 0.990 | 48 | 0.995 | 84 | 0.996 | 120 | 0.990 | 156 | 0.994 | 192 | 0.999 | 228 | 0.991 | 264 | 0.993 | 300 | 1.000 | 336 | 0.990 |
| 13 | 0.990 | 49 | 0.995 | 85 | 0.996 | 121 | 0.990 | 157 | 0.994 | 193 | 0.999 | 229 | 0.991 | 265 | 0.993 | 301 | 1.000 | 337 | 0.989 |
| 14 | 0.990 | 50 | 0.995 | 86 | 0.996 | 122 | 0.990 | 158 | 0.995 | 194 | 0.999 | 230 | 0.991 | 266 | 0.994 | 302 | 1.000 | 338 | 0.989 |
| 15 | 0.990 | 51 | 0.995 | 87 | 0.996 | 123 | 0.990 | 159 | 0.995 | 195 | 0.998 | 231 | 0.991 | 267 | 0.994 | 303 | 0.999 | 339 | 0.989 |
| 16 | 0.990 | 52 | 0.995 | 88 | 0.996 | 124 | 0.990 | 160 | 0.995 | 196 | 0.998 | 232 | 0.991 | 268 | 0.994 | 304 | 0.999 | 340 | 0.989 |
| 17 | 0.991 | 53 | 0.995 | 89 | 0.996 | 125 | 0.990 | 161 | 0.995 | 197 | 0.998 | 233 | 0.990 | 269 | 0.995 | 305 | 0.999 | 341 | 0.989 |
| 18 | 0.991 | 54 | 0.995 | 90 | 0.996 | 126 | 0.989 | 162 | 0.996 | 198 | 0.998 | 234 | 0.990 | 270 | 0.995 | 306 | 0.999 | 342 | 0.989 |
| 19 | 0.991 | 55 | 0.995 | 91 | 0.996 | 127 | 0.989 | 163 | 0.996 | 199 | 0.998 | 235 | 0.990 | 271 | 0.995 | 307 | 0.998 | 343 | 0.988 |
| 20 | 0.991 | 56 | 0.995 | 92 | 0.995 | 128 | 0.989 | 164 | 0.996 | 200 | 0.997 | 236 | 0.990 | 272 | 0.995 | 308 | 0.998 | 344 | 0.988 |
| 21 | 0.991 | 57 | 0.995 | 93 | 0.995 | 129 | 0.989 | 165 | 0.997 | 201 | 0.997 | 237 | 0.990 | 273 | 0.996 | 309 | 0.998 | 345 | 0.988 |
| 22 | 0.992 | 58 | 0.995 | 94 | 0.995 | 130 | 0.989 | 166 | 0.997 | 202 | 0.997 | 238 | 0.990 | 274 | 0.996 | 310 | 0.998 | 346 | 0.988 |
| 23 | 0.992 | 59 | 0.996 | 95 | 0.995 | 131 | 0.989 | 167 | 0.997 | 203 | 0.997 | 239 | 0.990 | 275 | 0.996 | 311 | 0.997 | 347 | 0.988 |
| 24 | 0.992 | 60 | 0.996 | 96 | 0.995 | 132 | 0.989 | 168 | 0.997 | 204 | 0.996 | 240 | 0.990 | 276 | 0.996 | 312 | 0.997 | 348 | 0.988 |
| 25 | 0.992 | 61 | 0.996 | 97 | 0.995 | 133 | 0.990 | 169 | 0.998 | 205 | 0.996 | 241 | 0.990 | 277 | 0.997 | 313 | 0.997 | 349 | 0.988 |
| 26 | 0.992 | 62 | 0.996 | 98 | 0.994 | 134 | 0.990 | 170 | 0.998 | 206 | 0.996 | 242 | 0.990 | 278 | 0.997 | 314 | 0.996 | 350 | 0.988 |
| 27 | 0.992 | 63 | 0.996 | 99 | 0.994 | 135 | 0.990 | 171 | 0.998 | 207 | 0.996 | 243 | 0.990 | 279 | 0.997 | 315 | 0.996 | 351 | 0.988 |
| 28 | 0.993 | 64 | 0.996 | 100 | 0.994 | 136 | 0.990 | 172 | 0.998 | 208 | 0.996 | 244 | 0.990 | 280 | 0.998 | 316 | 0.996 | 352 | 0.988 |
| 29 | 0.993 | 65 | 0.996 | 101 | 0.994 | 137 | 0.990 | 173 | 0.998 | 209 | 0.995 | 245 | 0.990 | 281 | 0.998 | 317 | 0.995 | 353 | 0.988 |
| 30 | 0.993 | 66 | 0.996 | 102 | 0.994 | 138 | 0.990 | 174 | 0.999 | 210 | 0.995 | 246 | 0.990 | 282 | 0.998 | 318 | 0.995 | 354 | 0.988 |
| 31 | 0.993 | 67 | 0.996 | 103 | 0.993 | 139 | 0.990 | 175 | 0.999 | 211 | 0.995 | 247 | 0.990 | 283 | 0.998 | 319 | 0.995 | 355 | 0.988 |
| 32 | 0.993 | 68 | 0.996 | 104 | 0.993 | 140 | 0.990 | 176 | 0.999 | 212 | 0.995 | 248 | 0.990 | 284 | 0.999 | 320 | 0.994 | 356 | 0.988 |
| 33 | 0.993 | 69 | 0.996 | 105 | 0.993 | 141 | 0.990 | 177 | 0.999 | 213 | 0.994 | 249 | 0.990 | 285 | 0.999 | 321 | 0.994 | 357 | 0.988 |
| 34 | 0.993 | 70 | 0.996 | 106 | 0.993 | 142 | 0.991 | 178 | 0.999 | 214 | 0.994 | 250 | 0.990 | 286 | 0.999 | 322 | 0.993 | 358 | 0.988 |
| 35 | 0.994 | 71 | 0.996 | 107 | 0.993 | 143 | 0.991 | 179 | 0.999 | 215 | 0.994 | 251 | 0.991 | 287 | 0.999 | 323 | 0.993 | 359 | 0.988 |

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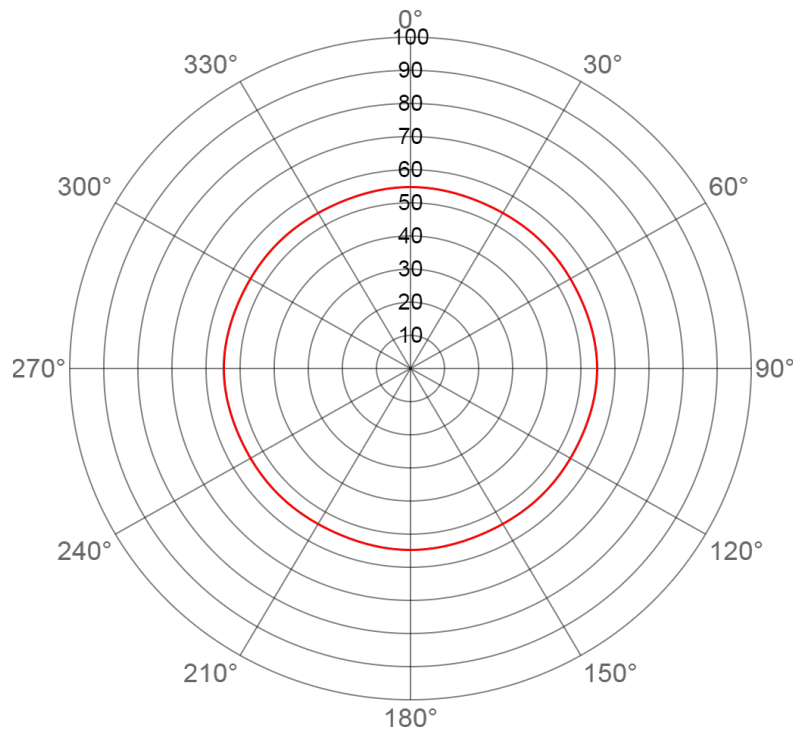
Horizontal Polarization AZIMUTH PATTERN (dB)

Exhibit No. **E-2B**
Date **26 Jun 2017**
Call Letters **WMEC**
Channel **36**
Antenna Type **TFU-24DSB-A-R**
Location **Macomb, IL**
Customer **Network Knowledge**

Gain **1.0 (0.00 dB)**
Calculated
Drawing # **DSB-A**

| Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB |
|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| 0 | -0.110 | 36 | -0.055 | 72 | -0.033 | 108 | -0.067 | 144 | -0.078 | 180 | -0.005 | 216 | -0.056 | 252 | -0.081 | 288 | -0.006 | 324 | -0.063 |
| 1 | -0.108 | 37 | -0.054 | 73 | -0.033 | 109 | -0.069 | 145 | -0.076 | 181 | -0.005 | 217 | -0.058 | 253 | -0.079 | 289 | -0.005 | 325 | -0.066 |
| 2 | -0.107 | 38 | -0.053 | 74 | -0.033 | 110 | -0.071 | 146 | -0.074 | 182 | -0.004 | 218 | -0.060 | 254 | -0.078 | 290 | -0.004 | 326 | -0.069 |
| 3 | -0.105 | 39 | -0.052 | 75 | -0.032 | 111 | -0.073 | 147 | -0.072 | 183 | -0.004 | 219 | -0.062 | 255 | -0.077 | 291 | -0.003 | 327 | -0.071 |
| 4 | -0.103 | 40 | -0.052 | 76 | -0.032 | 112 | -0.075 | 148 | -0.070 | 184 | -0.004 | 220 | -0.064 | 256 | -0.075 | 292 | -0.002 | 328 | -0.074 |
| 5 | -0.102 | 41 | -0.051 | 77 | -0.032 | 113 | -0.076 | 149 | -0.068 | 185 | -0.004 | 221 | -0.066 | 257 | -0.073 | 293 | -0.001 | 329 | -0.077 |
| 6 | -0.100 | 42 | -0.050 | 78 | -0.032 | 114 | -0.078 | 150 | -0.066 | 186 | -0.005 | 222 | -0.068 | 258 | -0.072 | 294 | -0.000 | 330 | -0.079 |
| 7 | -0.098 | 43 | -0.049 | 79 | -0.032 | 115 | -0.080 | 151 | -0.064 | 187 | -0.005 | 223 | -0.069 | 259 | -0.070 | 295 | -0.000 | 331 | -0.081 |
| 8 | -0.097 | 44 | -0.048 | 80 | -0.032 | 116 | -0.081 | 152 | -0.062 | 188 | -0.006 | 224 | -0.071 | 260 | -0.068 | 296 | 0.000 | 332 | -0.083 |
| 9 | -0.095 | 45 | -0.047 | 81 | -0.032 | 117 | -0.083 | 153 | -0.059 | 189 | -0.007 | 225 | -0.073 | 261 | -0.066 | 297 | -0.000 | 333 | -0.085 |
| 10 | -0.093 | 46 | -0.047 | 82 | -0.032 | 118 | -0.084 | 154 | -0.057 | 190 | -0.008 | 226 | -0.074 | 262 | -0.064 | 298 | -0.000 | 334 | -0.087 |
| 11 | -0.092 | 47 | -0.046 | 83 | -0.033 | 119 | -0.086 | 155 | -0.055 | 191 | -0.009 | 227 | -0.076 | 263 | -0.062 | 299 | -0.001 | 335 | -0.089 |
| 12 | -0.090 | 48 | -0.045 | 84 | -0.033 | 120 | -0.087 | 156 | -0.052 | 192 | -0.010 | 228 | -0.077 | 264 | -0.059 | 300 | -0.002 | 336 | -0.091 |
| 13 | -0.088 | 49 | -0.045 | 85 | -0.033 | 121 | -0.088 | 157 | -0.050 | 193 | -0.011 | 229 | -0.078 | 265 | -0.057 | 301 | -0.003 | 337 | -0.093 |
| 14 | -0.087 | 50 | -0.044 | 86 | -0.034 | 122 | -0.089 | 158 | -0.047 | 194 | -0.012 | 230 | -0.080 | 266 | -0.055 | 302 | -0.004 | 338 | -0.094 |
| 15 | -0.085 | 51 | -0.043 | 87 | -0.035 | 123 | -0.090 | 159 | -0.045 | 195 | -0.014 | 231 | -0.081 | 267 | -0.053 | 303 | -0.005 | 339 | -0.096 |
| 16 | -0.083 | 52 | -0.043 | 88 | -0.035 | 124 | -0.091 | 160 | -0.042 | 196 | -0.015 | 232 | -0.082 | 268 | -0.050 | 304 | -0.007 | 340 | -0.097 |
| 17 | -0.082 | 53 | -0.042 | 89 | -0.036 | 125 | -0.091 | 161 | -0.040 | 197 | -0.017 | 233 | -0.083 | 269 | -0.048 | 305 | -0.009 | 341 | -0.098 |
| 18 | -0.080 | 54 | -0.041 | 90 | -0.037 | 126 | -0.092 | 162 | -0.037 | 198 | -0.019 | 234 | -0.084 | 270 | -0.045 | 306 | -0.011 | 342 | -0.099 |
| 19 | -0.078 | 55 | -0.041 | 91 | -0.038 | 127 | -0.092 | 163 | -0.035 | 199 | -0.021 | 235 | -0.085 | 271 | -0.043 | 307 | -0.013 | 343 | -0.101 |
| 20 | -0.077 | 56 | -0.040 | 92 | -0.040 | 128 | -0.093 | 164 | -0.032 | 200 | -0.022 | 236 | -0.085 | 272 | -0.040 | 308 | -0.016 | 344 | -0.102 |
| 21 | -0.075 | 57 | -0.040 | 93 | -0.041 | 129 | -0.093 | 165 | -0.030 | 201 | -0.024 | 237 | -0.086 | 273 | -0.038 | 309 | -0.018 | 345 | -0.103 |
| 22 | -0.074 | 58 | -0.039 | 94 | -0.042 | 130 | -0.093 | 166 | -0.028 | 202 | -0.026 | 238 | -0.087 | 274 | -0.036 | 310 | -0.021 | 346 | -0.104 |
| 23 | -0.072 | 59 | -0.039 | 95 | -0.044 | 131 | -0.092 | 167 | -0.025 | 203 | -0.028 | 239 | -0.087 | 275 | -0.033 | 311 | -0.024 | 347 | -0.104 |
| 24 | -0.071 | 60 | -0.038 | 96 | -0.045 | 132 | -0.092 | 168 | -0.023 | 204 | -0.031 | 240 | -0.087 | 276 | -0.031 | 312 | -0.026 | 348 | -0.105 |
| 25 | -0.069 | 61 | -0.038 | 97 | -0.047 | 133 | -0.091 | 169 | -0.021 | 205 | -0.033 | 241 | -0.087 | 277 | -0.028 | 313 | -0.029 | 349 | -0.106 |
| 26 | -0.068 | 62 | -0.037 | 98 | -0.048 | 134 | -0.091 | 170 | -0.019 | 206 | -0.035 | 242 | -0.087 | 278 | -0.026 | 314 | -0.032 | 350 | -0.106 |
| 27 | -0.066 | 63 | -0.037 | 99 | -0.050 | 135 | -0.090 | 171 | -0.017 | 207 | -0.037 | 243 | -0.087 | 279 | -0.023 | 315 | -0.035 | 351 | -0.107 |
| 28 | -0.065 | 64 | -0.036 | 100 | -0.052 | 136 | -0.089 | 172 | -0.015 | 208 | -0.039 | 244 | -0.087 | 280 | -0.021 | 316 | -0.038 | 352 | -0.107 |
| 29 | -0.064 | 65 | -0.036 | 101 | -0.054 | 137 | -0.088 | 173 | -0.013 | 209 | -0.041 | 245 | -0.087 | 281 | -0.019 | 317 | -0.042 | 353 | -0.108 |
| 30 | -0.062 | 66 | -0.036 | 102 | -0.056 | 138 | -0.087 | 174 | -0.012 | 210 | -0.043 | 246 | -0.086 | 282 | -0.017 | 318 | -0.045 | 354 | -0.108 |
| 31 | -0.061 | 67 | -0.035 | 103 | -0.058 | 139 | -0.086 | 175 | -0.010 | 211 | -0.046 | 247 | -0.086 | 283 | -0.015 | 319 | -0.048 | 355 | -0.108 |
| 32 | -0.060 | 68 | -0.035 | 104 | -0.059 | 140 | -0.084 | 176 | -0.009 | 212 | -0.048 | 248 | -0.085 | 284 | -0.013 | 320 | -0.051 | 356 | -0.109 |
| 33 | -0.059 | 69 | -0.034 | 105 | -0.061 | 141 | -0.083 | 177 | -0.008 | 213 | -0.050 | 249 | -0.084 | 285 | -0.011 | 321 | -0.054 | 357 | -0.109 |
| 34 | -0.058 | 70 | -0.034 | 106 | -0.063 | 142 | -0.081 | 178 | -0.007 | 214 | -0.052 | 250 | -0.083 | 286 | -0.009 | 322 | -0.057 | 358 | -0.109 |
| 35 | -0.056 | 71 | -0.034 | 107 | -0.065 | 143 | -0.080 | 179 | -0.006 | 215 | -0.054 | 251 | -0.082 | 287 | -0.008 | 323 | -0.060 | 359 | -0.109 |

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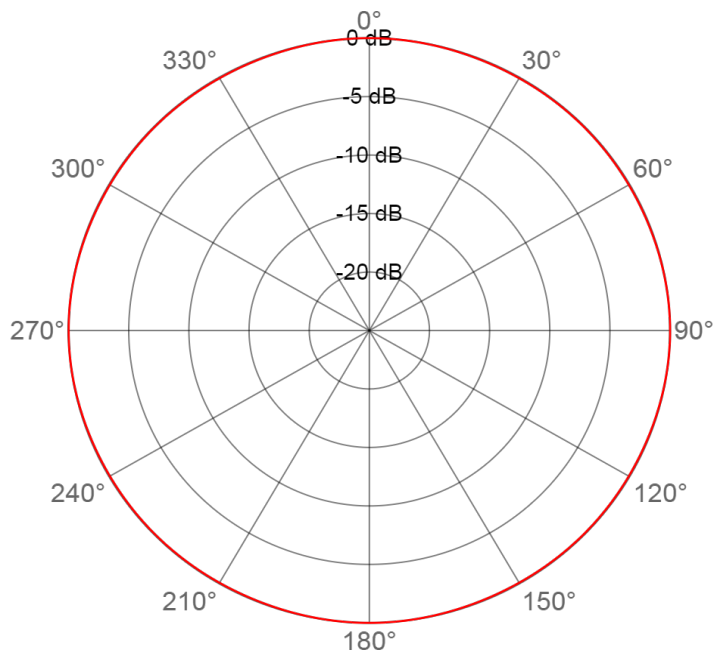
Vertical Polarization AZIMUTH PATTERN

Exhibit No. **E-2C**
Date **26 Jun 2017**
Call Letters **WMEC**
Channel **36**
Antenna Type **TFU-24DSB-A-R**
Location **Macomb, IL**
Customer **Network Knowledge**

Gain **1.0 (0.00 dB)**
Calculated
Drawing # **DSB-A**

| Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value | Deg | Value |
|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------|
| 0 | 0.548 | 36 | 0.542 | 72 | 0.543 | 108 | 0.544 | 144 | 0.542 | 180 | 0.548 | 216 | 0.542 | 252 | 0.543 | 288 | 0.544 | 324 | 0.542 |
| 1 | 0.548 | 37 | 0.542 | 73 | 0.544 | 109 | 0.543 | 145 | 0.542 | 181 | 0.548 | 217 | 0.542 | 253 | 0.544 | 289 | 0.543 | 325 | 0.542 |
| 2 | 0.548 | 38 | 0.543 | 74 | 0.544 | 110 | 0.543 | 146 | 0.542 | 182 | 0.548 | 218 | 0.543 | 254 | 0.544 | 290 | 0.543 | 326 | 0.542 |
| 3 | 0.548 | 39 | 0.543 | 75 | 0.544 | 111 | 0.543 | 147 | 0.542 | 183 | 0.548 | 219 | 0.543 | 255 | 0.544 | 291 | 0.543 | 327 | 0.542 |
| 4 | 0.547 | 40 | 0.543 | 76 | 0.545 | 112 | 0.543 | 148 | 0.542 | 184 | 0.547 | 220 | 0.543 | 256 | 0.545 | 292 | 0.543 | 328 | 0.542 |
| 5 | 0.547 | 41 | 0.543 | 77 | 0.545 | 113 | 0.543 | 149 | 0.542 | 185 | 0.547 | 221 | 0.543 | 257 | 0.545 | 293 | 0.543 | 329 | 0.542 |
| 6 | 0.547 | 42 | 0.543 | 78 | 0.545 | 114 | 0.542 | 150 | 0.542 | 186 | 0.547 | 222 | 0.543 | 258 | 0.545 | 294 | 0.542 | 330 | 0.542 |
| 7 | 0.547 | 43 | 0.543 | 79 | 0.546 | 115 | 0.542 | 151 | 0.542 | 187 | 0.547 | 223 | 0.543 | 259 | 0.546 | 295 | 0.542 | 331 | 0.542 |
| 8 | 0.547 | 44 | 0.543 | 80 | 0.546 | 116 | 0.542 | 152 | 0.542 | 188 | 0.547 | 224 | 0.543 | 260 | 0.546 | 296 | 0.542 | 332 | 0.542 |
| 9 | 0.546 | 45 | 0.543 | 81 | 0.546 | 117 | 0.542 | 153 | 0.542 | 189 | 0.546 | 225 | 0.543 | 261 | 0.546 | 297 | 0.542 | 333 | 0.542 |
| 10 | 0.546 | 46 | 0.543 | 82 | 0.547 | 118 | 0.542 | 154 | 0.542 | 190 | 0.546 | 226 | 0.543 | 262 | 0.547 | 298 | 0.542 | 334 | 0.542 |
| 11 | 0.546 | 47 | 0.543 | 83 | 0.547 | 119 | 0.542 | 155 | 0.542 | 191 | 0.546 | 227 | 0.543 | 263 | 0.547 | 299 | 0.542 | 335 | 0.542 |
| 12 | 0.545 | 48 | 0.543 | 84 | 0.547 | 120 | 0.542 | 156 | 0.542 | 192 | 0.545 | 228 | 0.543 | 264 | 0.547 | 300 | 0.542 | 336 | 0.542 |
| 13 | 0.545 | 49 | 0.543 | 85 | 0.547 | 121 | 0.542 | 157 | 0.542 | 193 | 0.545 | 229 | 0.543 | 265 | 0.547 | 301 | 0.542 | 337 | 0.542 |
| 14 | 0.545 | 50 | 0.543 | 86 | 0.547 | 122 | 0.542 | 158 | 0.542 | 194 | 0.545 | 230 | 0.543 | 266 | 0.547 | 302 | 0.542 | 338 | 0.542 |
| 15 | 0.544 | 51 | 0.543 | 87 | 0.548 | 123 | 0.542 | 159 | 0.543 | 195 | 0.544 | 231 | 0.543 | 267 | 0.548 | 303 | 0.542 | 339 | 0.543 |
| 16 | 0.544 | 52 | 0.542 | 88 | 0.548 | 124 | 0.542 | 160 | 0.543 | 196 | 0.544 | 232 | 0.542 | 268 | 0.548 | 304 | 0.542 | 340 | 0.543 |
| 17 | 0.544 | 53 | 0.542 | 89 | 0.548 | 125 | 0.542 | 161 | 0.543 | 197 | 0.544 | 233 | 0.542 | 269 | 0.548 | 305 | 0.542 | 341 | 0.543 |
| 18 | 0.544 | 54 | 0.542 | 90 | 0.548 | 126 | 0.542 | 162 | 0.543 | 198 | 0.544 | 234 | 0.542 | 270 | 0.548 | 306 | 0.542 | 342 | 0.543 |
| 19 | 0.543 | 55 | 0.542 | 91 | 0.548 | 127 | 0.542 | 163 | 0.544 | 199 | 0.543 | 235 | 0.542 | 271 | 0.548 | 307 | 0.542 | 343 | 0.544 |
| 20 | 0.543 | 56 | 0.542 | 92 | 0.548 | 128 | 0.543 | 164 | 0.544 | 200 | 0.543 | 236 | 0.542 | 272 | 0.548 | 308 | 0.543 | 344 | 0.544 |
| 21 | 0.543 | 57 | 0.542 | 93 | 0.548 | 129 | 0.543 | 165 | 0.544 | 201 | 0.543 | 237 | 0.542 | 273 | 0.548 | 309 | 0.543 | 345 | 0.544 |
| 22 | 0.543 | 58 | 0.542 | 94 | 0.547 | 130 | 0.543 | 166 | 0.545 | 202 | 0.543 | 238 | 0.542 | 274 | 0.547 | 310 | 0.543 | 346 | 0.545 |
| 23 | 0.543 | 59 | 0.542 | 95 | 0.547 | 131 | 0.543 | 167 | 0.545 | 203 | 0.543 | 239 | 0.542 | 275 | 0.547 | 311 | 0.543 | 347 | 0.545 |
| 24 | 0.542 | 60 | 0.542 | 96 | 0.547 | 132 | 0.543 | 168 | 0.545 | 204 | 0.542 | 240 | 0.542 | 276 | 0.547 | 312 | 0.543 | 348 | 0.545 |
| 25 | 0.542 | 61 | 0.542 | 97 | 0.547 | 133 | 0.543 | 169 | 0.546 | 205 | 0.542 | 241 | 0.542 | 277 | 0.547 | 313 | 0.543 | 349 | 0.546 |
| 26 | 0.542 | 62 | 0.542 | 98 | 0.547 | 134 | 0.543 | 170 | 0.546 | 206 | 0.542 | 242 | 0.542 | 278 | 0.547 | 314 | 0.543 | 350 | 0.546 |
| 27 | 0.542 | 63 | 0.542 | 99 | 0.546 | 135 | 0.543 | 171 | 0.546 | 207 | 0.542 | 243 | 0.542 | 279 | 0.546 | 315 | 0.543 | 351 | 0.546 |
| 28 | 0.542 | 64 | 0.542 | 100 | 0.546 | 136 | 0.543 | 172 | 0.547 | 208 | 0.542 | 244 | 0.542 | 280 | 0.546 | 316 | 0.543 | 352 | 0.547 |
| 29 | 0.542 | 65 | 0.542 | 101 | 0.546 | 137 | 0.543 | 173 | 0.547 | 209 | 0.542 | 245 | 0.542 | 281 | 0.546 | 317 | 0.543 | 353 | 0.547 |
| 30 | 0.542 | 66 | 0.542 | 102 | 0.545 | 138 | 0.543 | 174 | 0.547 | 210 | 0.542 | 246 | 0.542 | 282 | 0.545 | 318 | 0.543 | 354 | 0.547 |
| 31 | 0.542 | 67 | 0.542 | 103 | 0.545 | 139 | 0.543 | 175 | 0.547 | 211 | 0.542 | 247 | 0.542 | 283 | 0.545 | 319 | 0.543 | 355 | 0.547 |
| 32 | 0.542 | 68 | 0.542 | 104 | 0.545 | 140 | 0.543 | 176 | 0.547 | 212 | 0.542 | 248 | 0.542 | 284 | 0.545 | 320 | 0.543 | 356 | 0.547 |
| 33 | 0.542 | 69 | 0.543 | 105 | 0.544 | 141 | 0.543 | 177 | 0.548 | 213 | 0.542 | 249 | 0.543 | 285 | 0.544 | 321 | 0.543 | 357 | 0.548 |
| 34 | 0.542 | 70 | 0.543 | 106 | 0.544 | 142 | 0.542 | 178 | 0.548 | 214 | 0.542 | 250 | 0.543 | 286 | 0.544 | 322 | 0.542 | 358 | 0.548 |
| 35 | 0.542 | 71 | 0.543 | 107 | 0.544 | 143 | 0.542 | 179 | 0.548 | 215 | 0.542 | 251 | 0.543 | 287 | 0.544 | 323 | 0.542 | 359 | 0.548 |

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Vertical Polarization AZIMUTH PATTERN (dB)

Exhibit No. **E-2D**
Date **26 Jun 2017**
Call Letters **WMEC**
Channel **36**
Antenna Type **TFU-24DSB-A-R**
Location **Macomb, IL**
Customer **Network Knowledge**

Gain **1.0 (0.00 dB)**
Calculated
Drawing # **DSB-A**

| Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB | Deg | dB |
|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| 0 | 40.000 | 36 | 39.915 | 72 | 39.931 | 108 | 39.934 | 144 | 39.913 | 180 | 40.000 | 216 | 39.915 | 252 | 39.931 | 288 | 39.934 | 324 | 39.913 |
| 1 | 40.000 | 37 | 39.916 | 73 | 39.936 | 109 | 39.930 | 145 | 39.912 | 181 | 40.000 | 217 | 39.916 | 253 | 39.936 | 289 | 39.930 | 325 | 39.912 |
| 2 | 39.999 | 38 | 39.917 | 74 | 39.941 | 110 | 39.926 | 146 | 39.910 | 182 | 39.999 | 218 | 39.917 | 254 | 39.941 | 290 | 39.926 | 326 | 39.910 |
| 3 | 39.998 | 39 | 39.919 | 75 | 39.946 | 111 | 39.923 | 147 | 39.909 | 183 | 39.998 | 219 | 39.919 | 255 | 39.946 | 291 | 39.923 | 327 | 39.909 |
| 4 | 39.996 | 40 | 39.920 | 76 | 39.951 | 112 | 39.920 | 148 | 39.908 | 184 | 39.996 | 220 | 39.920 | 256 | 39.951 | 292 | 39.920 | 328 | 39.908 |
| 5 | 39.993 | 41 | 39.921 | 77 | 39.956 | 113 | 39.917 | 149 | 39.907 | 185 | 39.993 | 221 | 39.921 | 257 | 39.956 | 293 | 39.917 | 329 | 39.907 |
| 6 | 39.990 | 42 | 39.921 | 78 | 39.961 | 114 | 39.914 | 150 | 39.907 | 186 | 39.990 | 222 | 39.921 | 258 | 39.961 | 294 | 39.914 | 330 | 39.907 |
| 7 | 39.986 | 43 | 39.922 | 79 | 39.967 | 115 | 39.913 | 151 | 39.906 | 187 | 39.986 | 223 | 39.922 | 259 | 39.967 | 295 | 39.913 | 331 | 39.906 |
| 8 | 39.983 | 44 | 39.922 | 80 | 39.972 | 116 | 39.911 | 152 | 39.906 | 188 | 39.983 | 224 | 39.922 | 260 | 39.972 | 296 | 39.911 | 332 | 39.906 |
| 9 | 39.978 | 45 | 39.922 | 81 | 39.976 | 117 | 39.910 | 153 | 39.907 | 189 | 39.978 | 225 | 39.922 | 261 | 39.976 | 297 | 39.910 | 333 | 39.907 |
| 10 | 39.974 | 46 | 39.922 | 82 | 39.981 | 118 | 39.910 | 154 | 39.908 | 190 | 39.974 | 226 | 39.922 | 262 | 39.981 | 298 | 39.910 | 334 | 39.908 |
| 11 | 39.969 | 47 | 39.921 | 83 | 39.985 | 119 | 39.909 | 155 | 39.909 | 191 | 39.969 | 227 | 39.921 | 263 | 39.985 | 299 | 39.909 | 335 | 39.909 |
| 12 | 39.964 | 48 | 39.921 | 84 | 39.989 | 120 | 39.909 | 156 | 39.911 | 192 | 39.964 | 228 | 39.921 | 264 | 39.989 | 300 | 39.909 | 336 | 39.911 |
| 13 | 39.959 | 49 | 39.920 | 85 | 39.992 | 121 | 39.910 | 157 | 39.913 | 193 | 39.959 | 229 | 39.920 | 265 | 39.992 | 301 | 39.910 | 337 | 39.913 |
| 14 | 39.954 | 50 | 39.919 | 86 | 39.995 | 122 | 39.911 | 158 | 39.916 | 194 | 39.954 | 230 | 39.919 | 266 | 39.995 | 302 | 39.911 | 338 | 39.916 |
| 15 | 39.949 | 51 | 39.917 | 87 | 39.997 | 123 | 39.911 | 159 | 39.919 | 195 | 39.949 | 231 | 39.917 | 267 | 39.997 | 303 | 39.911 | 339 | 39.919 |
| 16 | 39.944 | 52 | 39.916 | 88 | 39.999 | 124 | 39.913 | 160 | 39.923 | 196 | 39.944 | 232 | 39.916 | 268 | 39.999 | 304 | 39.913 | 340 | 39.923 |
| 17 | 39.939 | 53 | 39.914 | 89 | 40.000 | 125 | 39.914 | 161 | 39.927 | 197 | 39.939 | 233 | 39.914 | 269 | 40.000 | 305 | 39.914 | 341 | 39.927 |
| 18 | 39.934 | 54 | 39.913 | 90 | 40.000 | 126 | 39.915 | 162 | 39.931 | 198 | 39.934 | 234 | 39.913 | 270 | 40.000 | 306 | 39.915 | 342 | 39.931 |
| 19 | 39.930 | 55 | 39.912 | 91 | 40.000 | 127 | 39.916 | 163 | 39.936 | 199 | 39.930 | 235 | 39.912 | 271 | 40.000 | 307 | 39.916 | 343 | 39.936 |
| 20 | 39.926 | 56 | 39.910 | 92 | 39.999 | 128 | 39.918 | 164 | 39.941 | 200 | 39.926 | 236 | 39.910 | 272 | 39.999 | 308 | 39.917 | 344 | 39.941 |
| 21 | 39.923 | 57 | 39.909 | 93 | 39.998 | 129 | 39.919 | 165 | 39.946 | 201 | 39.923 | 237 | 39.909 | 273 | 39.998 | 309 | 39.919 | 345 | 39.946 |
| 22 | 39.920 | 58 | 39.908 | 94 | 39.996 | 130 | 39.920 | 166 | 39.951 | 202 | 39.920 | 238 | 39.908 | 274 | 39.996 | 310 | 39.920 | 346 | 39.951 |
| 23 | 39.917 | 59 | 39.907 | 95 | 39.993 | 131 | 39.921 | 167 | 39.956 | 203 | 39.917 | 239 | 39.907 | 275 | 39.993 | 311 | 39.921 | 347 | 39.956 |
| 24 | 39.914 | 60 | 39.907 | 96 | 39.990 | 132 | 39.921 | 168 | 39.961 | 204 | 39.914 | 240 | 39.907 | 276 | 39.990 | 312 | 39.921 | 348 | 39.961 |
| 25 | 39.913 | 61 | 39.906 | 97 | 39.986 | 133 | 39.922 | 169 | 39.967 | 205 | 39.913 | 241 | 39.906 | 277 | 39.986 | 313 | 39.922 | 349 | 39.967 |
| 26 | 39.911 | 62 | 39.906 | 98 | 39.983 | 134 | 39.922 | 170 | 39.972 | 206 | 39.911 | 242 | 39.906 | 278 | 39.983 | 314 | 39.922 | 350 | 39.972 |
| 27 | 39.910 | 63 | 39.907 | 99 | 39.978 | 135 | 39.922 | 171 | 39.976 | 207 | 39.910 | 243 | 39.907 | 279 | 39.978 | 315 | 39.922 | 351 | 39.976 |
| 28 | 39.910 | 64 | 39.908 | 100 | 39.974 | 136 | 39.922 | 172 | 39.981 | 208 | 39.910 | 244 | 39.908 | 280 | 39.974 | 316 | 39.922 | 352 | 39.981 |
| 29 | 39.909 | 65 | 39.909 | 101 | 39.969 | 137 | 39.921 | 173 | 39.985 | 209 | 39.909 | 245 | 39.909 | 281 | 39.969 | 317 | 39.921 | 353 | 39.985 |
| 30 | 39.909 | 66 | 39.911 | 102 | 39.964 | 138 | 39.921 | 174 | 39.989 | 210 | 39.909 | 246 | 39.911 | 282 | 39.964 | 318 | 39.921 | 354 | 39.989 |
| 31 | 39.910 | 67 | 39.913 | 103 | 39.959 | 139 | 39.920 | 175 | 39.992 | 211 | 39.910 | 247 | 39.913 | 283 | 39.959 | 319 | 39.920 | 355 | 39.992 |
| 32 | 39.911 | 68 | 39.916 | 104 | 39.954 | 140 | 39.919 | 176 | 39.995 | 212 | 39.911 | 248 | 39.916 | 284 | 39.954 | 320 | 39.919 | 356 | 39.995 |
| 33 | 39.911 | 69 | 39.919 | 105 | 39.949 | 141 | 39.917 | 177 | 39.997 | 213 | 39.911 | 249 | 39.919 | 285 | 39.949 | 321 | 39.917 | 357 | 39.997 |
| 34 | 39.913 | 70 | 39.923 | 106 | 39.944 | 142 | 39.916 | 178 | 39.999 | 214 | 39.913 | 250 | 39.923 | 286 | 39.944 | 322 | 39.916 | 358 | 39.999 |
| 35 | 39.914 | 71 | 39.927 | 107 | 39.939 | 143 | 39.914 | 179 | 40.000 | 215 | 39.914 | 251 | 39.927 | 287 | 39.939 | 323 | 39.914 | 359 | 40.000 |

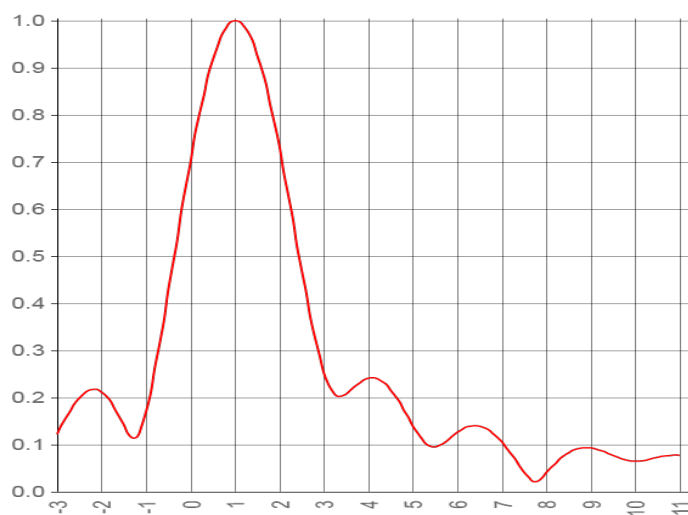
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ELEVATION PATTERN

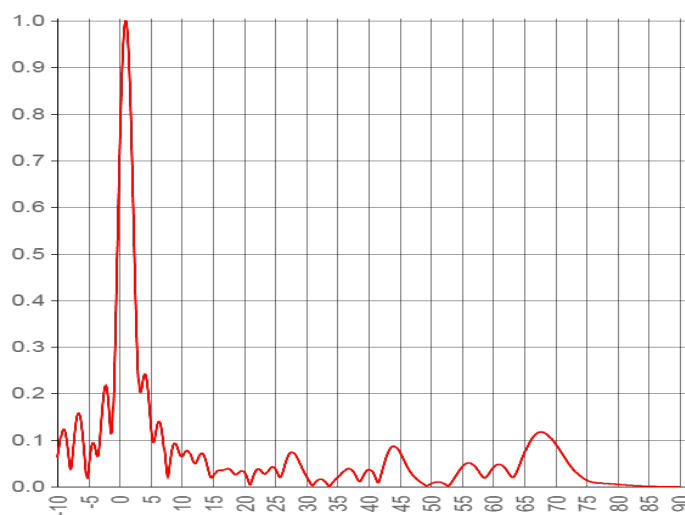
Exhibit No. **E-2E**
Date **26 Jun 2017**
Call Letters **WMEC**
Channel **36**
Antenna Type **TFU-24DSB-A-R**
Location **Macomb, IL**
Customer **Network Knowledge**

RMS Gain at Main Lobe **24.0 (13.80 dB)**
RMS Gain at Horizontal **11.9 (10.75 dB)**
Calculated

Beam Tilt **1 Degrees**
Drawing # **24B240100**



Degrees below horizontal



Degrees below horizontal

| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -10 | 0.063 | 10 | 0.065 | 30 | 0.023 | 50 | 0.006 | 70 | 0.092 |
| -9 | 0.123 | 11 | 0.077 | 31 | 0.002 | 51 | 0.010 | 71 | 0.073 |
| -8 | 0.045 | 12 | 0.051 | 32 | 0.015 | 52 | 0.008 | 72 | 0.053 |
| -7 | 0.134 | 13 | 0.070 | 33 | 0.011 | 53 | 0.004 | 73 | 0.036 |
| -6 | 0.127 | 14 | 0.051 | 34 | 0.005 | 54 | 0.023 | 74 | 0.023 |
| -5 | 0.035 | 15 | 0.020 | 35 | 0.019 | 55 | 0.042 | 75 | 0.014 |
| -4 | 0.088 | 16 | 0.035 | 36 | 0.032 | 56 | 0.051 | 76 | 0.010 |
| -3 | 0.122 | 17 | 0.037 | 37 | 0.038 | 57 | 0.045 | 77 | 0.008 |
| -2 | 0.212 | 18 | 0.034 | 38 | 0.023 | 58 | 0.027 | 78 | 0.007 |
| -1 | 0.169 | 19 | 0.028 | 39 | 0.018 | 59 | 0.022 | 79 | 0.006 |
| 0 | 0.704 | 20 | 0.032 | 40 | 0.037 | 60 | 0.040 | 80 | 0.005 |
| 1 | 1.000 | 21 | 0.004 | 41 | 0.023 | 61 | 0.048 | 81 | 0.004 |
| 2 | 0.731 | 22 | 0.035 | 42 | 0.025 | 62 | 0.039 | 82 | 0.003 |
| 3 | 0.254 | 23 | 0.031 | 43 | 0.068 | 63 | 0.021 | 83 | 0.002 |
| 4 | 0.241 | 24 | 0.036 | 44 | 0.087 | 64 | 0.037 | 84 | 0.001 |
| 5 | 0.141 | 25 | 0.039 | 45 | 0.075 | 65 | 0.070 | 85 | 0.001 |
| 6 | 0.126 | 26 | 0.023 | 46 | 0.049 | 66 | 0.098 | 86 | 0.001 |
| 7 | 0.105 | 27 | 0.062 | 47 | 0.027 | 67 | 0.114 | 87 | 0.000 |
| 8 | 0.040 | 28 | 0.072 | 48 | 0.014 | 68 | 0.117 | 88 | 0.000 |
| 9 | 0.093 | 29 | 0.049 | 49 | 0.004 | 69 | 0.108 | 89 | 0.000 |

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System Summary

| | |
|--------------|-------------------|
| Exhibit No. | E-2F |
| Date | 26 Jun 2017 |
| Call Letters | WMEC |
| Channel | 36 |
| Antenna Type | TFU-24DSB-A-R |
| Location | Macomb, IL |
| Customer | Network Knowledge |

Antenna

| | | |
|------------|----------------------|---------------------|
| ERP: | 100.0 kW (20.00 dBk) | 29.8 kW (14.73 dBk) |
| RMS Gain*: | 18.5 (12.66 dB) | 5.5 (7.43 dB) |

Antenna Input Power:

5.4 kW

Transmission Line

| | | |
|------------|------------------|---------|
| Type: | Flexline Air | |
| Size: | 3" | |
| Impedance: | 50 ohm | |
| Length: | 500 ft (152.4 m) | |
| | Attenuation: | 2.0 dB |
| | Efficiency: | 62.47 % |

Transmitter Output

8.7 kW (9.38 dBk)

* Gain is with respect to half wave dipole.

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Mechanicals

| | |
|--------------|-------------------|
| Exhibit No. | E-2G |
| Date | 26 Jun 2017 |
| Call Letters | WMEC |
| Channel | 36 |
| Antenna Type | TFU-24DSB-A-R |
| Location | Macomb, IL |
| Customer | Network Knowledge |

Preliminary Specifications

Side Mounted

Mechanical Specification without ice TIA-222-G

| | |
|---------------------|--------|
| Basic Wind Speed | 90 mph |
| Structure Class | II |
| Exposure Category | C |
| Topography Category | 1 |

Mechanical Specifications

| | | |
|---------------------------------|--------|---|
| Height less Lightning Protector | (H2) | 44.8 ft (13.7 m) |
| Center of Radiation | (H3) | 22.4 ft (6.8 m) |
| Effective Projected Area | (EPA)s | 61.5 ft ² (18.8 m ²) |
| Weight | W | 826.1 lbs |