Request for Waiver – Displacement Relief
University of Northern Iowa
Minor Change to FM Translator Station K269EJ, Des Moines, IA

The University of Northern Iowa (UNI) respectfully requests a waiver of Section 74.1233(a)(1) of the FCC's Rules in connection with the instant application for a minor change to the license facility of FM translator station K269EJ, Des Moines, Iowa. This application seeks displacement relief to modify the existing FM translator station for use of Channel 249.

FM Translator Displacement. FM translator Station K269EJ has been in use by UNI since it was originally licensed in 1994 (see File No. BLFT-19940308TG). The station's current channel 269 facility was licensed in 1998, following modifications to the translator facility. Presently, however, station K269EJ is facing displacement from its operating frequency due to the minor change application submitted in FCC File No. BPH-201000126AGR, which calls for modification of KTIA-FM and an associated modification of KPUL(FM) from Channel 258 to Channel 269. The full-service FM station's move to channel 269 will displace UNI's FM translator K269EJ and require the translator to broadcast over a different frequency.

Channel Availability and Preclusion. The Channel Preclusion studies in Attachments 2 and 3 to this request demonstrate that UNI cannot use any adjacent, second adjacent, third adjacent or I.F. channel in connection with the modification of FM translator K269EJ. As a result, UNI is unable to propose a channel change for this translator which corresponds with the minor change provisions of Section 74.1233(a)(1), which states that a major change for an FM translator station is "…is any change in frequency (output channel) except changes to first, second or third adjacent channels, or intermediate frequency channels, and any change in antenna location where the station would not continue to provide 1 mV/m service to some portion of its previously authorized 1 mV/m service area. All other changes will be considered minor."

Use of Channel 249. As detailed in the instant application, however, UNI may utilize the proposed channel 249 for this FM translator station in compliance with all applicable protection requirements and technical considerations. Accordingly, UNI requests a waiver of Section 74.1233(a)(1) to permit displacement of K269EJ to channel 249.

UNI respectfully submits that the public interest will be well served by the requested channel change and waiver, which would allow continued use of this FM translator station to broadcast noncommercial educational programming to the Des Moines, Iowa area. UNI utilizes FM translator K269EJ to rebroadcast the signal of co-licensed noncommercial educational radio station KUNI(FM), Cedar Falls, Iowa. As part of the Iowa Public Radio statewide network of public radio stations, KUNI and K269EJ provide a mix of local and national noncommercial educational programming, including news, public affairs, and talk for their local communities. Iowa Public Radio's mission is to inform, enrich, and engage Iowans through radio programming and other media.

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                    Doug Vernier Telecommunications Consultants
                    401 Main Street, Suite 213, Cedar Falls, IA 50613

                              University Of Northern Iowa
                       Current K269EJ Channel, Showing Displacement by KPUL
REFERENCE          CH#  269D  - 101.7 MHz, Pwr= 0.25 kW,  HAAT= 91.0 M,  COR= 356 M    DISPLAY DATES
41 35 02.0 N.                 Average Protected F(50-50)= 12.29 km                      DATA   04-13-10
93 38 29.0 W.                          Omni-directional                                SEARCH 04-13-10
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CH    CALL        TYPE  ANT   AZI    DIST              LAT       PWR(kW) INT(km)  PRO(km)   *IN*      *OUT*
CITY              STATE       <--    FILE #            LNG       HAAT(M) COR(M)   LICENSEE  (Overlap in km)
-------------------------------------------------------------------------------------------------------
269D  K269EJ      LIC _CN     0.0    0.0               41 35 02.0  0.250   43.3   12.6    -55.9*<    -55.9*<
Des Moines        IA          0.0    BLFT19980116TD    93 38 29.0  91      356    University Of Northern Iow

269A  KPUL        USR ___     228.4  30.6              41 24 02.0  6.000   87.3   28.8    -68.2*<    -37.6<
Winterset         IA          48.2                     93 54 58.0  100     396

268C2 KKSI        LIC _CN     122.4  93.0              41 07 57.0  49.000  77.4   51.7     2.4       21.6
Eddyville         IA          303.0  BLH19901127KC     92 42 12.0  152     390    O-town Communications, Inc

271D  636855      APP _C_     256.6  17.1              41 32 53.0  0.250    1.1   11.1     4.1        4.9
West Des Moines   IA          76.5   BNPFT20030314CCK  93 50 29.0          341    University Of Northern Iow

266C1 KXIA        LIC _CN     51.3   75.4              42 00 19.0  100.000  7.9   62.3    55.4       12.0
Marshalltown      IA          231.8  BLH19950727KE     92 55 45.0  200     491    Marshalltown Broadcasting,

269C2 KAYL-FM     LIC _C_     313.3  171.9             42 38 05.0  50.000 136.1   50.6    25.0       84.9
Storm Lake        IA          132.3  BLH20011011AAR    95 10 10.0  122     538    Sorenson Broadcasting Corp

268D  641370      APP _C_     335.4  58.9              42 03 56.1  0.092   19.9   13.3    26.5       26.9
Boone             IA          155.2  BNPFT20030317IQF  93 56 17.2          470    Radio Assist Ministry, Inc

271D  640551      APP _C_     73.4   42.3              41 41 30.0  0.170    0.9   11.9    28.9       29.3
Newton            IA          253.7  BNPFT20030314BDO  93 09 11.0          364    Holcomb International Mini

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Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
Contour distances are on direct line to and from reference station. Reference zone = 2, Co to 3rd adjacent.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside protected contour.
"<" = Contour Overlap
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HOW TO READ THE FM COMPUTER PRINT-OUT

Translator Reference Station

The computer printout should be self-explanatory for the most part. The parameters of the station being checked, (reference station) are printed in the heading. The 60 dBu protected contour is predicted from the Commission's F(50-50) table. Contour distances are in kilometers and are predicted using the Commission's TVFMINT FORTRAN subroutine. When interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90. The column labeled "* OUT *" shows the greatest distance in kilometers of overlap (or smallest distance of clearance) between the reference station's interference contour and the database station's protected contour. Negative distance figures in this column indicate outgoing contour overlap. Since translators are able to receive interference there is no "In" or incoming column in this report.

Listed antenna heights and power are the specific antenna heights and power from the FCC database.

Under the "AZI" column, the first row of numbers indicate the True North azimuths from the reference station toward the database stations, while the numbers in the second row indicate the reverse bearings from the database stations to the reference station. Bearings are calculated using spherical trigonometry.

The columns labeled "INT" and "PRO" contain the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

For I.F. relationships the minimum spacings the "IN" and "OUT" columns change their significance. The letter "R" stands for the minimum **required** distance in kilometers, while the letter "M" in the next column follows the **available clear space** separation in kilometers. Minimum separation distances when displayed are taken from Sec 73.207 of the rules as amended. Canadian and Mexican separation distances, U/D ratios and protected contour values are from the US/Mexican Working Agreement and the US/Canada Working Agreement".

The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" if the facility is directional. "Z" indicates a 73.215 directional. An "N" indicates it is a 73.215 station that operates with an omni-directional antenna. The fifth letter will be an E, H or V depending on the type of antenna polarization. The sixth letter will be a "Y" if the antenna uses beam tilt or an "X" if the commission is not sure, otherwise it will be an "N" or left blank.

Doug Vernier Telecommunications Consultants
401 Main Street, Suite 213, Cedar Falls, IA 50613

CHANNEL PRECLUSION STUDY
University Of Northern Iowa
With KPUL moving to channel 269

REFERENCE									DISPLAY DATES
41 35 02. N.		Class= D , Pwr=0.25 kW, HAAT= 91 M, COR= 356 M							DATA 04-13-10
93 38 29. W.		Average Protected F(50-50)= 12.29 km							SEARCH 04-13-10
		Omni-directional							

CH CALL	TYPE ANT	AZI.	DIST	LAT.	Pwr(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY	STATE	<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	

--- Channel 266   101.1 MHz. ---

| 269D K269EJ | LIC _CN | 0.0 | 0.0 | 41 35 02.0 | 0.250 | 1.1 | 12.6 | -13.7*< | -13.7*< |
| Des Moines | IA | 0.0 | BLFT19980116TD | 93 38 29.0 | 91 | 356 | University Of Northern Iow | | |

| 266C1 KXIA | LIC _CN | 51.3 | 75.4 | 42 00 19.0 | 100.000 | 160.0 | 62.3 | -96.7*< | -28.8< |
| Marshalltown | IA | 231.8 | BLH19950727KE | 92 55 45.0 | 200 | 491 | Marshalltown Broadcasting, | | |

| 265D 638594 | APP _C_ | 262.7 | 4.6 | 41 34 43.0 | 0.099 | 10.5 | 7.3 | -17.6*< | -19.7*< |
| West Des Moines | IA | 82.7 | BNPFT20030314CCN | 93 41 48.0 | | 297 | Northwestern College | | |

| 264D 629251 | APP _V_ | 327.9 | 9.4 | 41 39 19.0 | 0.099 | 0.7 | 5.6 | -4.1*< | 2.6 |
| Grimes | IA | 147.8 | BNPFT20030310BBM | 93 42 05.0 | | 284 | Calvary Chapel Of Twin Fal | | |

| 264D 635737 | APP _C_ | 313.2 | 13.1 | 41 39 53.0 | 0.115 | 0.8 | 12.8 | 1.7 | -0.8< |
| Des Moines | IA | 133.1 | BNPFT20030314BEF | 93 45 24.0 | | 419 | Holcomb International Mini | | |

--- Channel 267   101.3 MHz. ---

| 269D K269EJ | LIC _CN | 0.0 | 0.0 | 41 35 02.0 | 0.250 | 1.1 | 12.6 | -13.7*< | -13.7*< |
| Des Moines | IA | 0.0 | BLFT19980116TD | 93 38 29.0 | 91 | 356 | University Of Northern Iow | | |

| 267C3 KSIB-FM | LIC _CN | 228.6 | 81.9 | 41 05 41.0 | 19.000 | 111.7 | 40.2 | -42.4*< | -0.8< |
| Creston | IA | 48.2 | BLH19901130KG | 94 22 30.0 | 111 | 499 | G. O. Radio, Limited | | |

| 266C1 KXIA | LIC _CN | 51.3 | 75.4 | 42 00 19.0 | 100.000 | 92.6 | 62.3 | -29.3*< | -4.6< |
| Marshalltown | IA | 231.8 | BLH19950727KE | 92 55 45.0 | 200 | 491 | Marshalltown Broadcasting, | | |

| 265D 638594 | APP _C_ | 262.7 | 4.6 | 41 34 43.0 | 0.099 | 0.7 | 7.3 | -7.8*< | -3.8*< |
| West Des Moines | IA | 82.7 | BNPFT20030314CCN | 93 41 48.0 | | 297 | Northwestern College | | |

| 264D 629251 | APP _V_ | 327.9 | 9.4 | 41 39 19.0 | 0.099 | 0.7 | 5.6 | -4.1*< | 2.6 |
| Grimes | IA | 147.8 | BNPFT20030310BBM | 93 42 05.0 | | 284 | Calvary Chapel Of Twin Fal | | |

| 264D 635737 | APP _C_ | 313.2 | 13.1 | 41 39 53.0 | 0.115 | 0.8 | 12.8 | 1.7 | -0.8< |
| Des Moines | IA | 133.1 | BNPFT20030314BEF | 93 45 24.0 | | 419 | Holcomb International Mini | | |

--- Channel 268   101.5 MHz. ---

| 269D K269EJ | LIC _CN | 0.0 | 0.0 | 41 35 02.0 | 0.250 | 18.7 | 12.6 | -31.3*< | -31.3*< |
| Des Moines | IA | 0.0 | BLFT19980116TD | 93 38 29.0 | 91 | 356 | University Of Northern Iow | | |

| 268C2 KKSI | LIC _CN | 122.4 | 93.0 | 41 07 57.0 | 49.000 | 137.0 | 52.0 | -57.7*< | -5.7< |
| Eddyville | IA | 303.0 | BLH19901127KC | 92 42 12.0 | 152 | 390 | O-town Communications, Inc | | |

| 269A KPUL | USR ___ | 228.4 | 30.6 | 41 24 02.0 | 6.000 | 45.9 | 28.8 | -27.6*< | -17.3< |
| Winterset | IA | 48.2 | | 93 54 58.0 | 100 | 396 | | | |

| 265D 638594 | APP _C_ | 262.7 | 4.6 | 41 34 43.0 | 0.099 | 0.7 | 7.3 | -7.8*< | -3.8*< |
| West Des Moines | IA | 82.7 | BNPFT20030314CCN | 93 41 48.0 | | 297 | Northwestern College | | |

| 271D 632743 | APP _V_ | 327.9 | 9.4 | 41 39 19.0 | 0.010 | 0.2 | 3.2 | -3.6*< | 5.1 |
| Grimes | IA | 147.8 | BNPFT20030310AXZ | 93 42 05.0 | | 284 | Calvary Chapel Of Twin Fal | | |

| 271D 641448 | APP _C_ | 313.2 | 13.1 | 41 39 53.0 | 0.075 | 0.6 | 12.5 | 1.8 | -0.4< |
| Des Moines | IA | 133.1 | BNPFT20030317ITE | 93 45 24.2 | | 442 | Radio Assist Ministry, Inc | | |

--- Channel 269   101.7 MHz. ---

| 269D K269EJ | LIC _CN | 0.0 | 0.0 | 41 35 02.0 | 0.250 | 43.3 | 12.6 | -55.9*< | -55.9*< |
| Des Moines | IA | 0.0 | BLFT19980116TD | 93 38 29.0 | 91 | 356 | University Of Northern Iow | | |

| 269A KPUL | USR ___ | 228.4 | 30.6 | 41 24 02.0 | 6.000 | 88.6 | 28.8 | -70.3*< | -42.3< |
| Winterset | IA | 48.2 | | 93 54 58.0 | 100 | 396 | | | |

| 271D 632743 | APP _V_ | 327.9 | 9.4 | 41 39 19.0 | 0.010 | 0.2 | 3.2 | -3.6*< | 5.1 |
| Grimes | IA | 147.8 | BNPFT20030310AXZ | 93 42 05.0 | | 284 | Calvary Chapel Of Twin Fal | | |

| 271D 641448 | APP _C_ | 313.2 | 13.1 | 41 39 53.0 | 0.075 | 0.6 | 12.5 | 1.8 | -0.4< |
| Des Moines | IA | 133.1 | BNPFT20030317ITE | 93 45 24.2 | | 442 | Radio Assist Ministry, Inc | | |

--- Channel 270   101.9 MHz. ---

| 269D K269EJ | LIC _CN | 0.0 | 0.0 | 41 35 02.0 | 0.250 | 18.7 | 12.6 | -31.3*< | -31.3*< |
| Des Moines | IA | 0.0 | BLFT19980116TD | 93 38 29.0 | 91 | 356 | University Of Northern Iow | | |

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CH     CALL        TYPE  ANT   AZI    DIST           LAT          PWR(kW) INT(km)  PRO(km)   *IN*      *OUT*
CITY               STATE       <--    FILE #         LNG          HAAT(M) COR(M)   LICENSEE  (Overlap in km)
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273C  KSTZ         LIC _CY    6.7    24.2           41 48 01.0   100.000  11.5     79.4       0.3       -56.3*<
Des Moines          IA       186.7   BLHRB1104ZZ    93 36 27.0   384      675      Saga Communications Of Iow

269A  KPUL         USR ___   228.4   30.6           41 24 02.0   6.000    45.9     28.8      -27.6*<    -17.3<
Winterset           IA        48.2                  93 54 58.0   100      396

270C  KNWS-FM      LIC _CX   58.0    174.1          42 24 02.0   100.000  189.4    85.6      -27.6*<    47.4
Waterloo            IA       239.2   BLED20051102ABH 91 50 36.0  479      762      Northwestern College

271D  641448       APP _C_   313.2   13.1           41 39 53.0   0.075    19.9     12.5      -17.6*<    -19.2<
Des Moines          IA       133.1   BNPFT20030317ITE 93 45 24.2           442      Radio Assist Ministry, Inc

271D  636855       APP _C_   256.6   17.1           41 32 53.0   0.250    16.8     11.6      -11.8<     -14.2<
West Des Moines     IA        76.5   BNPFT20030314CCK 93 50 29.0           341      University Of Northern Iow

271D  632743       APP _V_   327.9   9.4            41 39 19.0   0.010    4.4      3.2       -7.8*<     -12.9<
Grimes              IA       147.8   BNPFT20030310AXZ 93 42 05.0           284      Calvary Chapel Of Twin Fal

217C2 KDFR         LIC DCX   69.2    10.2           41 36 59.0   32.000   2.0      12.5       14.5R     -4.3M
Des Moines          IA       249.3   BLED20030923ABC 93 31 36.0  136      405      Family Stations, Inc.


--- Channel 271   102.1 MHz.  ---
269D  K269EJ       LIC _CN    0.0    0.0            41 35 02.0   0.250    1.1      12.6      -13.7*<    -13.7*<
Des Moines          IA         0.0   BLFT19980116TD 93 38 29.0   91       356      University Of Northern Iow

273C  KSTZ         LIC _CY    6.7    24.2           41 48 01.0   100.000  11.5     79.4       0.3       -56.3*<
Des Moines          IA       186.7   BLHRB1104ZZ    93 36 27.0   384      675      Saga Communications Of Iow

271D  641448       APP _C_   313.2   13.1           41 39 53.0   0.075    43.7     12.5      -41.4*<    -44.9<
Des Moines          IA       133.1   BNPFT20030317ITE 93 45 24.2           442      Radio Assist Ministry, Inc

271D  636855       APP _C_   256.6   17.1           41 32 53.0   0.250    39.7     11.6      -34.7*<    -39.7<
West Des Moines     IA        76.5   BNPFT20030314CCK 93 50 29.0           341      University Of Northern Iow

271D  632743       APP _V_   327.9   9.4            41 39 19.0   0.010    10.2     3.2       -13.6*<    -38.1<
Grimes              IA       147.8   BNPFT20030310AXZ 93 42 05.0           284      Calvary Chapel Of Twin Fal

271D  640551       APP _C_   73.4    42.3           41 41 30.0   0.170    41.6     12.6      -11.4<     -12.9<
Newton              IA       253.7   BNPFT20030314BD0 93 09 11.0           364      Holcomb International Mini

217C2 KDFR         LIC DCX   69.2    10.2           41 36 59.0   32.000   2.0      12.5       14.5R     -4.3M
Des Moines          IA       249.3   BLED20030923ABC 93 31 36.0  136      405      Family Stations, Inc.


--- Channel 272   102.3 MHz.  ---
269D  K269EJ       LIC _CN    0.0    0.0            41 35 02.0   0.250    1.1      12.6      -13.7*<    -13.7*<
Des Moines          IA         0.0   BLFT19980116TD 93 38 29.0   91       356      University Of Northern Iow

273C  KSTZ         LIC _CY    6.7    24.2           41 48 01.0   100.000  117.8    79.4      -106.6*<   -73.4*<
Des Moines          IA       186.7   BLHRB1104ZZ    93 36 27.0   384      675      Saga Communications Of Iow

271D  641448       APP _C_   313.2   13.1           41 39 53.0   0.075    19.9     12.5      -17.6*<    -19.2<
Des Moines          IA       133.1   BNPFT20030317ITE 93 45 24.2           442      Radio Assist Ministry, Inc

271D  636855       APP _C_   256.6   17.1           41 32 53.0   0.250    16.8     11.6      -11.8<     -14.2<
West Des Moines     IA        76.5   BNPFT20030314CCK 93 50 29.0           341      University Of Northern Iow

271D  632743       APP _V_   327.9   9.4            41 39 19.0   0.010    4.4      3.2       -7.8*<     -12.9<
Grimes              IA       147.8   BNPFT20030310AXZ 93 42 05.0           284      Calvary Chapel Of Twin Fal

275D  641811       APP _C_   313.2   13.1           41 39 53.0   0.075    0.6      12.5       1.8       -0.4<
Des Moines          IA       133.1   BNPFT20030317ITF 93 45 24.2           442      Radio Assist Ministry, Inc
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Terrain database is FCC NGDC 30 Sec,   R= 73.215 qualifing spacings or FCC minimum spacings in KM,   M= Margin KM
In & Out distances between contours are shown at closest points. Reference Zone = 2
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside protected contour.

CHANNEL PRECLUSION STUDY
University Of Northern Iowa
With KPUL moving to channel 269 (I.F. Channels)

| REFERENCE
41 35 02. N.
93 38 29. W. | | Class= D , Pwr=0.25 kW, HAAT= 91 M, COR= 356 M
Average Protected F(50-50)= 12.29 km
Omni-directional | | | | | | | DISPLAY DATES
DATA   04-13-10
SEARCH 04-13-10 | |

CH CALL CITY	TYPE ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) INT(km) HAAT(M) COR(M)		PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
--- Channel 215 90.9 MHz. ---									
269D K269EJ Des Moines	LIC _CN IA	0.0 0.0	0.0 BLFT19980116TD	41 35 02.0 93 38 29.0	0.250 91	43.3 356	12.6 University Of Northern Iow	9.5R	-9.5M
215C2 KLOX Creston	CP _VX IA	225.4 44.9	79.8 BPED20080909ADS	41 04 38.0 94 19 09.0	45.000 155	137.9 535	53.4 Florida Public Radio, Inc.	-70.4*<	-16.7<
217C2 KDFR Des Moines	LIC DCX IA	69.2 249.3	10.2 BLED20030923ABC	41 36 59.0 93 31 36.0	32.000 136	5.4 405	49.1 Family Stations, Inc.	-7.7*<	-40.0*<
215C KUNI Cedar Falls	LIC _CY IA	60.5 241.7	168.4 BMLED19841106LW	42 18 59.0 91 51 31.0	100.000 524	192.9 799	88.5 University Of Northern Iow	-36.8*<	38.3
215A KLOX Creston	LIC _VX IA	227.6 47.1	83.5 BLED20080908ACD	41 04 29.0 94 22 35.0	4.000 102	82.3 489	27.1 Florida Public Radio, Inc.	-11.4<	15.8
213D K213DV Pleasant Hill	LIC _C_ IA	86.3 266.3	8.6 BMLFT20061206AEZ	41 35 20.0 93 32 17.0	0.062	0.6 433	12.4 Educational Media Foundati	-4.9*<	-4.9*<
269A KPUL Winterset	USR ___ IA	228.4 48.2	30.6	41 24 02.0 93 54 58.0	6.000 100	88.6 396	28.8	9.5R	21.1M
--- Channel 216 91.1 MHz. ---									
269D K269EJ Des Moines	LIC _CN IA	0.0 0.0	0.0 BLFT19980116TD	41 35 02.0 93 38 29.0	0.250 91	43.3 356	12.6 University Of Northern Iow	9.5R	-9.5M
217C2 KDFR Des Moines	LIC DCX IA	69.2 249.3	10.2 BLED20030923ABC	41 36 59.0 93 31 36.0	32.000 136	73.0 405	49.1 Family Stations, Inc.	-75.3*<	-57.4*<
216C KTPR Fort Dodge	LIC _CX IA	335.4 154.9	151.1 BLED20070911ABL	42 49 03.0 94 24 41.0	100.000 326	175.1 676	74.2 Iowa State University Of S	-37.1*<	33.1
215C2 KLOX Creston	CP _VX IA	225.4 44.9	79.8 BPED20080909ADS	41 04 38.0 94 19 09.0	45.000 155	79.3 535	53.5 Florida Public Radio, Inc.	-11.8<	8.5
213D K213DV Pleasant Hill	LIC _C_ IA	86.3 266.3	8.6 BMLFT20061206AEZ	41 35 20.0 93 32 17.0	0.062	0.6 433	12.4 Educational Media Foundati	-4.9*<	-4.9*<
269A KPUL Winterset	USR ___ IA	228.4 48.2	30.6	41 24 02.0 93 54 58.0	6.000 100	88.6 396	28.8	9.5R	21.1M

Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin KM
In & Out distances between contours are shown at closest points. Reference Zone = 2
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside protected contour.