

ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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Federal Communications Commission
Office of the Secretary

In the Matter of)	
)	
Amendment of Section 73.622(i))	MB Docket No. 08-117
Final DTV Table of Allotments)	RM-11450
Television Broadcast Stations)	
(St. Paul, Minnesota))	

To: Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary

Attn: Chief, Policy and Rules Division
Media Bureau

**JOINT REQUEST FOR APPROVAL OF SETTLEMENT AGREEMENT AND
REQUEST FOR WITHDRAWAL OF COUNTERPROPOSAL**

Duluth-Superior Area Educational Television Corporation ("Duluth-Superior"), licensee of noncommercial educational Station WDSE-TV and WDSE-DT, Duluth, Minnesota, and Twin Cities Public Television, Inc. ("TPT"), licensee of noncommercial educational Station KTCI-DT, St. Paul, Minnesota, pursuant to Section 73.3525 of the Commission's Rules, hereby request that the FCC (i) approve the Settlement Agreement attached as Exhibit 1, (ii) dismiss the Counterproposal filed by Duluth-Superior in the above-captioned proceeding, and (iii) approve the substitution of DTV Channel *23 as the post-transition DTV allocation for Station KTCI-DT in lieu of DTV Channel *26, as now allotted. In support of this request, Duluth-Superior and TPT are submitting, as Exhibits 2 and 3 respectively, the declarations required by Section 73.3525 of the Commission's Rules.

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Respectfully Submitted,

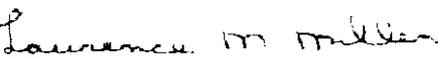
DULUTH-SUPERIOR AREA EDUCATIONAL
TELEVISION CORPORATION

By: 

Brian M. Madden
John D. Poutasse
Lerman Senter PLLC
2000 K Street, NW, Suite 600
Washington, DC 20006-1809
202-429-8970

Its Counsel

TWIN CITIES PUBLIC TELEVISION, INC.

By: 

Lawrence M. Miller
Schwartz, Woods & Miller
Suite 610, The Lion Building
1233 20th Street, N.W.
Washington, D.C. 20036-7322
202-833-1700

April 24, 2009

Its Counsel

EXHIBIT 1

SETTLEMENT AGREEMENT

This Settlement Agreement ("Agreement") is made and entered into this 24th day of April, 2009, by and between Duluth-Superior Area Educational Television Corporation ("Duluth-Superior"), licensee of noncommercial educational Station WDSE-TV and WDSE-DT, Duluth, Minnesota, and Twin Cities Public Television, Inc. ("TPT"), licensee of noncommercial educational Station KTCI-DT, St. Paul, Minnesota, with reference to the following:

WHEREAS, in response to a Petition for Rulemaking ("Petition") filed by TPT, the Federal Communications Commission ("FCC") released on July 8, 2008 a Notice of Proposed Rulemaking to amend Section 73.622(i) of the Commission's Rules, the Final DTV Table of Allotments, to substitute DTV Channel *38 as the post-transition DTV allocation for Station KTCI-DT in lieu of DTV Channel *26, as presently allotted (MB Docket No. 08-117; RM-11450) ("the "Rulemaking Proceeding");

WHEREAS, Duluth-Superior filed Comments in the Rulemaking Proceeding in which it counterproposed that the FCC (i) allocate one of three available channels (DTV Channel 23, DTV Channel 24 or DTV Channel 25) to St. Paul for use by KTCI-DT in lieu of the proposed DTV Channel *38, and (ii) allocate a new, reserved allotment on DTV Channel *38 at Superior, Wisconsin (the "Counterproposal");

WHEREAS, TPT filed Reply Comments opposing the Counterproposal;

WHEREAS, Duluth-Superior and TPT believe that a settlement upon the terms and conditions set forth in this Agreement will serve the public interest by enabling the grant of the Petition, as supplemented, and by facilitating the ultimate introduction of a new noncommercial educational television service on DTV Channel *38 at Superior, Wisconsin.

NOW THEREFORE, in consideration of the foregoing and the mutual obligations and covenants set forth herein, the parties, intending to be legally bound hereby, agree as follows:

1. Subject to the conditions set forth herein and the approval of this Agreement by the FCC, the parties agree as follows:

- (a) TPT agrees to file with the FCC a supplement to its Reply Comments ("Supplement"), a copy of which is attached hereto at Exhibit A, expressing TPT's consent to the substitution of DTV Channel *23 as the proposed reserved allotment for St. Paul, Minnesota, in lieu of DTV Channel *38, as originally proposed; provided, however, that in the event that a third party objects to the proposed DTV Channel *23 allotment and TPT determines in its sole discretion that such objection will unreasonably delay FCC action on the Petition, TPT may withdraw its request to substitute DTV Channel *23 for DTV Channel *38;
- (b) Duluth-Superior agrees to withdraw the Counterproposal; and
- (c) In consideration of TPT's performance of its obligations under Section 1(a) hereof, Duluth-Superior agrees to pay TPT an amount not to exceed Twenty

Seven Thousand Five Hundred Dollars (\$27,500), as provided in Section 4 hereof.

2. Immediately upon execution of this Agreement, and no later than 6:00 p.m. Eastern Time on April 27, 2009, TPT shall join with Duluth-Superior in the submission of a Joint Request for Approval of Settlement Agreement and Request for Withdrawal of Counterproposal (the "Joint Request") requesting that the FCC (i) grant the Joint Request; (ii) approve this Agreement; (iii) dismiss the Counterproposal and (iv) approve the substitution of DTV Channel *23 as the post-transition DTV allocation for Station KTCI-DT in lieu of DTV Channel *26, as presently allotted. The Joint Request shall be accompanied by (x) a certification signed by an officer of Duluth-Superior; and (y) a certification signed by an officer of TPT, copies of which are attached hereto.

3. The parties shall in good faith pursue approval by the FCC of the Joint Request and this Agreement and shall cooperate fully with each other and with the FCC and take whatever additional action is reasonably necessary or appropriate to obtain FCC approval of, and to effectuate, this Agreement. TPT further agrees that if the FCC allots DTV Channel *23 for KTVI-DT's use at St. Paul, Minnesota, it will interpose no objection to Duluth-Superior's proposed use of DTV Channel *38 at Superior, Wisconsin.

4. The payments from Duluth-Superior to TPT shall be made as follows:

(a) Within five (5) business days following the date on which the Commission grants the Joint Request by Final Order (as defined below), Duluth-Superior shall pay to TPT an amount not to exceed Twenty Four Thousand Dollars (\$24,000) as reimbursement for costs incurred by TPT in connection with any necessary modifications to TPT's DTV Channel *38 combiner to specify operation on DTV Channel *23; and

(b) Within five (5) business days of the date of this Agreement, Duluth-Superior shall pay to TPT an amount not to exceed Three Thousand Five Hundred Dollars (\$3,500) as reimbursement for engineering and legal costs incurred by TPT in connection with the preparation of the Supplement.

For purposes of this Agreement, "Final Order" shall mean an action by the Commission that (i) has not been vacated, reversed, stayed, set aside, annulled or suspended, (ii) with respect to which no timely filed appeal, request for stay, or petition for rehearing, reconsideration or review by any party or by the Commission on its own motion, is pending, and (iii) as to which the time for filing any such appeal, request, or petition and for review by the Commission on its own motion has expired.

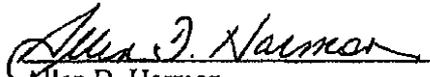
5. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns. If any provision of this Agreement is determined to be void, unenforceable, or contrary to law, the remainder of this Agreement shall continue in full force and effect, provided that such continuation would not materially diminish the benefit of this Agreement for any party. This Agreement sets forth the entire understanding of the parties hereto at the time of its execution and delivery with respect to the subject matter hereof and supersedes all prior agreements between the parties with respect to the subject matter hereof. This Agreement may not be amended except by written amendment signed by all parties. Each party represents and warrants that (i) it has the requisite power to enter into and perform

'
' this Agreement, (ii) it is not a party to any other agreement or understanding that is inconsistent with this Agreement and (iii) performance under this Agreement will not contravene any other contract, agreement, corporate provision or other limitation on his/its authority, power or rights. This Agreement may be signed in counterparts and delivered by facsimile, with the same effect as if the signature on each counterpart were on the same instrument. If any party breaches its obligations under this Agreement, the other party shall have the right to seek injunctive relief and specific performance. The breaching party agrees to waive any defense as to the adequacy of the other party's remedies at law and to interpose no opposition, legal or otherwise, to the propriety of injunctive relief or specific performance as a remedy.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Settlement Agreement
as of the date first written above.

DULUTH-SUPERIOR AREA EDUCATIONAL
TELEVISION CORPORATION

By: 
Allen D. Harmon
President & General Manager

TWIN CITIES PUBLIC TELEVISION, INC.

By: 
Name: James R. Pagliarini
Title: President + CEO

EXHIBIT A

TWIN CITIES PUBLIC TELEVISION, INC. SUPPLEMENT TO REPLY COMMENTS

MB DOCKET NO. 08-117; RM-11450

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
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Amendment of Section 73.622(i),)	MB Docket No. 08-117
Final DTV Table of Allotments,)	RM-11450
Television Broadcast Stations)	
(St. Paul, Minnesota))	

To: Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary

Attn: Chief, Video Division, Media Bureau

SUPPLEMENTAL COMMENTS OF TWIN CITIES PUBLIC TELEVISION, INC.

Twin Cities Public Television, Inc. ("TPT"), licensee of noncommercial educational Station KTCI-TV, analog Channel *17, St. Paul, Minnesota, hereby supplements its earlier comments in this docket. TPT is the proponent of the proposal set forth in the above-captioned Notice of Proposed Rule Making to substitute DTV Channel *38 for the assigned post-transition DTV Channel *26 for noncommercial educational Station KTCI-DT, St. Paul, Minnesota.¹ For the reasons set forth below TPT now proposes the allotment of DTV Channel *23 rather than Channel *38.

¹ The Notice at paragraph 1 mistakenly refers to the Station KTCI-TV analog channel as *16. The station operates on analog Channel *17 and on pre-transition digital Channel *16.

1. Duluth-Superior Area Educational Television Corporation ("DS") filed a counterproposal. It asked for the substitution of DTV Channel *23, *24, or *25, rather than *38 as proposed, for use by Station KTCI-DT. DS also sought waiver of the freeze on petitions for new DTV allotments and the allotment of Channel *38 to Superior, Wisconsin so that it could apply for authority to construct a new noncommercial educational station there. DS hopes to use the equipment from the pre-transition Channel *38 facilities of its Station WDSE-DT, Duluth, Minnesota for such a new station.

2. TPT filed a Reply opposing DS' counterproposal. The parties have now, however, reached a settlement of their differences and they are filing simultaneously herewith a Joint Request For Approval Of Settlement Agreement And Request For Withdrawal Of Counterproposal ("Joint Request"). The Settlement Agreement provides that (a) TPT will file this Supplement asking for allotment of Channel *23 for Station KTCI-DT but will reserve the right to revert to the request for allotment of Channel *38 in specified circumstances, (b) DS will withdraw its Counterproposal, and (c) DS will reimburse TPT for its costs of retuning certain equipment to operate on Channel *23 and up to a certain amount of reasonable and prudent engineering and legal costs in filing this Supplement.

3. The attached engineering supplement shows that Channel *23 can be allotted consistent with all applicable rules. TPT will promptly apply for DTV Channel *23 when it is allotted and, when authorized, will promptly build its DTV station using that channel within the time limit specified by the Commission.

In view of this showing, Channel *23, rather than Channel *38, should be substituted for Channel *26 for use for Station KTCI-DT, conditioned on approval of the Joint Request.

Respectfully submitted,

TWIN CITIES PUBLIC TELEVISION, INC.

By: 

Lawrence M. Miller
miller@swmlaw.com

SCHWARTZ, WOODS & MILLER
Suite 610, The Lion Building
1233 20th Street, N.W.
Washington, D.C. 20036-7322
Telephone: (202)833-1700
Facsimile: (202)833-2351

Its Attorneys

Date: April 24, 2009

SUPPLEMENT TO A PETITION FOR RULE MAKING
AMEND DTV TABLE OF ALLOTMENTS TO
SUBSTITUTE CHANNEL 23, INSTEAD OF
CHANNEL 38, IN LIEU OF CHANNEL 26
FOR KTCI-DT POST-TRANSITION FACILITY
ST. PAUL, MINNESOTA

KESSLER AND GEHMAN ASSOCIATES, INC.
TELECOMMUNICATIONS CONSULTING ENGINEERS

KGGA

20090422

Prepared by William T. Godfrey, Jr.

507 N.W. 60th Street, Suite C
Gainesville, Florida 32607



Kessler and Gehman Associates, Inc.

Telecommunications Consulting Engineers

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM THOMAS GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES INC. (KGA), TELECOMMUNICATIONS CONSULTING ENGINEERS IN SUPPORT OF A SUPPLEMENT TO A PETITION FOR RULE MAKING (BPRM-20080620AFM) TO AMEND THE DTV TABLE OF ALLOTMENTS BY SUBSTITUTING CHANNEL *23, INSTEAD OF CHANNEL *38, IN PLACE OF CHANNEL *26 FOR THE KTCI-DT BROADCAST FACILITY LICENSED TO TWIN CITIES PUBLIC TELEVISION (TPT).

The firm Kessler and Gehman Associates, Inc. (KGA) has been retained by Twin Cities Public Television, Inc., St. Paul, MN to prepare engineering studies and the engineering portion of a supplement to a Petition for Rule Making (BPRM-20080620AFM) to amend the DTV Table of Allotments (Appendix B) to substitute the proposed post-transition digital Channel *23, instead of the previous requested Channel *38, in lieu of allotted post-transition digital Channel *26 which is assigned to the KTCI-DT digital television broadcast facility.

Discussion

Twin Cities Public Television (tpt) is licensed to operate the KTCI-TV analog facility on Channel *17 with an ERP of 331.0 kW at an antenna height Radiation Center (R/C) of 393.0 meters Above Average Terrain (AAT) using a directional antenna. According to the initial allotment plan set forth in Appendix B of the *Sixth Report and Order* in MM Docket 87-268, FCC 97-115, adopted April 3, 1997, KTCI was allotted pre-transition digital Channel *16 at an antenna height R/C of 392.9 meters AAT and an ERP of 50.0 kW. In its Pre-Election Certification application (FCC Form 381), tpt certified that it would operate its post-transition DTV station based on its allotted replication facilities and in its First Round Channel Election application (FCC Form 382), tpt entered into a negotiated channel election arrangement with Fox Television Stations, Inc. (Fox) to release Channel *16 and lock-in Channel *26 for its final post-transition DTV operation. Fox agreed to allow tpt to use the existing Channel *26 broadband



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panel antenna after the transition and tpt agreed to remove its existing Channel *16 antenna from the tower.

In its 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 (22 FCC Rcd 15581), the FCC adopted the Final DTV Table of Allotments which assigned Channel *26 as the final post-transition DTV channel for KTCI-DT with an ERP of 63.1 kW and an antenna HAAT of 396.0 m; however, the antenna azimuth pattern was not changed from the licensed Channel *16 pattern (Antenna ID: 74396) to the Fox KMSP-DT Channel *26 antenna azimuth pattern (Antenna ID: 29226). This turned out to be a big problem due to the directional azimuth patterns being so different. Since the KMSP-DT Channel *26 pre-transition DTV facility, licensed to Fox, operated with an ERP of 691 kW, tpt planned all along to file a maximization application to increase the ERP for its final post-transition DTV facility on Channel *26 using the KMSP-DT antenna. However, unknowingly when the channel election process took place, the filing freeze, prohibiting coverage expansions, was not lifted in time for tpt to file a maximization application utilizing masking from the KMSP-DT Channel *26 pre-transition facility. This essentially eliminated any significant maximization opportunities. While most other UHF stations in the St. Paul market are operating their post-transition digital facilities in the neighborhood of 1,000 kW (ERP), KTCI-DT would have been limited to something less than 50 kW (ERP).

TPT filed a Petition for Rule Making (PFRM) requesting authorization to substitute Channel *38 in lieu of Channel *26 for its final post-transition channel and the FCC released a Notice of Proposed Rule Making (NPRM) on July 8, 2008 stating that DTV Channel *38 can be substituted for DTV Channel *26 at St. Paul, MN as proposed by tpt. However, Duluth-Superior Area Educational TV Corporation (Duluth-Superior) filed a counter proposal to the NPRM stating that it wanted to file for a new DTV station using Channel *38 and that tpt could use Channel *23. Accordingly, to accommodate Duluth-Superior, tpt requests authorization to operate with Channel *23 in lieu of the allotted post-transition digital Channel *26 instead of the previously requested Channel *38.



Post-Transition Interference (REQUEST FOR WAIVER)

Initial spacing studies, which considered post-transition DTV allotments, post-transition DTV licenses, post-transition DTV construction permits, post-transition DTV applications and Class A/Class A-eligible low power television (LPTV) stations in the applicable areas surrounding St. Paul, MN, revealed that Channel *23 was a possible option for the KTCI-DT post-transition DTV facility. After the spacing studies were completed additional studies were conducted to verify that the proposed station met the principal community coverage requirements of §73.625(a) of the FCC Rules. Exhibit 10 depicts the proposed KTCI-DT CH *23 F(50,90) 48.0 dBuV/m principal community contour and demonstrates that it would completely encompass the principal community of St. Paul, MN. After determining principal community coverage compliance, a detailed interference study was conducted, which included all applicable surrounding post-transition stations, using the terrain dependent Longley-Rice, point-to-point propagation algorithm detailed in the FCC’s Office of Engineering and Technology Bulletin Number 69 (OET 69).

The following table depicts the allotted (Appendix B) and proposed parameters respectively for the KTCI-DT post-transition DTV facility (see enclosed “Tech Box” extract from FCC Form 340-DTV form):

Facility ID	State	City	Call Sign	DTV Chan	DTV ERP (kW)	DTV HAAT (m)	DTV Antenna ID	DTV Latitude (DDMMSS)	DTV Longitude (DDMMSS)
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Final DTV Table of Allotments (Appendix B) Parameters:

68597	MN	ST. PAUL	KTCI	*26	63.1	396.0	74396	450329	930727
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Proposed Channel *23 Parameters:

68597	MN	ST. PAUL	KTCI	*23	700	412.9	20120	450330	930727
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Accordingly, tpt proposes to amend the DTV Table of Allotments (Appendix B) for its KTCI-DT post-transition DTV facility by making the following changes:



- 1) Change from allotted Channel *26 to the proposed Channel *23.
- 2) Change from allotted 63.1 kW ERP to proposed to 700.0 kW ERP.
- 3) Change from allotted 396.0 m antenna HAAT to proposed 412.9 m antenna HAAT.
- 4) Change from allotted Antenna ID: 74396 (Andrew model ATW30H4-DSC3-17S elliptically polarized directional antenna) to proposed Antenna ID: 29226 (Dielectric model TUP-SP4-12-1 horizontally polarized directional antenna).
- 5) Change (correct) from allotted 45°-03'-29" north latitude to correct 45°-03'-30" north latitude.

The proposed Channel *23, 700 kW ERP facility satisfies the post-transition interference protection provisions of §73.616 of the FCC Rules. Exhibit 13 is a Longley-Rice interference study that was computed using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's DTV analysis software. The interference percentages are exactly the same as the FCC calculations since the study was performed using the same type computer and the same interference analysis software. Referring to Exhibit 13, it can be seen that the proposed KTCI-DT Channel *23 facility would have contour overlap with the KQEG-CA Channel 23 Crescent, MN Class A facility (BLTTA-2004-0602ABA). **Therefore, in support of a waiver of the interference protection requirements pursuant to §73.616(f)(3) of the FCC rules, tpt hereby requests to make full use of terrain shielding and Longley-Rice terrain dependent propagation methods to demonstrate that the proposed facility will not be predicted to cause interference to the KQEG-CA Class A facility.** Exhibit 13 (pages 19-21) demonstrates that the proposed KTCI-DT Channel *23 facility is only predicted to cause an additional 0.1% interference to the KQEG-CA Class A facility which is well below the allowable 0.5% threshold. Exhibit 13 also demonstrates that the proposed KTCI-DT Channel *23 facility would not cause unacceptable interference to any post-transition facility and thus satisfies the post-transition interference protection provisions of 47 C.F.R. §73.616.



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Canadian Coordination

The KTCI transmitter site is 353.7 km from the Canadian border which is outside the 300 km culling distance established for DTV stations; therefore, Canadian coordination is not required.

Exhibits

Exhibits 1 and 2 represent KTCI's administration data as well as the antenna and antenna structure specifications for the proposed post-transition digital Channel *23.

Exhibit 3 depicts the profile view of the proposed antenna on the antenna structure with all the appropriate elevations.

Exhibits 4 (11 deg) and 5 (90 deg) display the elevation pattern and Exhibit 6 displays the elevation pattern tabulation.

Exhibit 7 depicts the proposed antenna azimuth pattern and Exhibit 8 depicts the proposed antenna azimuth pattern tabulation.

Exhibit 9 depicts the location of the KTCI-DT transmitter site using the White Bear Lake West, MN Topographic map.

Exhibit 10 is a principal community contour map demonstrating that the proposed KTCI-DT Channel *23 post-transition DTV facility's F(50,90) 48.0 dBuV/m Principal Community contour will completely encompass the principal community of St. Paul, MN.

Exhibit 11 is a contour map comparing the allotted KTCI-DT Channel *26 F(50,90) 40.0 dBuV/m contour (green) and the proposed KTCI-DT Channel *23 F(50,90) 39.7 dBuV/m contour (red).



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Exhibit 12 is a contour map comparing the initial KTCI-DT Channel *38 F(50,90) 41.0 dBuV/m contour (red) and the proposed KTCI-DT Channel *23 F(50,90) 39.7 dBuV/m contour (green). This exhibit demonstrates that the proposed Channel *23 facility will have a greater coverage area than the initial Channel *38 facility.

Exhibit 13 is a Longley-Rice interference study computed using a Sun Microsystems SPARC 5 computer work station loaded with the FCC's DTV analysis software. The exhibit demonstrates compliance with the full-service post-transition DTV interference protection requirements as well as the Class A interference protection requirements.

Environmental Impact

The proposed construction will have no significant environmental impact as defined in §1.1307 of the FCC Rules. The digital transmitter, 6-1/8 inch transmission line and horizontally polarized antenna system shall produce an ERP of 700.0 kW. It was determined that the maximum lobe of radiation from the base of the tower would occur at approximately 1.21 miles from the base of the tower (1.24-mile radial distance from the antenna center). At approximately 1.21 miles from the base of the tower, the depression angle of the main lobe will be approximately 12° below the horizontal. At that point, the relative field is 0.184 and the power density six feet above the ground will be approximately 0.0002 mW/cm². This equates to only 0.01% of the Maximum Permissible Exposure (MPE) limits for Occupational/Controlled Exposure and only 0.06% of the MPE limits for General Population/Uncontrolled Exposure authorized by the American National Standards Institute (ANSI). Since operation of the proposed KTCI-DT Channel *23 post-transition DTV facility will not exceed 5.0% of the MPE limit for Occupational/Controlled Exposure or General Population/Uncontrolled Exposure at any point on the ground, the proposed facility is not considered a "significant contributor" to the RF exposure environment pursuant to OET Bulletin 65, Edition 97-01. Therefore, contributions of



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exposure from other sources were not accounted for in this analysis. It is safe to conclude that the emissions will be insignificant and well within the maximum allowable requirements.

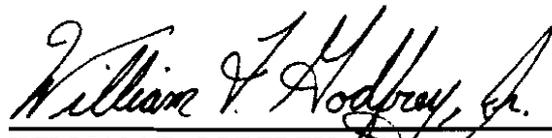
If other antennas are placed on the tower in the future, the licensee will cooperate with those users by reducing or completely terminating the power to the antenna when maintenance workers are in danger from the electromagnetic radiation emanating from the antenna. It is also understood that additional antennas on the support structure could increase the overall RF exposure levels and it is the responsibility of each licensee to ensure that the total RF exposure resulting from the operation of all antennas on the support structure do not exceed the maximum permissible exposure level at any point on the ground.

Certification

This technical statement was prepared by William T. Godfrey, Telecommunications Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.



KESSLER AND GEHMAN ASSOCIATES, INC.


WILLIAM T. GODFREY, JR.
Telecommunications Technical Consultant

22 April, 2009

PROPOSED KTCI-DT CHANNEL 23

PETITION FOR RULE MAKING

ST. PAUL, MINNESOTA

ENGINEERING SPECIFICATIONS

A. Transmitter Site:

Geographic coordinates (NAD27):

North Latitude: _____ 45° 03' 30"

West Longitude: _____ 93° 07' 27"

Transmitter Site Address: **540 Gramsie Road
Shoreview, MN 55126-7021**

B. Main Studio Address:

**Twin Cities Public Television
172 East Fourth Street
Saint Paul, MN 55101**

Post-Transition Facility:

DTV Channel: Number: _____ 23

Frequency: _____ 524-530 MHz

Offset: _____ N/A

C. Antenna Height:

Height of Site Above Mean Sea Level (AMSL): _____ 277.0 M

Overall Height of Structure Above Ground: _____ 446.8 M

(including all appurtenances)

Overall Height of Structure Above Mean Sea Level: _____ 723.8 M

(including all appurtenances)

Height of Site Above Average Terrain: _____ -3.1 M

Antenna Height Radiation Center (R/C) Above Ground: _____ 416.0 M

Antenna Height R/C Above Mean Sea Level: _____ 693.0 M

Average of All Non-Odd Radials: _____ 280.1 M

Antenna Height R/C Above Average Terrain: _____ 412.9 M

D. System Parameters – Horizontal Polarization:

Transmitter Power Required: _____ 27.5 kW

Maximum Power Input to Antenna: _____ 18.5 kW

Transmission Line Loss: _____ 1.73 dB

Transmission Line Efficiency: _____ 67.1%

Maximum Antenna Gain in Beam Maximum: _____ 15.79 dB

Maximum Antenna Gain in Horizontal Plane: _____ 14.38 dB

Maximum Effective Radiated Power: _____ 28.45 dBk

In Beam Maximum: _____ 700.0 kW

Maximum Effective Radiated Power: _____ 27.04 dBk

In Horizontal Plane: _____ 505.9 kW

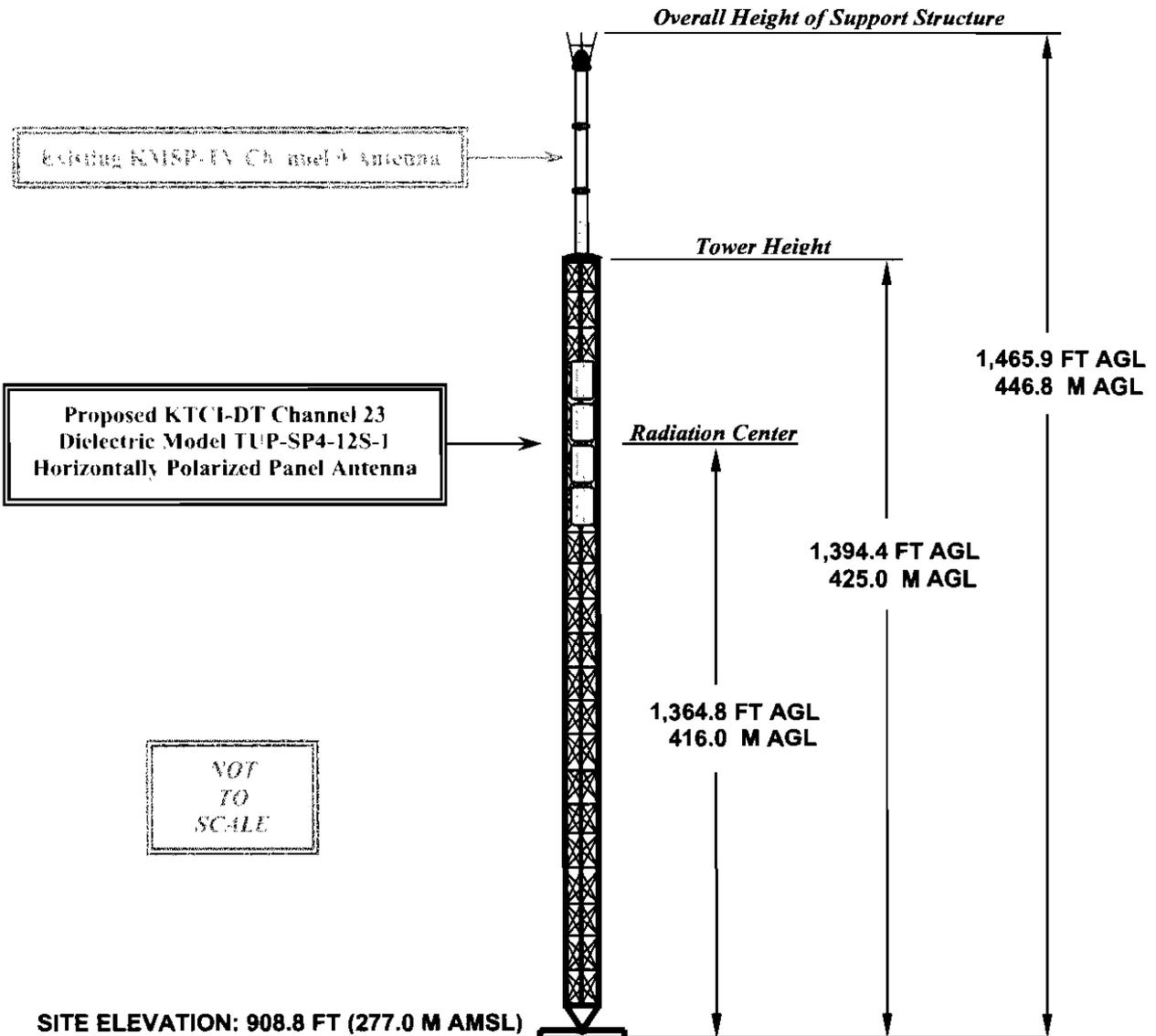
PROPOSED KTCI-DT CHANNEL 23
PETITION FOR RULE MAKING
ST. PAUL, MINNESOTA

**DATA FOR PROPOSED DIRECTIONAL
TRANSMITTING ANTENNA**

- A. **Antenna:** Dielectric Model TUP-SP4-12S-1, Horizontally Polarized, Directional, Broadband, Panel Antenna.
- B. **Electrical Beam Tilt:** 0.75 degrees
- C. **Mechanical Beam Tilt:** None
- D.

<u>Maximum Power Gain</u>	<u>Horizontal Polarization</u>
Maximum:	37.9 (15.79 dB)
Horizontal:	27.4 (14.38 dB)
- E. **Length:** 45.3 feet (13.8 meters) not including appurtenances.
- F. **TPO:** 27.5 kW
- G. **Null Fill:** 20.0%
- H. **Transmission Line:** 6-1/8" 50 ohm EHT digitLine
- I. **Transmission Line Attenuation:** 0.119 dB/100-feet
- J. **Transmission Line Length:** 1,450 feet
- K. **Transmission Line Loss:** 1.73 dB

KTCI-DT CHANNEL 23 TOWER ELEVATION VIEW



SITE ELEVATION: 908.8 FT (277.0 M AMSL)

OVERALL HEIGHT AGL: 446.8 M
OVERALL HEIGHT AMSL: 723.8 M
RADIATION CENTER AGL: 416.0 M
RADIATION CENTER AMSL: 693.0 M
RADIATION CENTER HAAT: 412.9 M
AVG OF ALL NON-ODD RADIALS: 280.1 M
SITE HAAT: -3.1 M

COORDINATES (NAD 27):
N. LATITUDE 45° 03' 30"
W. LONGITUDE 93° 07' 27"

Antenna Structure Registration Number:
1022899

NOTE: NOT TO SCALE

KESSLER AND GEHMAN

TELECOMMUNICATIONS CONSULTING ENGINEERS
 507 N.W. 60th Street, Suite C
 Gainesville, Florida 32607

KTCI-DT CHANNEL 23

ST. PAUL, MINNESOTA

20090417

EXHIBIT 3

Proposal Number

Date

Call Letters

KTCI-DT

Channel

Location

Minneapolis, MN

Customer

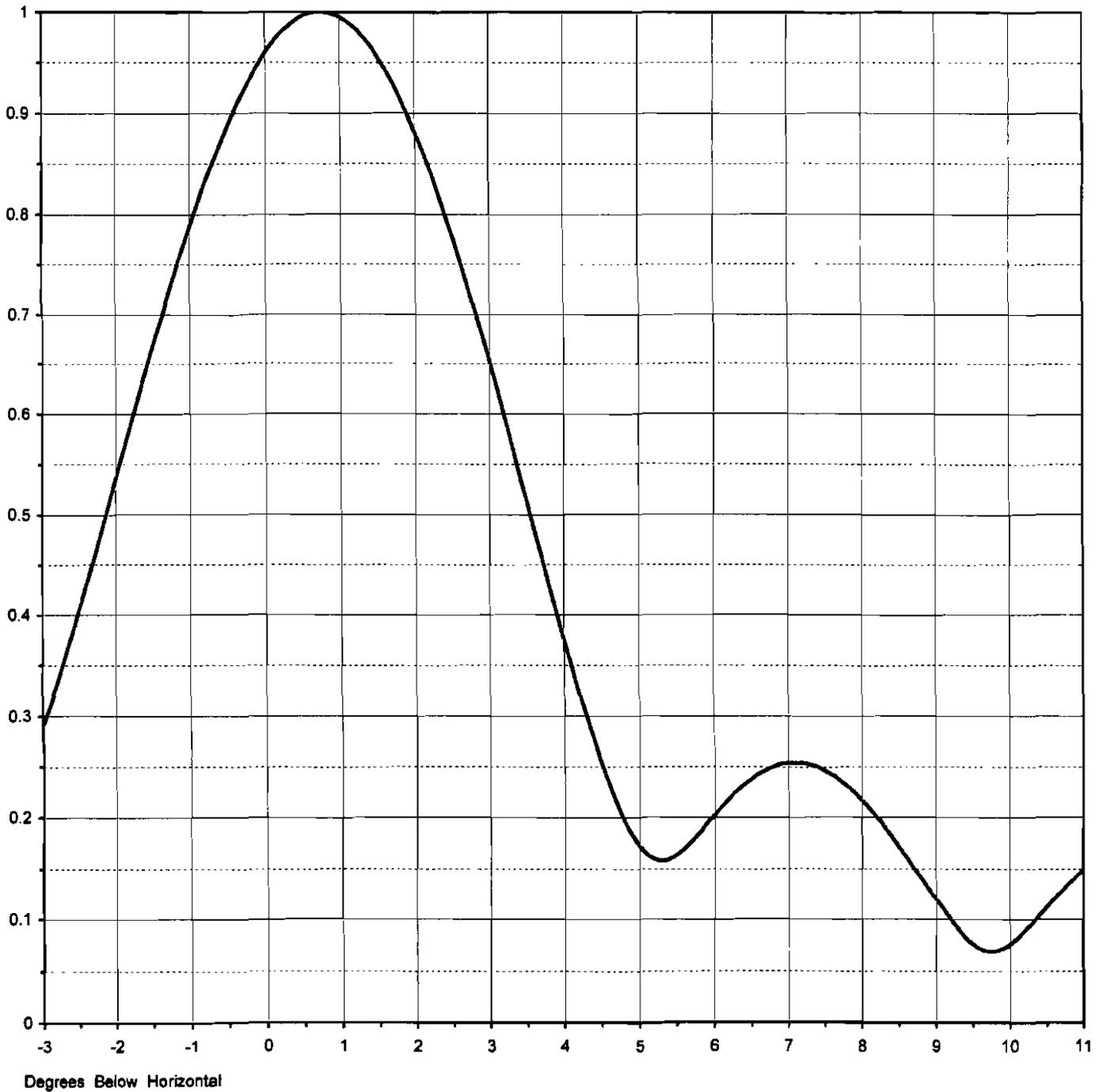
Antenna Type

TUP-SP4-12S-1

ELEVATION PATTERN: 6 Panels

RMS Gain at Main Lobe **12.70 (11.04 dB)**
RMS Gain at Horizontal **11.70 (10.68 dB)**
Calculated / Measured **Calculated**

Beam Tilt **0.75 deg**
Frequency **545.00 MHz**
Drawing # **06U127075**



Proposal Number

Date

Call Letters

KTCI-DT Channel

Location

Minneapolis, MN

Customer

Antenna Type

TUP-SP4-12S-1

ELEVATION PATTERN: 6 Panels

RMS Gain at Main Lobe **12.70 (11.04 dB)**

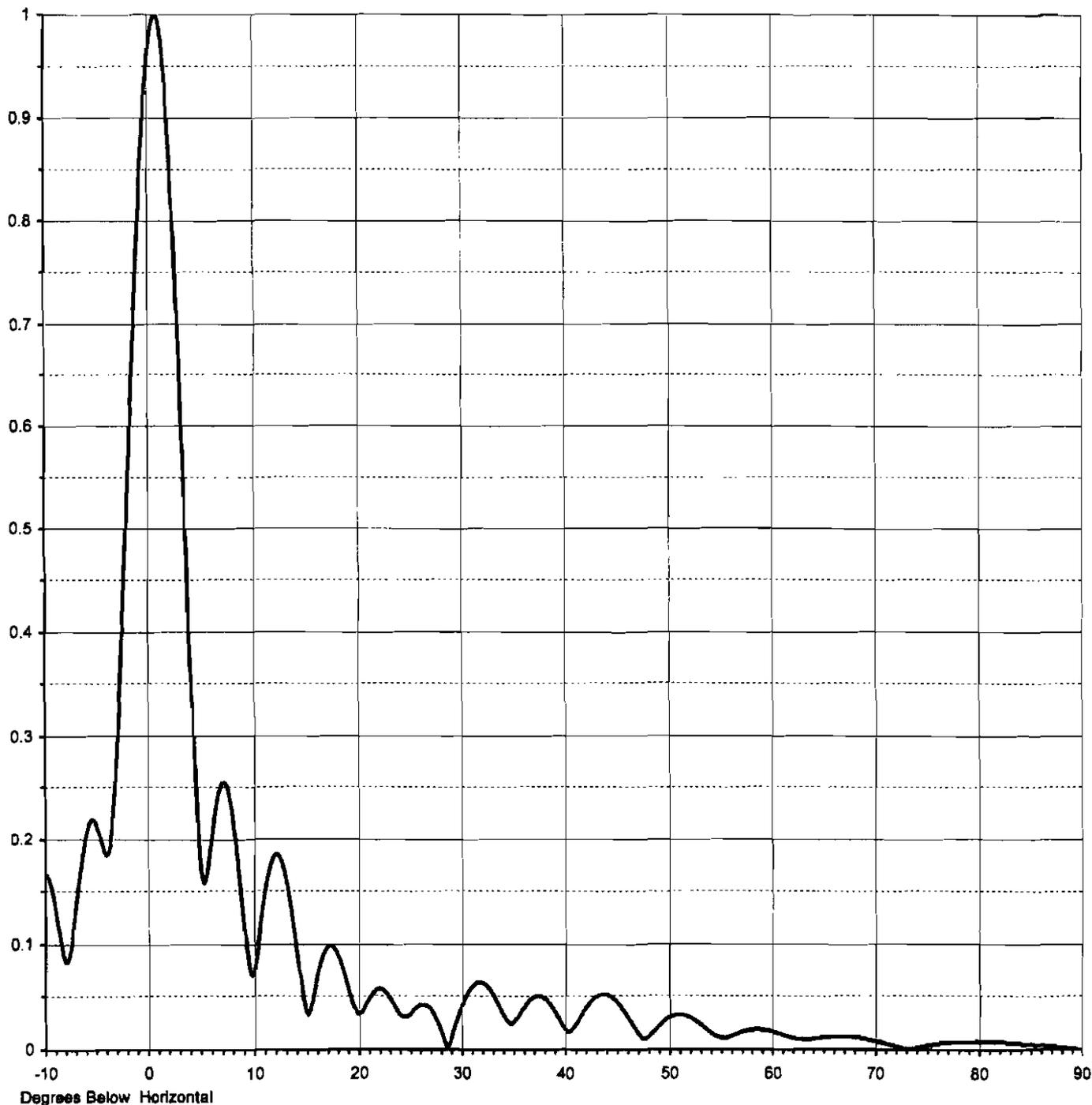
Beam Tilt **0.75 deg**

RMS Gain at Horizontal **11.70 (10.68 dB)**

Frequency **545.00 MHz**

Calculated / Measured **Calculated**

Drawing # **06U127075-90**



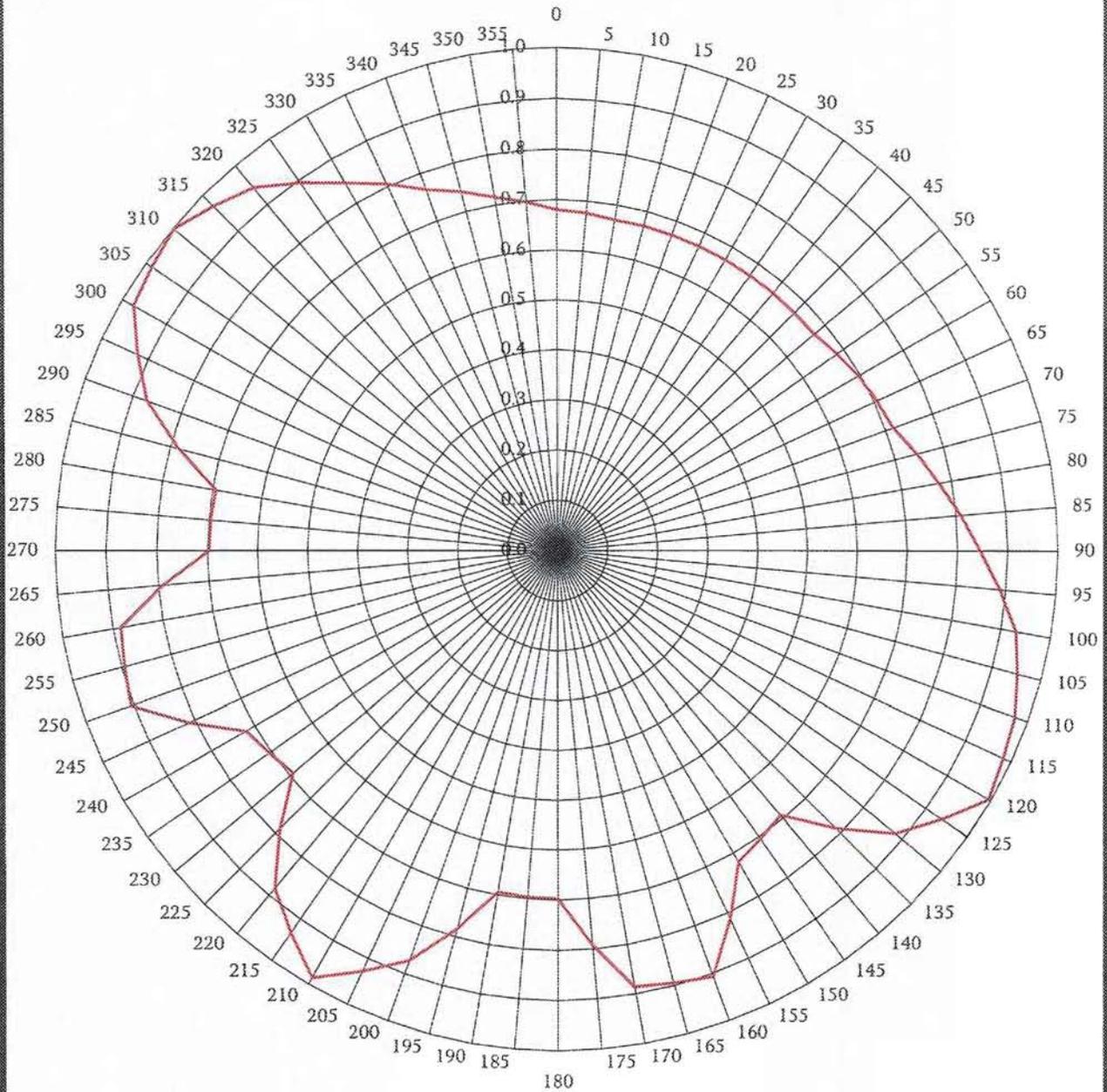
Proposal Number
 Date
 Call Letters **KTCI-DT** Channel
 Location **Minneapolis, MN**
 Customer
 Antenna Type **TUP-SP4-12S-1**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **06U127075-90**

Angle	Field										
-10.0	0.167	2.4	0.801	10.6	0.112	30.5	0.050	51.0	0.032	71.5	0.004
-9.5	0.157	2.6	0.755	10.8	0.127	31.0	0.058	51.5	0.031	72.0	0.003
-9.0	0.133	2.8	0.705	11.0	0.142	31.5	0.063	52.0	0.030	72.5	0.002
-8.5	0.103	3.0	0.653	11.5	0.170	32.0	0.063	52.5	0.027	73.0	0.000
-8.0	0.083	3.2	0.598	12.0	0.184	32.5	0.059	53.0	0.023	73.5	0.001
-7.5	0.096	3.4	0.542	12.5	0.182	33.0	0.052	53.5	0.020	74.0	0.002
-7.0	0.134	3.6	0.486	13.0	0.166	33.5	0.043	54.0	0.016	74.5	0.003
-6.5	0.174	3.8	0.430	13.5	0.138	34.0	0.033	54.5	0.013	75.0	0.004
-6.0	0.205	4.0	0.376	14.0	0.102	34.5	0.026	55.0	0.011	75.5	0.005
-5.5	0.219	4.2	0.323	14.5	0.064	35.0	0.025	55.5	0.011	76.0	0.005
-5.0	0.214	4.4	0.275	15.0	0.035	35.5	0.030	56.0	0.012	76.5	0.006
-4.5	0.197	4.6	0.232	15.5	0.041	36.0	0.038	56.5	0.014	77.0	0.006
-4.0	0.185	4.8	0.196	16.0	0.065	36.5	0.045	57.0	0.016	77.5	0.007
-3.5	0.211	5.0	0.172	16.5	0.085	37.0	0.049	57.5	0.017	78.0	0.007
-3.0	0.290	5.2	0.160	17.0	0.097	37.5	0.050	58.0	0.018	78.5	0.007
-2.8	0.333	5.4	0.160	17.5	0.099	38.0	0.048	58.5	0.019	79.0	0.007
-2.6	0.380	5.6	0.170	18.0	0.092	38.5	0.043	59.0	0.018	79.5	0.007
-2.4	0.430	5.8	0.185	18.5	0.078	39.0	0.036	59.5	0.018	80.0	0.007
-2.2	0.482	6.0	0.202	19.0	0.060	39.5	0.028	60.0	0.017	80.5	0.007
-2.0	0.535	6.2	0.218	19.5	0.043	40.0	0.020	60.5	0.015	81.0	0.007
-1.8	0.588	6.4	0.232	20.0	0.033	40.5	0.017	61.0	0.014	81.5	0.007
-1.6	0.640	6.6	0.243	20.5	0.036	41.0	0.021	61.5	0.012	82.0	0.007
-1.4	0.691	6.8	0.250	21.0	0.045	41.5	0.029	62.0	0.011	82.5	0.007
-1.2	0.740	7.0	0.254	21.5	0.053	42.0	0.037	62.5	0.010	83.0	0.006
-1.0	0.787	7.2	0.254	22.0	0.057	42.5	0.044	63.0	0.009	83.5	0.006
-0.8	0.830	7.4	0.250	22.5	0.055	43.0	0.049	63.5	0.009	84.0	0.006
-0.6	0.869	7.6	0.242	23.0	0.049	43.5	0.051	64.0	0.010	84.5	0.005
-0.4	0.904	7.8	0.231	23.5	0.041	44.0	0.051	64.5	0.010	85.0	0.005
-0.2	0.934	8.0	0.217	24.0	0.033	44.5	0.049	65.0	0.011	85.5	0.004
0.0	0.959	8.2	0.201	24.5	0.030	45.0	0.045	65.5	0.011	86.0	0.004
0.2	0.978	8.4	0.182	25.0	0.032	45.5	0.038	66.0	0.012	86.5	0.003
0.4	0.991	8.6	0.162	25.5	0.037	46.0	0.031	66.5	0.012	87.0	0.003
0.6	0.999	8.8	0.141	26.0	0.041	46.5	0.023	67.0	0.012	87.5	0.002
0.8	1.000	9.0	0.120	26.5	0.041	47.0	0.016	67.5	0.012	88.0	0.002
1.0	0.995	9.2	0.100	27.0	0.038	47.5	0.010	68.0	0.011	88.5	0.001
1.2	0.984	9.4	0.083	27.5	0.030	48.0	0.011	68.5	0.011	89.0	0.001
1.4	0.967	9.6	0.072	28.0	0.019	48.5	0.016	69.0	0.010	89.5	0.000
1.6	0.944	9.8	0.070	28.5	0.006	49.0	0.021	69.5	0.009	90.0	0.000
1.8	0.916	10.0	0.072	29.0	0.009	49.5	0.026	70.0	0.008		
2.0	0.882	10.2	0.082	29.5	0.025	50.0	0.029	70.5	0.007		
2.2	0.844	10.4	0.096	30.0	0.038	50.5	0.031	71.0	0.005		

RELATIVE FIELD AZIMUTH PATTERN



DIELECTRIC MODEL TUP-SP4-12S-1
BEAM MAXIMA AT 305°
AZIMUTH GAIN: 3.0 (4.75 dB)
POLARIZATION: HORIZONTAL

K **G** **A**
KESSLER AND GEHMAN
TELECOMMUNICATIONS CONSULTING ENGINEERS
507 N.W. 60th Street, Suite C
Gainesville, Florida 32607

KTCI-DT CHANNEL 23
ST. PAUL, MINNESOTA

20090417

EXHIBIT 7