

TECHNICAL EXHIBIT
AMENDMENT TO PENDING
APPLICATION FOR DTV CONSTRUCTION PERMIT
IN SUPPORT OF ITS POST-TRANSITION FACILITY
STATION WOAI-DT
SAN ANTONIO, TEXAS
CH 48 725 KW 457 M

Technical Narrative

This Technical Exhibit supports an amendment to the pending application for digital television (DTV) station WOAI-DT for its final DTV at San Antonio, Texas.¹ This application requests a construction permit (CP) for a digital television operation on channel 48 at San Antonio with a non-directional effective radiated power of 725 kilowatts. The purpose of this amendment is to not increase its predicted noise-limited contour beyond its Appendix B allotment and therefore, avoid the need for Mexican Coordination.

Proposed Facilities

Station WOAI-DT proposes to operate DTV channel 48 from its NTSC transmitter site. The antenna height above average terrain for the channel 48 DTV operation is 457 meters. The proposed WOAI-DT effective radiated power does not exceed the Commission's *Appendix B* allocated maximum effective radiated power in any azimuthal

¹ See Application for Construction Permit, BPCDT-20080304AAH.

direction.² However, an allocation study was still completed to ensure no prohibited interference would occur.

The proposed DTV transmitter site will be located at its NTSC transmitter site. Therefore, the proposed site location is:

29° 16' 11" North Latitude
98° 15' 55" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 2.

The Appendix contains the vertical plane radiation pattern for the proposed antenna system.

Figure 3 is a map showing the DTV predicted coverage contour and the associated analog Grade B coverage contour. The extent of the contour has been calculated using the normal FCC prediction method. The San Antonio city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

Population Served

The herein proposed WOAI-DT facility is predicted to serve 1,889,982 persons, post-transition based upon the 2000 Census. WOAI-DT's associated Appendix B facility is predicted to serve 1,894,000 persons. Therefore, the

² See Seventh Report And Order And Eighth Further Notice Of Proposed Rule Making in the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service, MB Docket 87-268, Released August 6, 2007; Adopted August 1, 2007.

herein proposed WOAI-DT facility would serve 99.8% of WOAI-DT's Appendix B population.

Allocation Considerations

The proposed WOAI-DT Channel 48 facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other Appendix B DTV allotments. Longley-Rice interference analyses were conducted pursuant to the requirements of the FCC Rules; OET Bulletin No. 69; and published FCC guidelines for preparation of such interference analyses. The Longley-Rice interference analyses were conducted using the software developed by du Treil, Lundin & Rackley, Inc. based on the FCC published software routines.³ Stations selected for analysis were determined pursuant to the distance requirements outlined in the FCC DTV Processing Guidelines Public Notice. The results of the interference analyses for the proposed WOAI-DT facility are summarized herein at Figure 4. As indicated therein, the proposed facility will meet the 0.5% criterion outlined in the FCC Rules and published guidelines with respect to all considered stations.⁴

3 The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 1 km was employed with 0.5 km terrain increment.

4 Interference analysis results reflect the net change in interference to a given station considering the interference predicted to occur from all other stations (i.e. "masking") including the allotment facility

Radiofrequency Electromagnetic Field Exposure

The proposed WOAI-DT facilities were evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level to workers and the general public. The radiation center for the proposed WOAI-DT antenna is located 459 meters above ground level. The maximum effective radiated power is 725 kilowatts. A "worst-case" relative field value of 0.25 is assumed for the antenna's downward radiation. The calculated power density at a point 2 meters above ground level is 0.007 mW/cm^2 . This is less than 5 percent of the Commission's recommended limit of 0.45 mW/cm^2 for channel 48 for an "uncontrolled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is a multi-user site, an agreement will control access to the site. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down. The proposed WOAI-DT operation appears to be otherwise categorically excluded from environmental processing.

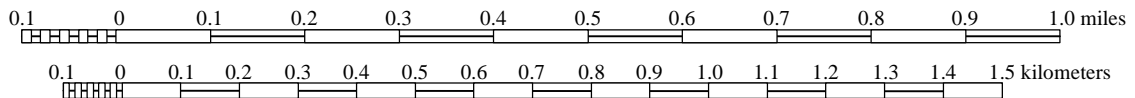
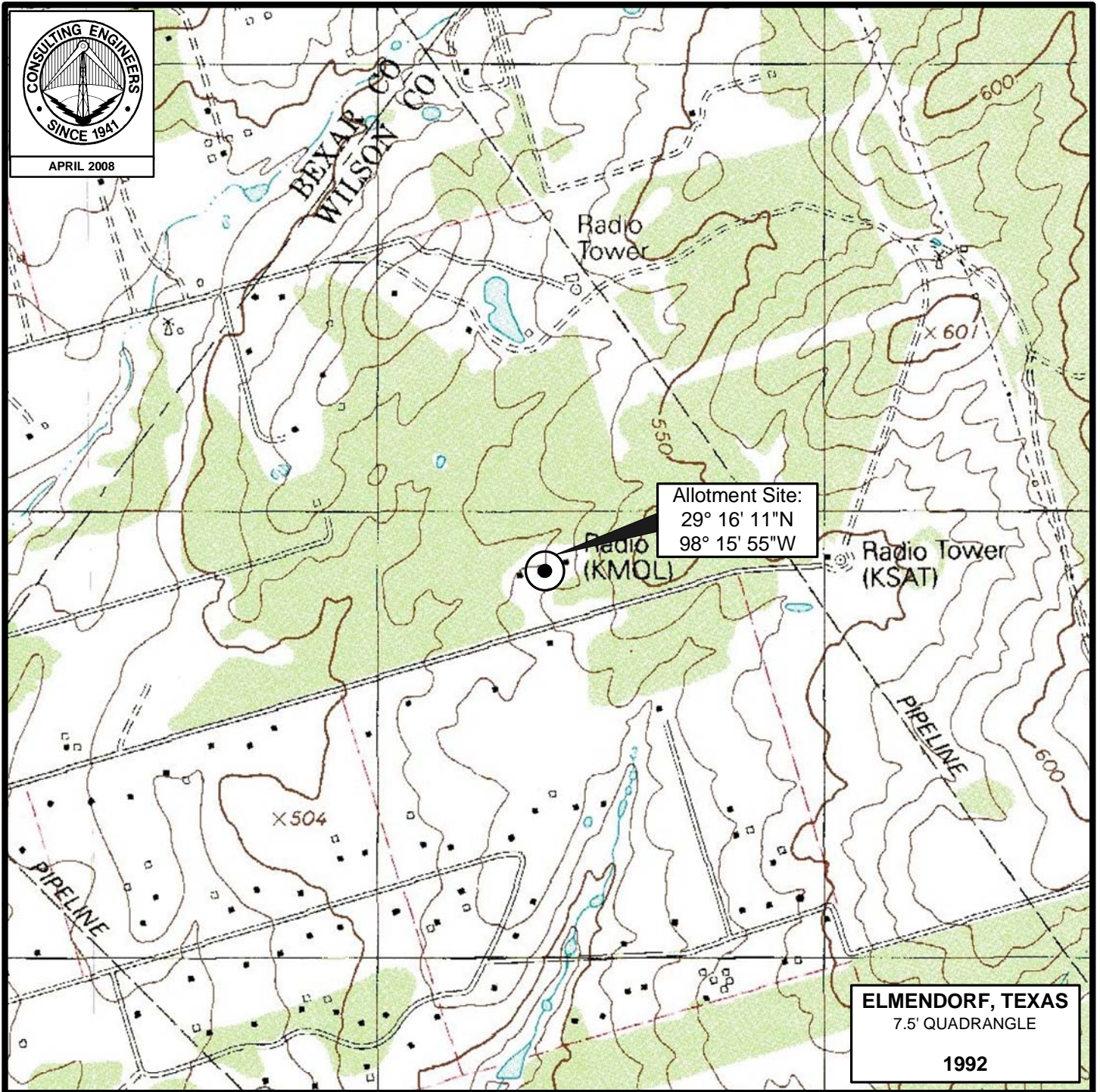
It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

Charles Cooper

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 32437
941.329.6000

April 24, 2008

Figure 1

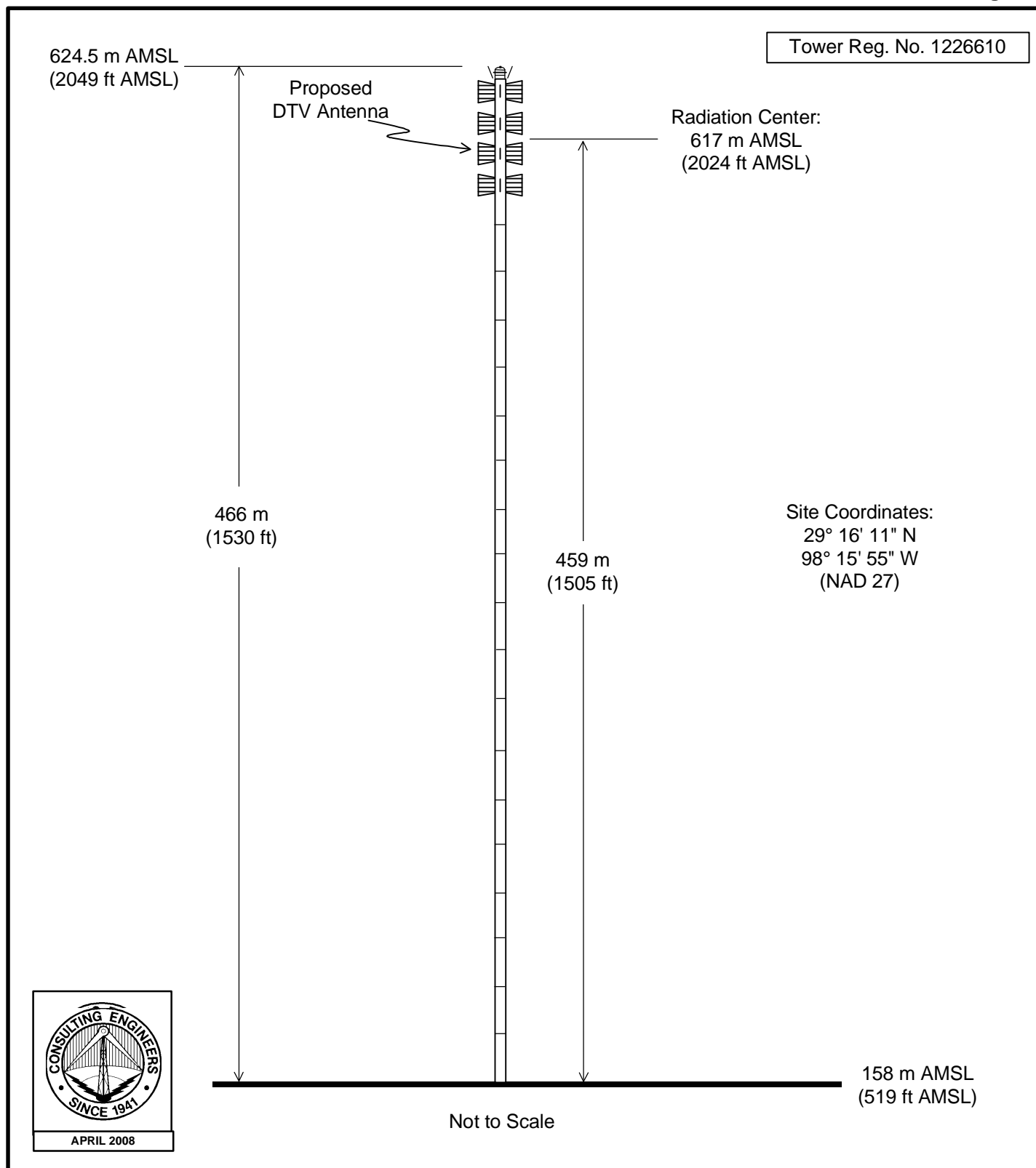


EXISTING TRANSMITTER SITE

DTV STATION WOAI-DT
SAN ANTONIO, TEXAS
CH 48 725 KW 457 M

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

Figure 2



PROPOSED ANTENNA AND SUPPORTING STRUCTURE

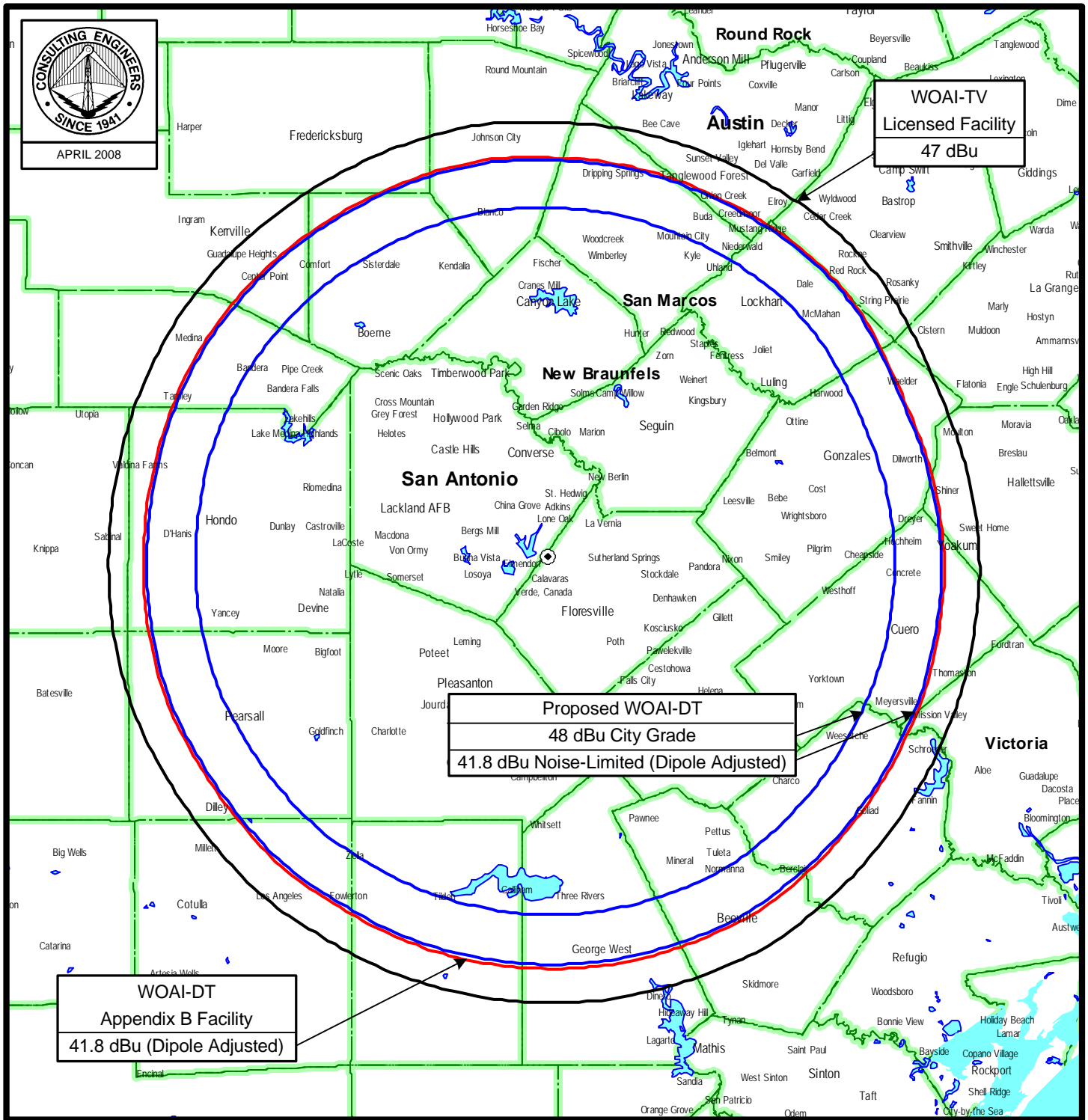
TELEVISION STATION WOAI-DT

SAN ANTONIO, TEXAS

CH 48 725 KW 457 M

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

Figure 3



PREDICTED COVERAGE CONTOURS

STATION WOAI-DT
SAN ANTONIO, TEXAS
CH 48 725 KW 457 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida

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Post-Transition OET-69 Interference Analysis

Census data selected 2000

Post Transition Data Base Selected
 /export/home/cdbs/tvdb.sff_G
 TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 04-24-2008 Time: 09:22:17

Record Selected for Analysis

WOAI USERRECORD-01 SAN ANTONIO TX US
 Channel 48 ERP 725. kW HAAT 458. m RCAMSL 00617 m
 Latitude 029-16-10 Longitude 0098-15-55
 Status APP Zone 2 Border
 Last update Cutoff date Docket
 Comments
 Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 0.50 km

Facility does not meet maximum height/power limits
 Channel 48 ERP = 725.00 HAAT = 458.

| Azimuth (Deg) | ERP (kW) | HAAT (m) | 41.0 dBu F(50,90) (km) |
|------------------|-------------|-------------|---------------------------|
| 0.0 | 725.000 | 446.4 | 107.0 |
| 45.0 | 725.000 | 445.0 | 106.9 |
| 90.0 | 725.000 | 440.5 | 106.5 |
| 135.0 | 725.000 | 468.4 | 108.9 |
| 180.0 | 725.000 | 480.6 | 109.9 |
| 225.0 | 725.000 | 467.1 | 108.8 |
| 270.0 | 725.000 | 459.8 | 108.2 |
| 315.0 | 725.000 | 457.1 | 107.9 |

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is within the Mexican coordination distance
 Distance to border = 215.5km

Figure 4

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

| Channel | Proposed Station Call | City/State | ARN |
|---------|--------------------------|----------------|--------------|
| 48 | WOAI | SAN ANTONIO TX | USERRECORD01 |

Stations Potentially Affected by Proposed Station

| Chan | Call | City/State | Dist(km) | Status | Application | Ref. No. |
|------|---------|--------------|----------|--------|-------------|--------------|
| 48 | KTMD | GALVESTON TX | 268.8 | LIC | BLCDT | -20040325AEO |
| 48 | KSTR-TV | IRVING TX | 384.6 | LIC | BLCDT | -20020909AAM |
| 49 | KNVA | AUSTIN TX | 125.7 | CP | BPCDT | -19991025ADB |

Analysis of Interference to Affected Station 1

Analysis of current record

| Channel | Call | City/State | Application | Ref. No. |
|---------|------|--------------|-------------|--------------|
| 48 | KTMD | GALVESTON TX | BLCDT | -20040325AEO |

Stations Potentially Affecting This Station

| Chan | Call | City/State | Dist(km) | Status | Application | Ref. No. |
|------|---------|----------------|----------|--------|---------------|--------------|
| 47 | KNWS-TV | KATY TX | 0.0 | CP | BFRCT | -20050307ACD |
| 48 | KSTR-TV | IRVING TX | 358.0 | LIC | BLCDT | -20020909AAM |
| 48 | WOAI | SAN ANTONIO TX | 268.8 | APP | USERRECORD-01 | |

Total scenarios = 1

Result key: 1

Scenario 1 Affected station 1

Before Analysis

Results for: 48A TX GALVESTON BLCDT 20040325AEO LIC

HAAT 597.0 m, ATV ERP 1000.0 kW

| | POPULATION | AREA (sq km) |
|--------------------------------|------------|--------------|
| within Noise Limited Contour | 4838457 | 39988.3 |
| not affected by terrain losses | 4838060 | 39903.9 |
| lost to NTSC IX | 0 | 0.0 |
| lost to additional IX by ATV | 0 | 0.0 |
| lost to ATV IX only | 0 | 0.0 |
| lost to all IX | 0 | 0.0 |

Potential Interfering Stations Included in above Scenario 1

After Analysis

Results for: 48A TX GALVESTON BLCDT 20040325AEO LIC

HAAT 597.0 m, ATV ERP 1000.0 kW

| | POPULATION | AREA (sq km) |
|--------------------------------|------------|--------------|
| within Noise Limited Contour | 4838457 | 39988.3 |
| not affected by terrain losses | 4838060 | 39903.9 |
| lost to NTSC IX | 0 | 0.0 |
| lost to additional IX by ATV | 1170 | 105.0 |
| lost to ATV IX only | 1170 | 105.0 |
| lost to all IX | 1170 | 105.0 |

Potential Interfering Stations Included in above Scenario 1

| | | |
|--------------------|--------------|-----|
| 48A TX SAN ANTONIO | USERRECORD01 | APP |
|--------------------|--------------|-----|

Percent new IX = 0.0242%

Worst case new IX 0.0242% Scenario 1

Analysis of Interference to Affected Station 2

Figure 4

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Analysis of current record
Channel      Call      City/State      Application Ref. No.
48           KSTR-TV    IRVING TX       BLCDT          -20020909AAM

Stations Potentially Affecting This Station

Chan  Call      City/State      Dist(km) Status Application Ref. No.
48    KTMD      GALVESTON TX    358.0  LIC    BLCDT          -20040325AEO
48    WOAI      SAN ANTONIO TX  384.6  APP    USERRECORD-01
Proposal causes no interference

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Analysis of Interference to Affected Station    3

Analysis of current record
Channel      Call      City/State      Application Ref. No.
49           KNVA      AUSTIN TX       BPCDT          -19991025ADB

Stations Potentially Affecting This Station

Chan  Call      City/State      Dist(km) Status Application Ref. No.
50    KBTX-TV  BRYAN TX        171.4  CP MOD BMPCDT      -20020604AAT
48    WOAI      SAN ANTONIO TX  125.7  APP    USERRECORD-01

Total scenarios =    1

Result key:          2
Scenario            1 Affected station          3
Before Analysis

Results for: 49A TX AUSTIN          BPCDT      19991025ADB  CP
HAAT 396.0 m, ATV ERP 500.0 kW
POPULATION      AREA (sq km)
within Noise Limited Contour  1674067  27671.8
not affected by terrain losses 1656281  27029.3
lost to NTSC IX              0         0.0
lost to additional IX by ATV  132       44.0
lost to ATV IX only          132       44.0
lost to all IX               132       44.0

Potential Interfering Stations Included in above Scenario    1

50A TX BRYAN          BMPCDT      20020604AAT  CP

After Analysis

Results for: 49A TX AUSTIN          BPCDT      19991025ADB  CP
HAAT 396.0 m, ATV ERP 500.0 kW
POPULATION      AREA (sq km)
within Noise Limited Contour  1674067  27671.8
not affected by terrain losses 1656281  27029.3
lost to NTSC IX              0         0.0
lost to additional IX by ATV  53153    742.6
lost to ATV IX only          53153    742.6
lost to all IX               53153    742.6

Potential Interfering Stations Included in above Scenario    1

50A TX BRYAN          BMPCDT      20020604AAT  CP
48A TX SAN ANTONIO    USERRECORD01  APP

The following station failed the de minimis interference criteria.
48D TX SAN ANTONIO    USERRECORD01
ERP 725.00 kW HAAT 458.0 m RCAMSL 617.0 m
Antenna none

Due to interference to the following station and scenario:    1
49D TX AUSTIN          BPCDT      19991025ADB
ERP 500.00 kW HAAT 396.0 m RCAMSL 613.0 m
Antenna CDB 00000000028952

Percent Service lost without proposal:    0.0 to BPCDT      19991025ADB
Percent Service lost with proposal:      3.2 to BPCDT      19991025ADB

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Figure 4

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Worst case new IX      3.2015% Scenario      1

<NOTE, THE WOAI ALLOTMENT CAUSES 3.4420% WITH SAME INPUT PARAMETERS.
THEREFORE, NO INCREASE IS PREDICTED.>

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Analysis of Interference to Affected Station      4

Analysis of current record
Channel      Call      City/State      Application Ref. No.
  48      WOAI      SAN ANTONIO TX      USERRECORD-01

Stations Potentially Affecting This Station

Chan  Call      City/State      Dist(km) Status  Application Ref. No.
  48  KTMD      GALVESTON TX      268.8  LIC    BLCDT    -20040325AEO
  48  KSTR-TV    IRVING TX      384.6  LIC    BLCDT    -20020909AAM
  49  KNVA      AUSTIN TX      125.7  CP     BPCDT    -19991025ADB

Total scenarios =      1

Result key:      3
Scenario      1  Affected station      4
Before Analysis

Results for: 48A TX SAN ANTONIO      USERRECORD01      APP
HAAT 458.0 m, ATV ERP 725.0 kW
POPULATION      AREA (sq km)
within Noise Limited Contour      1920859      35407.7
not affected by terrain losses      1912024      34865.1
lost to NTSC IX      0      0.0
lost to additional IX by ATV      22042      555.4
lost to ATV IX only      22042      555.4
lost to all IX      22042      555.4

Potential Interfering Stations Included in above Scenario      1

48A TX GALVESTON      BLCDT      20040325AEO  LIC
49A TX AUSTIN      BPCDT      19991025ADB  CP

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

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APPENDIX

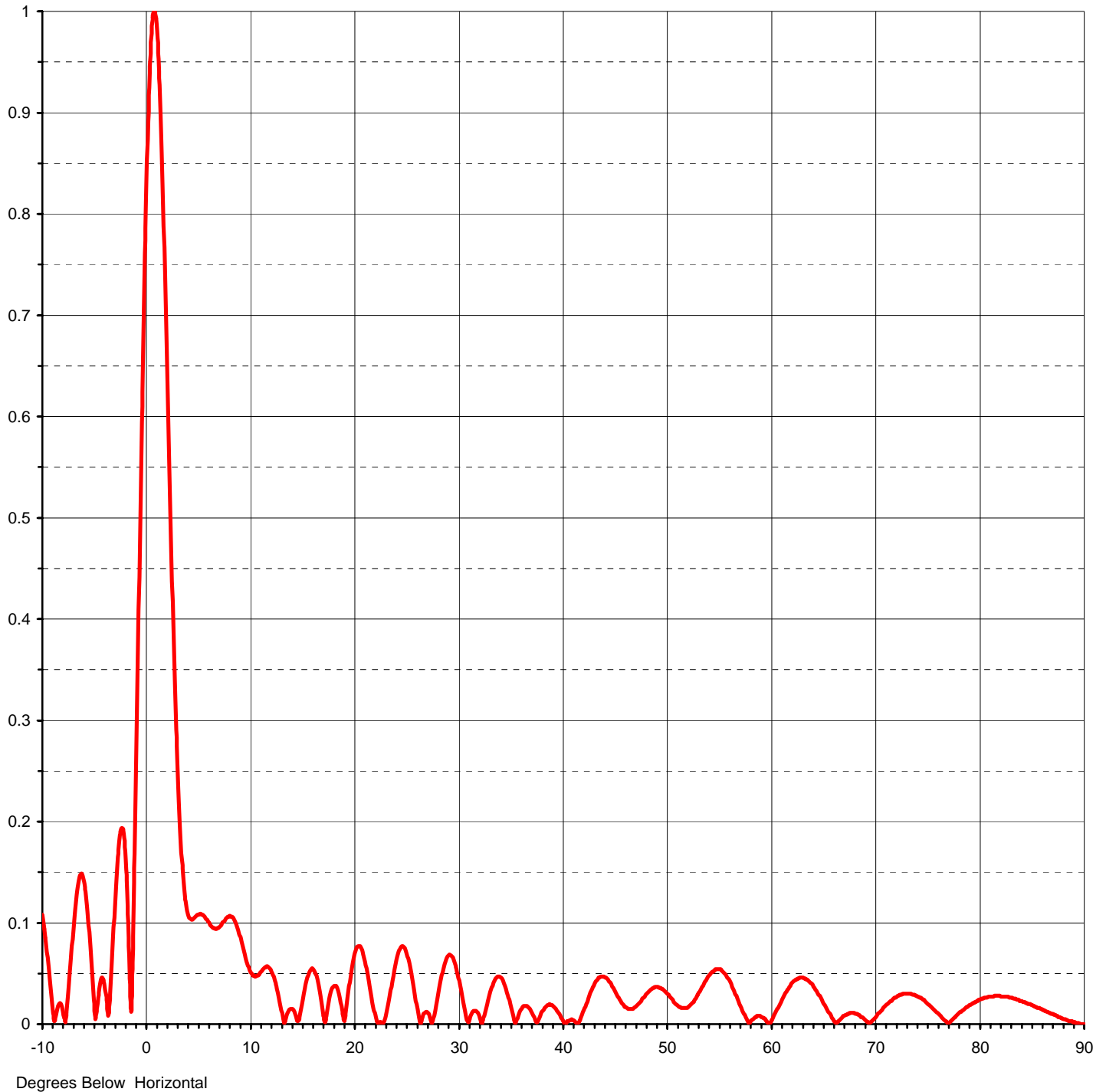
TRANSMITTING ANTENNA VERTICAL PLANE PATTERN



| | | |
|-----------------|------------------------|-------------------|
| Proposal Number | C-00674 | |
| Date | 26-Sep-06 | |
| Call Letters | WOAI-DT | Channel 48 |
| Location | San Antonio, TX | |
| Customer | | |
| Antenna Type | TFU-30GTH-R O4 | |

ELEVATION PATTERN

| | | | |
|------------------------|---------------------------|-----------|---------------------|
| RMS Gain at Main Lobe | 27.00 (14.31 dB) | Beam Tilt | 0.75 deg |
| RMS Gain at Horizontal | 18.70 (12.72 dB) | Frequency | 677.00 MHz |
| Calculated / Measured | Calculated | Drawing # | 30G270075-90 |





Proposal Number **C-00674**

Date **26-Sep-06**

Call Letters **WOAI-DT** Channel **48**

Location **San Antonio, TX**

Customer

Antenna Type **TFU-30GTH-R 04**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **30G270075-90**

| Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field | Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -10.0 | 0.108 | 2.4 | 0.458 | 10.6 | 0.047 | 30.5 | 0.022 | 51.0 | 0.019 | 71.5 | 0.023 |
| -9.5 | 0.066 | 2.6 | 0.378 | 10.8 | 0.048 | 31.0 | 0.002 | 51.5 | 0.016 | 72.0 | 0.027 |
| -9.0 | 0.015 | 2.8 | 0.307 | 11.0 | 0.051 | 31.5 | 0.013 | 52.0 | 0.016 | 72.5 | 0.029 |
| -8.5 | 0.018 | 3.0 | 0.247 | 11.5 | 0.056 | 32.0 | 0.009 | 52.5 | 0.021 | 73.0 | 0.030 |
| -8.0 | 0.012 | 3.2 | 0.198 | 12.0 | 0.054 | 32.5 | 0.008 | 53.0 | 0.029 | 73.5 | 0.029 |
| -7.5 | 0.033 | 3.4 | 0.161 | 12.5 | 0.040 | 33.0 | 0.028 | 53.5 | 0.038 | 74.0 | 0.027 |
| -7.0 | 0.096 | 3.6 | 0.135 | 13.0 | 0.016 | 33.5 | 0.043 | 54.0 | 0.047 | 74.5 | 0.024 |
| -6.5 | 0.141 | 3.8 | 0.118 | 13.5 | 0.007 | 34.0 | 0.047 | 54.5 | 0.052 | 75.0 | 0.020 |
| -6.0 | 0.141 | 4.0 | 0.108 | 14.0 | 0.015 | 34.5 | 0.038 | 55.0 | 0.054 | 75.5 | 0.015 |
| -5.5 | 0.091 | 4.2 | 0.104 | 14.5 | 0.006 | 35.0 | 0.020 | 55.5 | 0.051 | 76.0 | 0.010 |
| -5.0 | 0.017 | 4.4 | 0.103 | 15.0 | 0.019 | 35.5 | 0.001 | 56.0 | 0.044 | 76.5 | 0.005 |
| -4.5 | 0.038 | 4.6 | 0.105 | 15.5 | 0.044 | 36.0 | 0.014 | 56.5 | 0.033 | 77.0 | 0.001 |
| -4.0 | 0.037 | 4.8 | 0.107 | 16.0 | 0.055 | 36.5 | 0.018 | 57.0 | 0.020 | 77.5 | 0.006 |
| -3.5 | 0.029 | 5.0 | 0.108 | 16.5 | 0.044 | 37.0 | 0.013 | 57.5 | 0.009 | 78.0 | 0.011 |
| -3.0 | 0.124 | 5.2 | 0.109 | 17.0 | 0.015 | 37.5 | 0.002 | 58.0 | 0.001 | 78.5 | 0.015 |
| -2.8 | 0.158 | 5.4 | 0.108 | 17.5 | 0.017 | 38.0 | 0.011 | 58.5 | 0.007 | 79.0 | 0.019 |
| -2.6 | 0.182 | 5.6 | 0.106 | 18.0 | 0.037 | 38.5 | 0.018 | 59.0 | 0.008 | 79.5 | 0.022 |
| -2.4 | 0.193 | 5.8 | 0.103 | 18.5 | 0.033 | 39.0 | 0.019 | 59.5 | 0.005 | 80.0 | 0.024 |
| -2.2 | 0.188 | 6.0 | 0.100 | 19.0 | 0.005 | 39.5 | 0.013 | 60.0 | 0.002 | 80.5 | 0.026 |
| -2.0 | 0.162 | 6.2 | 0.097 | 19.5 | 0.034 | 40.0 | 0.005 | 60.5 | 0.012 | 81.0 | 0.027 |
| -1.8 | 0.116 | 6.4 | 0.095 | 20.0 | 0.066 | 40.5 | 0.003 | 61.0 | 0.022 | 81.5 | 0.028 |
| -1.6 | 0.050 | 6.6 | 0.094 | 20.5 | 0.077 | 41.0 | 0.004 | 61.5 | 0.032 | 82.0 | 0.027 |
| -1.4 | 0.038 | 6.8 | 0.095 | 21.0 | 0.065 | 41.5 | 0.001 | 62.0 | 0.040 | 82.5 | 0.027 |
| -1.2 | 0.140 | 7.0 | 0.096 | 21.5 | 0.038 | 42.0 | 0.012 | 62.5 | 0.044 | 83.0 | 0.026 |
| -1.0 | 0.255 | 7.2 | 0.098 | 22.0 | 0.011 | 42.5 | 0.025 | 63.0 | 0.046 | 83.5 | 0.024 |
| -0.8 | 0.378 | 7.4 | 0.101 | 22.5 | 0.002 | 43.0 | 0.038 | 63.5 | 0.044 | 84.0 | 0.023 |
| -0.6 | 0.503 | 7.6 | 0.104 | 23.0 | 0.006 | 43.5 | 0.046 | 64.0 | 0.039 | 84.5 | 0.021 |
| -0.4 | 0.624 | 7.8 | 0.106 | 23.5 | 0.031 | 44.0 | 0.047 | 64.5 | 0.029 | 85.0 | 0.019 |
| -0.2 | 0.735 | 8.0 | 0.107 | 24.0 | 0.059 | 44.5 | 0.042 | 65.0 | 0.020 | 85.5 | 0.016 |
| 0.0 | 0.832 | 8.2 | 0.106 | 24.5 | 0.076 | 45.0 | 0.034 | 65.5 | 0.011 | 86.0 | 0.014 |
| 0.2 | 0.909 | 8.4 | 0.103 | 25.0 | 0.072 | 45.5 | 0.024 | 66.0 | 0.003 | 86.5 | 0.012 |
| 0.4 | 0.964 | 8.6 | 0.099 | 25.5 | 0.051 | 46.0 | 0.017 | 66.5 | 0.004 | 87.0 | 0.010 |
| 0.6 | 0.994 | 8.8 | 0.093 | 26.0 | 0.020 | 46.5 | 0.015 | 67.0 | 0.008 | 87.5 | 0.007 |
| 0.8 | 1.000 | 9.0 | 0.086 | 26.5 | 0.004 | 47.0 | 0.017 | 67.5 | 0.011 | 88.0 | 0.005 |
| 1.0 | 0.981 | 9.2 | 0.078 | 27.0 | 0.012 | 47.5 | 0.022 | 68.0 | 0.010 | 88.5 | 0.003 |
| 1.2 | 0.941 | 9.4 | 0.070 | 27.5 | 0.001 | 48.0 | 0.029 | 68.5 | 0.008 | 89.0 | 0.002 |
| 1.4 | 0.882 | 9.6 | 0.062 | 28.0 | 0.024 | 48.5 | 0.034 | 69.0 | 0.004 | 89.5 | 0.001 |
| 1.6 | 0.808 | 9.8 | 0.059 | 28.5 | 0.051 | 49.0 | 0.037 | 69.5 | 0.002 | 90.0 | 0.000 |
| 1.8 | 0.724 | 10.0 | 0.053 | 29.0 | 0.067 | 49.5 | 0.035 | 70.0 | 0.007 | | |
| 2.0 | 0.635 | 10.2 | 0.050 | 29.5 | 0.066 | 50.0 | 0.031 | 70.5 | 0.013 | | |
| 2.2 | 0.545 | 10.4 | 0.048 | 30.0 | 0.048 | 50.5 | 0.025 | 71.0 | 0.019 | | |