



ORIGINAL

WSWP
Channel 10

BID RESPONSE

May 12, 2009

RECEIVED

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PURCHASING DIVISION
STATE OF WV

Dielectric

A Unit of SPX Corporation

Thank you for the opportunity to propose solutions for the new TV projects for WSWP

Since our inception in 1942, Dielectric has considered itself a solution-oriented engineering company, with pride in our depth of scientific knowledge, and our experience. Dielectric was the first to identify requirements and issues unique to DTV transmission, and as a result, we offer many products specifically designed for DTV. We were also pleased to be a part of the PBS DTV Express in the early days of getting the "digital" message out to the country. Currently, over 75% of all DTV stations currently on-air have done so with Dielectric, and we are confident in our ability to provide the best possible solution for WSWP Digital requirement.

The antenna we propose for your project is not only a well-proven design, but also one that will support WSWP in your endeavor of "building an exciting and productive future." I believe you will find this response to be consistent with our history. Keep in mind that beyond the initial purchase price lies the elusive 'return on investment', and the antenna that provides your station with the best possible signal and coverage that is essential to achieving the highest possible value. You may be offered cheaper antennas, but not with a better cost to value ratio. Our products are also backed with the best warranty in the industry.

Dielectric is the nation's largest manufacturer of broadcast antennas, transmission line, and RF systems equipment, with over 60 years of continuous service to the broadcast community. We have over 80 Staff Engineers with over 1500 years of combined experience to their credit. Our entire company is committed to providing you the best in broadcast systems. We look forward to this exciting project.

Kind regards,
Mary Morelli



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
EBA204

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ADDRESS CORRESPONDENCE TO ATTENTION OF
**SHELLY MURRAY
 304-558-8801**

VENDOR

*C20082552 01 800-341-9678
 DIELECTRIC COMMUNICATIONS
 PO BOX 949
 RAYMOND ME 04071

SHIP TO

EDUCATIONAL BROADCASTING
 AUTHORITY
 600 CAPITOL STREET
 CHARLESTON, WV
 25301-1223 304-558-3400

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/08/2009				

BID OPENING DATE: **05/14/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		968-15		
<p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA EDUCATIONAL BROADCASTING AUTHORITY, IS SOLICITING BIDS FOR THE REMOVAL OF AN EXISTING ANALOG CHANNEL 9 TOP MOUNT ANTENNA AND TRANSMISSION LINE AND TO PURCHASE AND INSTALL A TOP MOUNT DIGITAL CHANNEL 10 BROADCAST TELEVISION ANTENNA AND 3 1/8 EIA FLANGED TRANSMISSION LINE PER THE ATTACHED SPECIFICATIONS.</p> <p>TECHNICAL QUESTIONS MUST BE SUBMITTED IN WRITING TO SHELLY MURRAY IN THE WEST VIRGINIA PURCHASING DIVISION VIA MAIL AT THE ADDRESS SHOWN AT THE TOP OF THIS RFQ, VIA FAX AT 304-558-4115, OR VIA EMAIL AT SHELLY.L.MURRAY@WV.GOV. DEADLINE FOR ALL TECHNICAL QUESTIONS IS 04/29/2009 AT THE CLOSE OF BUSINESS. ALL TECHNICAL QUESTIONS RECEIVED, IF ANY, WILL BE ANSWERED BY ADDENDUM AFTER THE DEADLINE.</p> <p>QUESTIONS CONCERNING THE ACTUAL PROCESS BY WHICH A VENDOR MAY SUBMIT A BID TO THE STATE OF WEST VIRGINIA ARE NOT CONSIDERED TO BE TECHNICAL QUESTIONS AND MAY BE SUBMITTED AT ANY TIME PRIOR TO THE RFQ OPENING AND IN ANY FORMAT.</p>						
<p>ANTENNA TOWER CONSTRUCTION</p> <p>EXHIBIT 5</p> <p>WEST VIRGINIA CODE 21-1D-5 PROVIDES THAT: ANY SOLICITATION FOR A PUBLIC IMPROVEMENT CONSTRUCTION CONTRACT REQUIRES EACH VENDOR THAT SUBMITS A BID FOR THE WORK TO</p>						

SIGNATURE: *Mary Morelli* TELEPHONE: **207-655-8311** DATE: **5-12-09**

TITLE: *Quoting Representative* FEIN: **38106240** ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



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DATE PRINTED 04/08/2009	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
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BID OPENING DATE: **05/14/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>THE BID. THE ENCLOSED DRUG-FREE WORKPLACE AFFIDAVIT MUST BE SIGNED AND SUBMITTED WITH THE BID AS EVIDENCE OF THE VENDOR'S COMPLIANCE WITH THE PROVISIONS OF ARTICLE 1D, CHAPTER 21 OF THE WEST VIRGINIA CODE. FAILURE TO SUBMIT THE SIGNED DRUG-FREE WORKPLACE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF SUCH BID.</p> <p>NOTICE TO PROCEED: THIS CONTRACT IS TO BE PERFORMED WITHIN 180 CALENDAR DAYS AFTER THE NOTICE TO PROCEED IS RECEIVED. UNLESS OTHERWISE SPECIFIED, THE FULLY EXECUTED PURCHASE ORDER WILL BE CONSIDERED NOTICE TO PROCEED.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE MATERIALS OR WORKMANSHIP SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM WITH THE SPECIFICATIONS OF THE BID AND CONTRACT HERE IN.</p> <p>WAGE RATES: THE CONTRACTOR OR SUBCONTRACTOR SHALL PAY THE HIGHER OF THE U.S. DEPARTMENT OF LABOR MINIMUM WAGE RATES AS ESTABLISHED FOR FAYETTE COUNTY, PURSUANT TO WEST VIRGINIA CODE 21-5A, ET, SEQ. (PREVAILING WAGE RATES APPLY TO THIS PROJECT)</p> <p>ARBITRATION: ANY REFERENCES MADE TO ARBITRATION OR INTEREST FOR PAYMENTS DUE (EXCEPT FOR ANY INTEREST REQUIRED BY STATE LAW) CONTAINED IN THIS CONTRACT OR IN ANY AMERICAN INSTITUTE OF ARCHITECTS DOCUMENTS PERTAINING TO THIS CONTRACT ARE HEREBY DELETED.</p> <p>WORKERS' COMPENSATION: VENDOR IS REQUIRED TO PROVIDE A CERTIFICATE FROM WORKERS' COMPENSATION IF SUCCESSFUL.</p> <p>ALL OF THE ITEMS CHECKED BELOW WILL BE A REQUIREMENT</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Mary Morell</i>	TELEPHONE 207-655-8311	DATE 5-12-09
TITLE Quoting Representative	FEIN 381016240	ADDRESS CHANGES TO BE NOTED ABOVE

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<p>OF THIS CONTRACT:</p> <p>(XX) INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF COMMERCIAL GENERAL LIABILITY INSURANCE PRIOR TO ISSUANCE OF CONTRACT. UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS, THE MINIMUM AMOUNT OF INSURANCE COVERAGE REQUIRED IS \$250,000.</p> <p>() BUILDERS RISK INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF BUILDERS RISK - ALL RISK INSURANCE IN AN AMOUNT EQUAL TO 100% OF THE AMOUNT OF THE CONTRACT.</p> <p>(XX) BONDS: FIVE PERCENT (5%) OF THE TOTAL AMOUNT OF THE BID PAYABLE TO THE STATE OF WEST VIRGINIA, SHALL BE SUBMITTED WITH EACH BID AS A BID BOND. THE SUCCESSFUL BIDDER SHALL ALSO FURNISH A PERFORMANCE BOND AND LABOR/MATERIAL BOND FOR 100% OF THE AMOUNT OF THE CONTRACT. BONDS MAY BE PROVIDED IN THE FORM OF A CERTIFIED CHECK IRREVOCABLE LETTER OF CREDIT, OR BOND FURNISHED BY A SOLVENT SURETY COMPANY AUTHORIZED TO DO BUSINESS IN THE STATE OF WEST VIRGINIA. A LETTER OF CREDIT SUBMITTED IN LIEU OF A BOND WILL ONLY BE ALLOWED FOR PROJECTS UNDER \$100,000. PERSONAL OR BUSINESS CHECKS ARE NOT ACCEPCTABLE IN LIEU OF THE 5% BID BOND, PERFORMANCE BOND, OR LABOR AND MATERIAL BOND.</p> <p>() MAINTENANCE BOND: A TWO (2) YEAR MAINTENANCE BOND COVERING THE ROOFING SYSTEM WILL BE A REQUIREMENT OF THE SUCCESSFUL VENDOR.</p> <p>REV. 11/00</p> <p>EXHIBIT 7</p> <p>DOMESTIC ALUMINUM, GLASS & STEEL IN PUBLIC WORKS</p>						

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<p>PROJECTS</p> <p>IN ACCORDANCE WITH WEST VIRGINIA CODE 5-19-1 ET., SEQ., EVERY CONTRACT FOR CONSTRUCTION, RECONSTRUCTION, ALTERATION, REPAIR, IMPROVEMENT OR MAINTENANCE OF PUBLIC WORKS, WHERE THE COST IS MORE THAN \$50,000 AND, IN THE CASE OF STEEL ONLY, WHERE THE COST OF STEEL IS MORE THAN \$50,000 OR WHERE MORE THAN 10,000 POUNDS OF STEEL ARE REQUIRED, THE STATE WILL ACCEPT ONLY ALUMINUM GLASS, OR STEEL PRODUCTS PRODUCED IN THE UNITED STATES. IN ADDITION, ITEMS OF MACHINERY OR EQUIPMENT PURCHASED FOR USE AT THE SITE OF PUBLIC WORKS SHALL BE MADE OF DOMESTIC ALUMINUM, GLASS OR STEEL, UNLESS THE COST OF THE PRODUCT IS LESS THAN \$50,000 OR LESS THAN 10,000 POUNDS OF STEEL ARE USED IN PUBLIC WORKS PROJECTS.</p> <p>FOREIGN MADE ALUMINUM, GLASS OR STEEL PRODUCTS MAY BE ACCEPTED ONLY IF THE COST OF DOMESTIC PRODUCTS IS FOUND TO BE UNREASONABLE. SUCH COST IS UNREASONABLE IF IT IS 20% OR MORE HIGHER THAN THE BID PRICE FOR FOREIGN MADE PRODUCTS. IF THE DOMESTIC ALUMINUM, GLASS OR STEEL PRODUCTS TO BE SUPPLIED OR PRODUCED IN A "SUBSTANTIAL LABOR SURPLUS AREA", AS DEFINED BY THE UNITED STATES DEPARTMENT OF LABOR, FOREIGN PRODUCTS MAY BE SUPPLIED ONLY IF DOMESTIC PRODUCTS ARE 30% OR MORE HIGHER IN PRICE THAN THE FOREIGN MADE PRODUCTS.</p> <p>IF, PRIOR TO THE AWARD OF A CONTRACT UNDER THE ABOVE PROVISIONS, THE SPENDING OFFICER OF THE SPENDING UNIT DETERMINES THAT THERE EXISTS A BID FOR LIKE FOREIGN ALUMINUM, GLASS OR STEEL THAT IS REASONABLE AND LOWER THAN THE LOWEST BID DOMESTIC PRODUCTS, THE SPENDING OFFICE MAY REQUEST, IN WRITING, A REEVALUATION AND REDUCTION IN THE LOWEST BID FOR SUCH DOMESTIC PRODUCTS. ALL VENDORS MUST INDICATE IN THEIR BID IF THEY ARE SUPPLYING FOREIGN ALUMINUM, GLASS OR STEEL.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Mary Morrell</i>	TELEPHONE 207-655-8311	DATE 5-12-09
TITLE <i>Quoting Representative</i>	FEIN 381016240	ADDRESS CHANGES TO BE NOTED ABOVE

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REV. 3/88

EXHIBIT 9

NOTICE FOR ISSUANCE & ACKNOWLEDGEMENT OF CONSTRUCTION PROJECT ADDENDA

THE ARCHITECT/ENGINEER AND/OR AGENCY SHALL BE REQUIRED TO ABIDE BY THE FOLLOWING SCHEDULE IN ISSUING CONSTRUCTION PROJECT ADDENDA FOR STATE AGENCIES:

(1) THE ARCHITECT/ENGINEER SHALL PREPARE THE ADDENDUM AND A LIST OF ALL PARTIES THAT HAVE PROCURED DRAWINGS AND SPECIFICATIONS FOR THE PROJECT. THE ADDENDUM AND LIST SHALL BE FORWARDED TO THE BUYER IN THE STATE PURCHASING DIVISION. THE ARCHITECT/ENGINEER SHALL ALSO SEND A COPY OF THE ADDENDUM TO THE STATE AGENCY FOR WHICH THE CONTRACT IS ISSUED.

(2) THE BUYER SHALL SEND THE ADDENDUM TO ALL INTERESTED PARTIES AND, IF NECESSARY, EXTEND THE BID OPENING DATE. ANY ADDENDUM SHOULD BE RECEIVED BY THE BUYER WITHIN FOURTEEN (14) DAYS PRIOR TO THE BID OPENING DATE.

(3) ALL ADDENDA SHOULD BE FORMALLY ACKNOWLEDGED BY ALL BIDDERS AND SUBMITTED TO THE STATE PURCHASING DIVISION. THE SAME RULES AND REGULATIONS THAT APPLY TO THE ORIGINAL BIDDING DOCUMENT SHALL ALSO APPLY TO AN ADDENDUM DOCUMENT. THE ONLY EXCEPTION MAY BE FOR AN ADDENDUM THAT IS ISSUED FOR THE SOLE PURPOSE OF CHANGING A BID OPENING TIME AND/OR DATE.

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Marci Morrell</i>	TELEPHONE 207-655-8311	DATE 5-12-09
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TITLE Quoting Representative	FEIN 381016240	ADDRESS CHANGES TO BE NOTED ABOVE
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REV. 11/96						
EXHIBIT 10						
ADDENDUM ACKNOWLEDGEMENT						
I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.						
ADDENDUM NOS.:						
NO. 1						
NO. 2						
NO. 3						
NO. 4						
NO. 5						
I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF TH ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF THE BIDS.						
VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.						
.....SIGNATURE						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

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<p>.....COMPANY</p> <p>.....DATE</p> <p>REV. 11/96</p> <p>CONTRACTORS LICENSE</p> <p>WEST VIRGINIA STATE CODE 21-11-2 REQUIRES THAT ALL PERSONS DESIRING TO PERFORM CONTRACTING WORK IN THIS STATE MUST BE LICENSED. THE WEST VIRGINIA CONTRACTORS LICENSING BOARD IS EMPOWERED TO ISSUE THE CONTRACTORS LICENSE. APPLICATIONS FOR A CONTRACTORS LICENSE MAY BE MADE BY CONTACTING THE WEST VIRGINIA DIVISION OF LABOR CAPITOL COMPLEX, BUILDING 3, ROOM 319, CHARLESTON, WV 25305. TELEPHONE: (304) 558-7890.</p> <p>WEST VIRGINIA STATE CODE 21-11-11 REQUIRES ANY PROSPECTIVE BIDDER TO INCLUDE THE CONTRACTORS LICENSE NUMBER ON THEIR BID.</p> <p>BIDDER TO COMPLETE:</p> <p>CONTRACTORS NAME: <i>Stainless LLC / Doty Moore Tower Services LLC</i></p> <p>CONTRACTORS LICENSE NO.: <i>WV 036376</i>.....</p> <p>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FURNISH A COPY OF THEIR CONTRACTORS LICENSE PRIOR TO ISSUANCE OF A PURCHASE ORDER/CONTRACT</p> <p>APPLICABLE LAW</p> <p>THE WEST VIRGINIA STATE CODE, PURCHASING DIVISION RULES AND REGULATIONS, AND THE INFORMATION PROVIDED IN</p>						

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SIGNATURE <i>Mary Morelli</i>	TELEPHONE <i>207-655-8311</i>	DATE <i>5-12-09</i>
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<p>THE "REQUEST FOR QUOTATION" ISSUED BY THE PURCHASING DIVISION IS THE SOLE AUTHORITY GOVERNING THIS PROCUREMENT.</p> <p>ANY INFORMATION PROVIDED IN SPECIFICATION MANUALS, OR ANY OTHER SOURCE, VERBAL OR WRITTEN, WHICH CONTRADICTS OR ALTERS THE INFORMATION PROVIDED FROM THE SOURCES AS DESCRIBED IN THE ABOVE PARAGRAPH IS VOID AND OF NO EFFECT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>REV. 1/2005</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: SHELLY MURRAY</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Mary Moulli</i>	TELEPHONE 207-655-8311	DATE 5-12-09
TITLE <i>Assistant Representative</i>	FEIN 381011240	ADDRESS CHANGES TO BE NOTED ABOVE

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ADDRESS CORRESPONDENCE TO ATTENTION OF:
SHELLY MURRAY
304-558-8801

VENDOR

*C20082552 01 800-341-9678
 DIELECTRIC COMMUNICATIONS
 PO BOX 949
 RAYMOND ME 04071

SHIP TO

EDUCATIONAL BROADCASTING
 AUTHORITY
 600 CAPITOL STREET
 CHARLESTON, WV
 25301-1223 304-558-3400

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/08/2009				

BID OPENING DATE: **05/14/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
				REQ. NO.: EBA204		
				BID OPENING DATE: 05/14/2009		
				BID OPENING TIME: 1:30 PM		
				PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: <i>207-655-8173</i>		
				PLEASE PRINT OR TYPE NAME OF PERSON TO CONTACT CONCERNING THIS QUOTE: <i>Mary Morelli</i>		
				***** THIS IS THE END OF RFQ EBA204 ***** TOTAL:		

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Mary Morelli</i>	TELEPHONE <i>207-655-8311</i>	DATE <i>5-12-09</i>
TITLE <i>Bidding Representative</i>	FEIN <i>381016240</i>	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

EBA204 Request for Quotation

West Virginia Educational Broadcasting (WVEBA) is Requesting Quotations for the purchase and installation of a top-mount digital channel 10 broadcast television antenna and 3 1/8 inch EIA flanged transmission line.

Prior to installation, the scope of this project also includes the removal of the existing analog channel 9 antenna and 6 1/8 inch EIA flanged transmission line from the 377.4 foot Stainless G-5 tower.

Location of the project is: Route 41/12, House number 153, 4 miles SW of Layland, WV.

All new materials specified in this Request For Quotation (RFQ) are manufactured by Dielectric Communications and are shown for reference only. Items equal to or exceeding Dielectric specifications are acceptable.

1 General Specifications

- 1.1 The WVEBA WSWP television tower is located in Fayette County, West Virginia and labor shall be computed based on the prevailing wage rate as it applies to Fayette County.
- 1.2 Respondents must submit a complete users list of similar antenna systems supplied. This list must have at least ten top mount VHF antennas designed and shipped in the last five years. This information is requested with the bid, but must be submitted within 24 hours of request by the Purchasing Division.

2 Scope of Work

- 2.1 Mobilize crew and equipment at site near Layland, WV
- 2.2 Rig 377.4' Stainless G-5 guyed tower
- 2.3 Remove existing top mount strobe and disconnect cable for reuse
- 2.4 Remove existing RCA TW-15A9-R antenna and store on site
- 2.5 Remove existing 6-1/8" 75 ohm rigid transmission line, approximately 365 ft vertical and 40 ft horizontal and store at site
- 2.6 Punch or replace existing clip angles to accept 3-1/8" hangers
- 2.7 Install new 3-1/8" 50 ohm transmission line approximately 365 ft vertical and 40 ft horizontal

- 2.8 Install mounting pedestal, new antenna, and associated elbow complex
- 2.9 Install existing strobe light and connect to existing control cable
- 2.10 Sweep test antenna and transmission line to meet manufacture's specifications
- 2.11 De-rig tower, clean site, and demobilize from site

3. Antenna

3.1 Respondents to this request must have manufactured high power VHF slotted cylinder antennas for a minimum of ten consecutive years

3.2 Vendors shall provide a minimum nine year system warranty covering the antenna system. The antenna system consists of the existing WVEBA owned one year old Dielectric Mask Filter Part number R0098333510, existing one year old associated Dielectric 1 5/8" transmission line, existing WVEBA owned one year old Dielectric Patch Panel Part number R12764I, the new vendor's supplied antenna, and the new vendor's supplied transmission line.

3.3 Antenna shall be a horizontally polarized, directional, top mounted slotted cylinder type designed for digital channel 10.

3.3.1 All pattern shaping elements shall be inside the radome. There shall be no external radiating or pattern shaping.

3.4 Antenna azimuth pattern shall exactly match that contained within this RFQ as specified in exhibit 6 and exhibit 7.

3.5 Antenna shall be of hot dipped galvanized manufacture.

3.6 The new antenna center of radiation shall be designed to be at 20.7 meters above the tower top using a support pole to be provided by the bidder as displayed in Exhibit 2.

3.6.1 The support pole shall be designed so the mounting flange hole pattern will match the existing TW15A9-R antenna mounting hole pattern so the new support pole can mount directly to the existing top plate.

3.6.2 Antenna support Pole shall be hot dipped galvanized.

3.6.3 Antenna support Pole shall be manufactured with climbing pegs to facilitate changing top beacon.

3.7 Antenna and support pole shall be designed to RS-222F, 70 mph basic wind speed

3.8 Antenna weight and wind loading (including support pole) shall be no greater than the existing TW15A9-R antenna, with a weight of 19,200 lbs and overturn of 288,630 ft-lbs (50psf.)

3.9 Antenna shall have a RMS main lobe power gain of 6.0 (7.78 dB) at digital channel 10, with heavy null fill, and no less than 20 % first null fill. The new antenna elevation pattern shall be supplied by the vendor with the bid, and shall match pattern as specified in Exhibit 3, Exhibit 4, and Exhibit 5.

3.10 Antenna peak directional gain shall be 8.4 (9.24 dB) as specified in Exhibit 1.

3.11 Antenna Beam Tilt shall be 0.75 degrees as specified in Exhibit 11-the Construction Permit.

3.12 During factory assembly of antenna, antenna elevation patterns and gain shall be determined through anechoic chamber or scaled field measurement techniques.

3.12.1 Respondents shall state measurement type and supply data to WVEBA before antenna shipment.

3.13 Antenna maximum VSWR across DTV channel 10 shall be 1.15:1.0 or better

3.14 Antenna input power rating shall be no less than 30 kW average DTV

3.14.1 Antenna power rating shall be calculated without pressurization.

3.15 The antenna shall have a method for climbing to facilitate replacing the top beacon, and respondents will describe climbing method.

3.15.1 Azimuth circularity shall not be compromised by the climbing mechanism such as external ladders.

3.16 Antenna shall be supplied with a full cylindrical radome and must be designed for easy antenna access and inspection

3.16.1 The radome shall be non pressurized and of a material impregnated with international orange so as to never require painting.

3.16.2 Radomes of polyethylene (or equivalent) material will not be accepted.

3.16.3 Designs which do not allow for easy access for antenna inspection will not be considered

3.16.4 Proposals shall describe the method of accessing the antenna

3.17 Antenna shall be shipped fully assembled. No on-site assembly will be allowed.

3.18 Antenna input shall be 3-1/8" 50 ohm EIA

3.19 Antenna shall be supplied with a new factory optimized tower top elbow complex to connect the antenna input to 3-1/8" transmission line vertical run and allow easy disconnect for maintenance.

3.20 Bidders shall supply a system summary page showing an ERP of 24 kW and TPO requirement with approximately 450' of 3-1/8" EIA transmission line (40 ft horizontal + 365 ft vertical + approximately 45 ft through support pole.)

3.21 An electrical system check of the new antenna and new transmission line shall be conducted after installation to verify proper installation.

4. Transmission Line

4.1 Transmission line shall be rigid 3-1/8" 50 ohm EIA flanged.

4.1.1 Horizontal run to approximately 40 feet from the building to the tower base

4.1.2 Vertical run to be approximately 365 feet

4.1.3 An additional 45 feet shall be designed (with hangers) to route through the antenna support pole

4.2 Respondents shall have manufactured 3-1/8" high power transmission line for a minimum of 10 consecutive years

4.3 Vendors shall provide a minimum nine year system warranty covering the antenna system which consists of existing WVEBA owned one year old Dielectric Mask Filter Part number R0098333510, existing one year old associated Dielectric 1 5/8" transmission line, existing WVEBA owned one year old Dielectric Patch Panel Part number R12764I, the new vendor's supplied antenna, and the new vendor's supplied transmission line.

4.4 All hanging materials, all mounting hardware, and a dehydrator, Dielectric Model 6678 or equal shall be provided as specified in Exhibit 12.

4.5 All flanges shall be forged for maximum strength. Cast flanges will not be accepted

4.5.1 Flanges shall be Heliarc welded.

4.6 Low loss Teflon insulators shall be used in both straight sections and elbows

4.6.1 Insulators shall be of a disk type for best inner conductor support

- 4.6.2 Straight section connectors shall be anchored
- 4.7 Expansion compensation shall be provided
- 4.7.1 Should watch band spring type compensation be used spring shall be located below the anchor insulator
- 4.7.2 Designs with watchband springs located above the insulator will not be acceptable
- 4.8 The transmission line shall have a maximum VSWR of 1.05:1.0 across the channel 10 band.
- 4.9 Transmission line loss shall not exceed .135 dB/100' at digital channel 10
- 4.10 Any field determined cut lengths shall be supplied direct from the factory within two business days and then shipped via overnight shipment.
- 4.11 All elbows shall be heavy wall, reinforced unequal leg broadband type.

5 Notes

- 5.1 Winning vendor shall conduct a site visit at least three months prior to commencement of work.
- 5.2 Normal working hours will be 7:00 AM to 5:00 PM Monday through Friday.
- 5.2.1 Work may be performed on Sundays, Holidays, or evening hours only after consultation between vendors and WVEBA engineering managers.
- 5.3 WVEBA shall provide a RF safe environment during normal working hours.
- 5.4 Transmission line and associated hardware quantities are estimated and shall be adjusted at time of order with appropriate credit or charge applied.
- 5.5 While work is being performed vendor shall provide temporary tower illumination per FAA requirements.
- 5.6 Vendor shall provide all materials and labor required to complete installation, including antenna mounting bolts.
- 5.7 Vendor shall provide 4 foot lightning protection for the top of the antenna.
- 5.8 A detailed drawing of the tower top is included as a reference in Exhibit 8.
- 5.9 Transmission line segments shall be 19' 6" for digital channel 10.

13

6. Shipping, delivery

6.1 Delivery is FOB Destination

6.1.1 Cost of delivery shall be included in proposal

6.1.2 This project must be completed within 180 days from the Notice to Proceed.

6.1.3 Vendor is responsible for off-loading and placement of antenna, transmission line, and related items

6.1.4 At least 24 hours prior to delivery the WVEBA contacts listed below shall be alerted

6.2 All items shall be delivered to:

WSWP Transmitter Site
Route 41/12
House number 153
Layland, WV 25864

6.3 Shipping Contact Information:

Jeremy Scott, Engineering Manager
304-254-7865
or
Tom Belcher, Senior Engineer
304-254-7864

6.4 Mailing address:

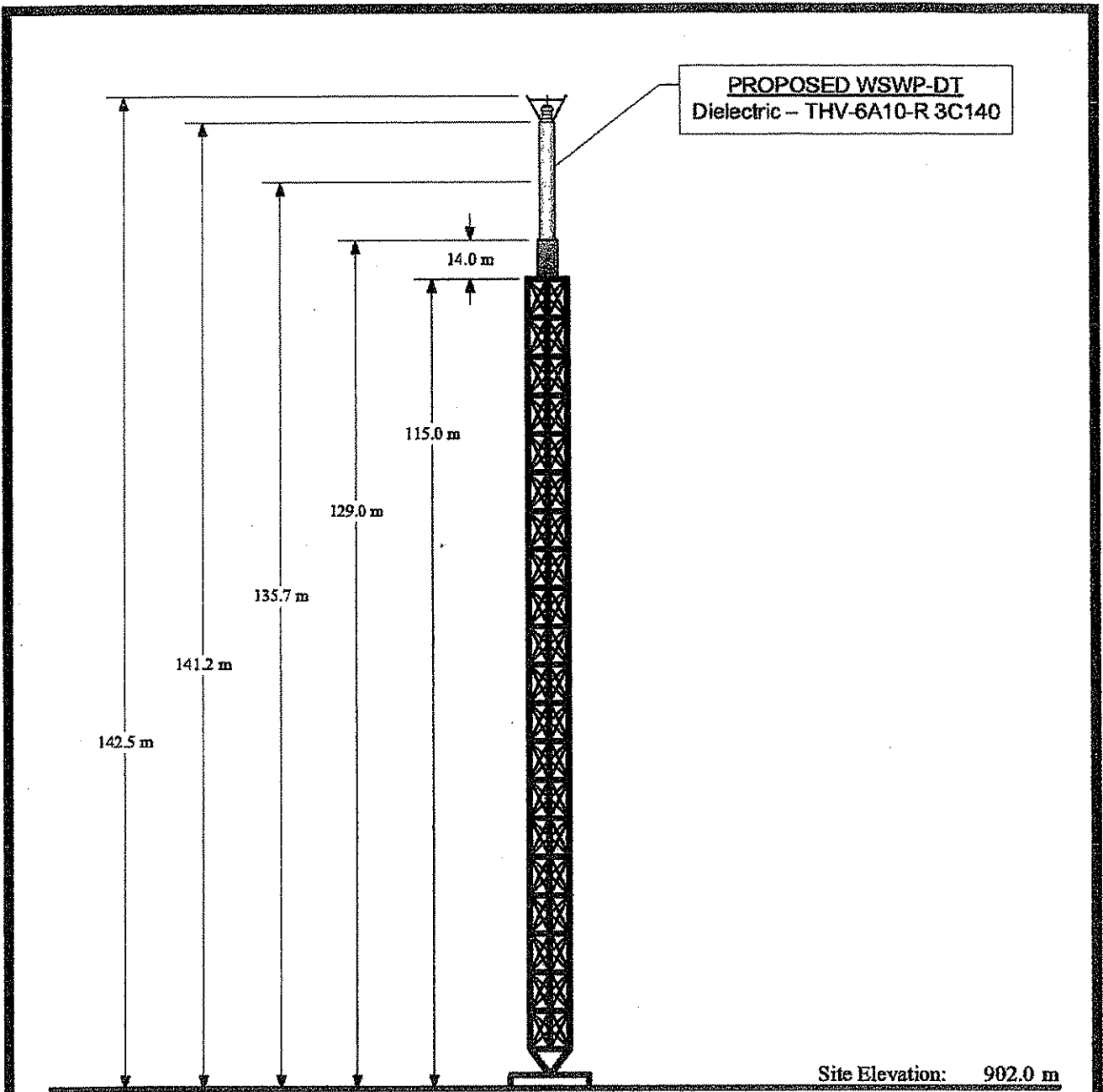
WV Public Broadcasting
124 Industrial Park Road
Beaver, WV 25813

7. Invoicing

7.1 All invoices shall be itemized and clearly indicated.

7.2 Invoices shall be sent to:

West Virginia Educational Broadcasting
Attention Steve Chapman
600 Capitol Street
Charleston, WV 25301



Overall Height AGL:	142.5 m
Overall Height AMSL:	1044.5 m
Radiation Center AGL:	135.7 m
Radiation Center AMSL:	1037.7 m
Radiation Center HAAT:	317.9 m
Average Terrain:	719.8 m

NAD 27 Coordinates:	
N. Latitude:	37° 53' 46.0"
W. Longitude:	80° 59' 21.0"

NOTE: NOT TO SCALE

KESSLER & GEHMAN

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

WSWP-DT

GRANDVIEW, WV

20080915

EXHIBIT E2

****Exhibit E1****

WSWP

Grandview, West Virginia

Engineering Specifications

- A. Transmitter Site (NAD 27)
- | | |
|----------------------------|---|
| North Latitude | 37° 53' 46" |
| West Longitude | 80° 59' 21" |
| Street Address or Location | State Route 41, 4 Miles SW of Layland, WV |
- B. Proposed Facility
- | | | |
|-------------|-----------|-------------|
| DTV Channel | Number | 10 |
| | Frequency | 192-198 MHZ |
- C. Elevations
- | | |
|---|----------|
| Height of Site Above Mean Sea Level (AMSL) | 902.0 m |
| Overall height of Structure above Ground
(including all appurtenances) | 142.5 m |
| Overall Height of Structure Above Mean Sea Level
(including all appurtenances) | 1044.5 m |
| Effective Height of Antenna Above Ground | 135.7 m |
| Effective Height of Antenna Above Average Terrain | 317.9 m |
| Effective Height of Antenna Above Mean Sea Level | 1037.7 m |
- D. Antenna Parameters: -Horizontal Polarization
- | | | |
|--|-------|-----|
| Maximum Antenna Gain in Beam Maximum | 9.24 | dB |
| Maximum Antenna Gain in Horizontal Plane | 9.14 | dB |
| Maximum Effective Radiated Power | 13.8 | dBk |
| In Beam Maximum | 24 | KW |
| Maximum Effective Radiated Power | 13.7 | dBk |
| In Horizontal Plane | 23.44 | KW |

Exhibit 3

Proposal Number
Date
Call Letters
Location
Customer
Antenna Type

Revision:
Channel 10

ELEVATION PATTERN

RMS Gain at Main Lobe	6.00 (7.78 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	5.90 (7.71 dB)	Frequency	195.00 MHz
Calculated / Measured	Calculated		

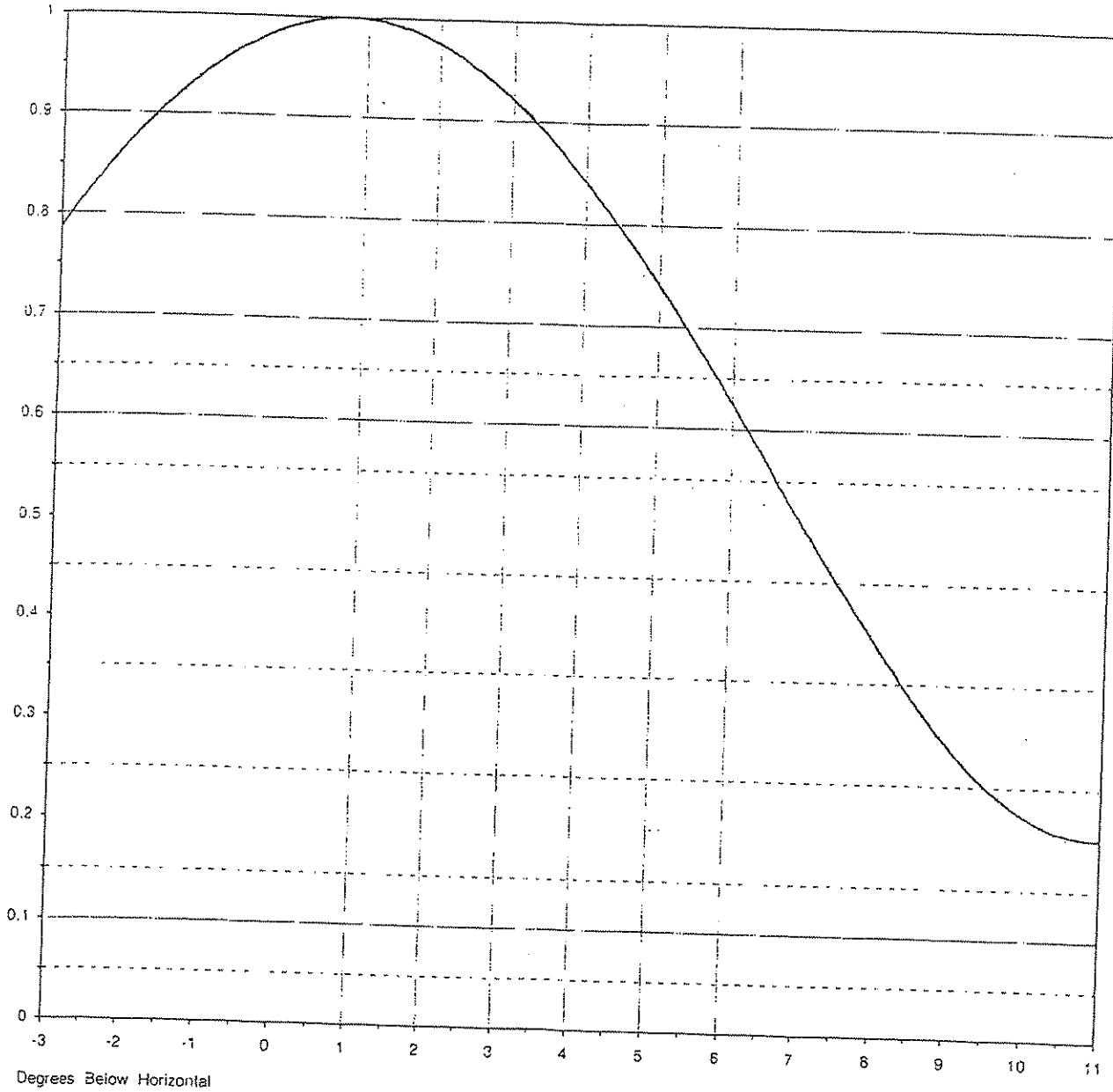


Exhibit 4

Proposal Number
Date
Call Letters
Location
Customer
Antenna Type

Revision:
Channel 10

ELEVATION PATTERN

RMS Gain at Main Lobe	6.00 (7.78 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	5.90 (7.71 dB)	Frequency	195.00 MHz
Calculated / Measured	Calculated		

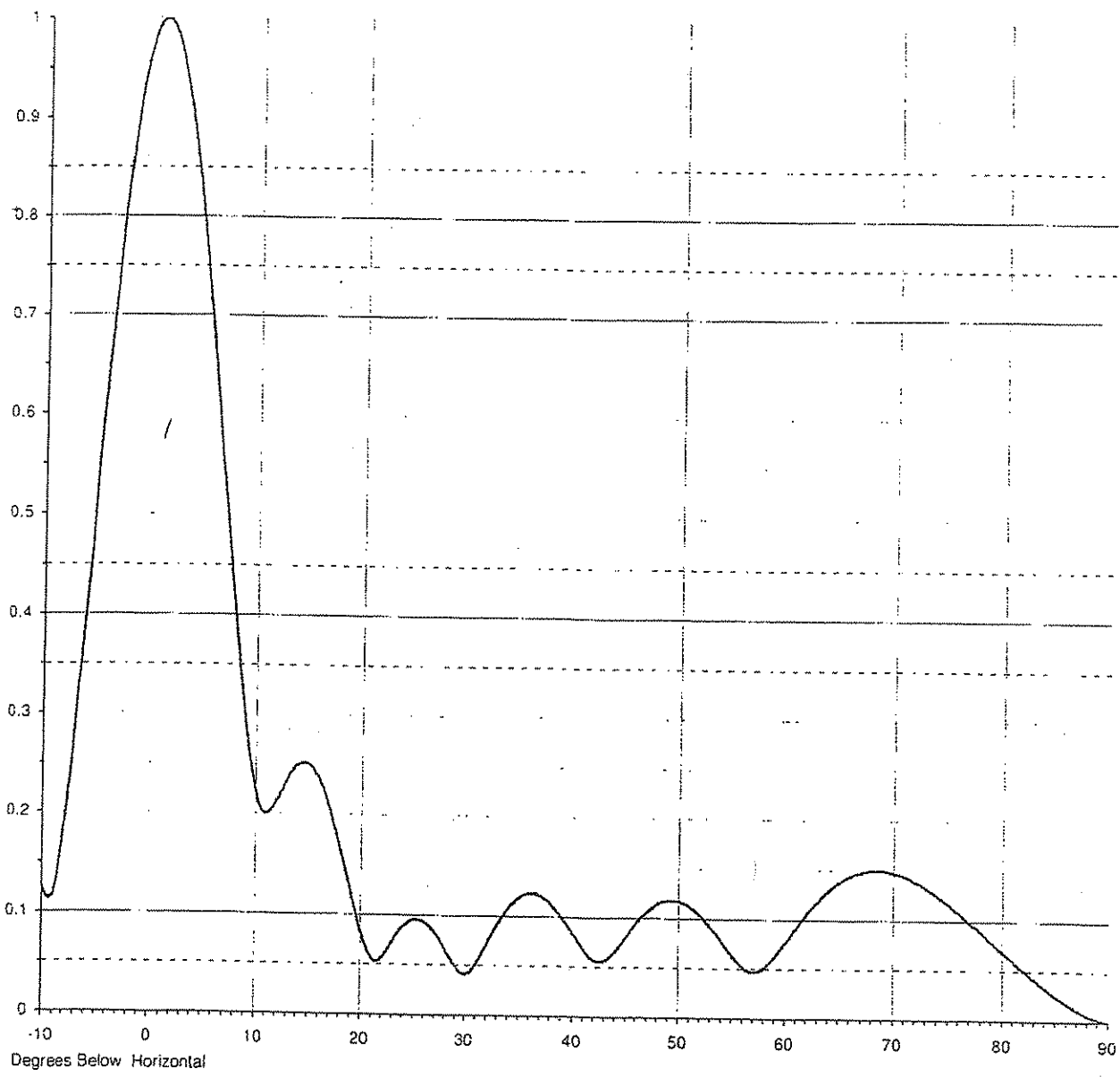


Exhibit 5

Proposal Number

Revision:

Date

Call Letters

Channel 10

Location

Customer

Antenna Type

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #:

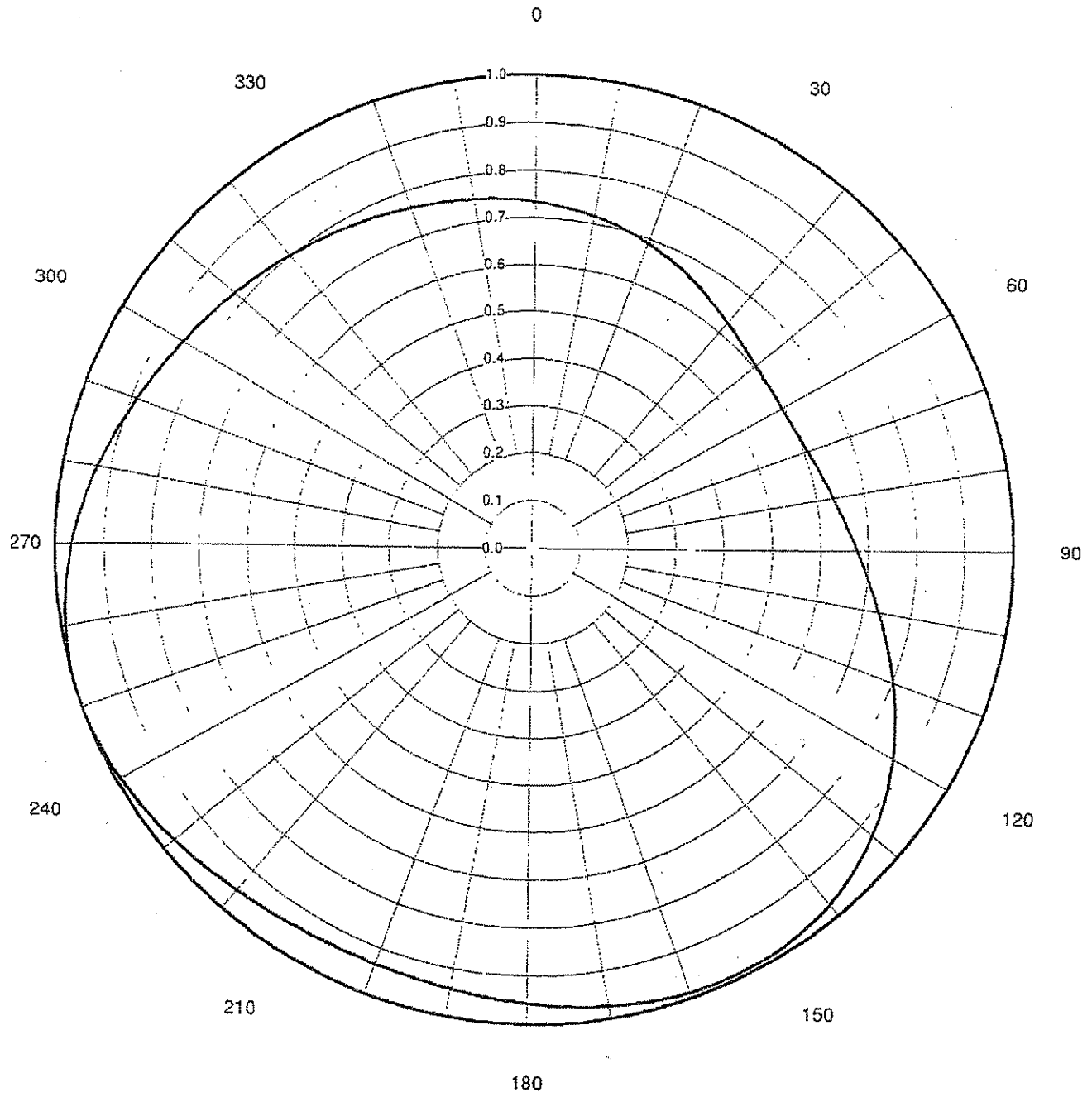
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.126	2.4	0.958	10.6	0.205	30.5	0.043	51.0	0.113	71.5	0.142
-9.5	0.114	2.6	0.947	10.8	0.202	31.0	0.050	51.5	0.109	72.0	0.139
-9.0	0.119	2.8	0.935	11.0	0.200	31.5	0.059	52.0	0.104	72.5	0.136
-8.5	0.143	3.0	0.922	11.5	0.203	32.0	0.069	52.5	0.099	73.0	0.132
-8.0	0.184	3.2	0.908	12.0	0.212	32.5	0.080	53.0	0.092	73.5	0.129
-7.5	0.234	3.4	0.893	12.5	0.223	33.0	0.090	53.5	0.086	74.0	0.125
-7.0	0.291	3.6	0.876	13.0	0.234	33.5	0.099	54.0	0.079	74.5	0.121
-6.5	0.353	3.8	0.859	13.5	0.243	34.0	0.107	54.5	0.072	75.0	0.117
-6.0	0.416	4.0	0.842	14.0	0.250	34.5	0.113	55.0	0.065	75.5	0.112
-5.5	0.481	4.2	0.823	14.5	0.252	35.0	0.118	55.5	0.058	76.0	0.108
-5.0	0.547	4.4	0.803	15.0	0.251	35.5	0.122	56.0	0.053	76.5	0.103
-4.5	0.611	4.6	0.783	15.5	0.245	36.0	0.123	56.5	0.049	77.0	0.098
-4.0	0.673	4.8	0.762	16.0	0.236	36.5	0.123	57.0	0.047	77.5	0.094
-3.5	0.731	5.0	0.740	16.5	0.224	37.0	0.121	57.5	0.047	78.0	0.089
-3.0	0.786	5.2	0.718	17.0	0.208	37.5	0.118	58.0	0.050	78.5	0.084
-2.8	0.807	5.4	0.695	17.5	0.190	38.0	0.114	58.5	0.055	79.0	0.079
-2.6	0.827	5.6	0.672	18.0	0.170	38.5	0.108	59.0	0.061	79.5	0.074
-2.4	0.846	5.8	0.649	18.5	0.149	39.0	0.101	59.5	0.068	80.0	0.069
-2.2	0.864	6.0	0.625	19.0	0.128	39.5	0.093	60.0	0.075	80.5	0.064
-2.0	0.881	6.2	0.501	19.5	0.107	40.0	0.085	60.5	0.082	81.0	0.060
-1.8	0.897	6.4	0.577	20.0	0.087	40.5	0.077	61.0	0.090	81.5	0.055
-1.6	0.912	6.6	0.552	20.5	0.070	41.0	0.069	61.5	0.097	82.0	0.050
-1.4	0.926	6.8	0.528	21.0	0.058	41.5	0.063	62.0	0.104	82.5	0.046
-1.2	0.939	7.0	0.504	21.5	0.053	42.0	0.058	62.5	0.111	83.0	0.042
-1.0	0.950	7.2	0.480	22.0	0.056	42.5	0.056	63.0	0.117	83.5	0.037
-0.8	0.961	7.4	0.456	22.5	0.063	43.0	0.056	63.5	0.123	84.0	0.033
-0.6	0.970	7.6	0.433	23.0	0.072	43.5	0.060	64.0	0.128	84.5	0.029
-0.4	0.978	7.8	0.410	23.5	0.080	44.0	0.065	64.5	0.134	85.0	0.025
-0.2	0.985	8.0	0.387	24.0	0.087	44.5	0.072	65.0	0.138	85.5	0.022
0.0	0.991	8.2	0.366	24.5	0.092	45.0	0.079	65.5	0.141	86.0	0.018
0.2	0.995	8.4	0.345	25.0	0.095	45.5	0.086	66.0	0.144	86.5	0.015
0.4	0.998	8.6	0.325	25.5	0.095	46.0	0.093	66.5	0.146	87.0	0.012
0.6	1.000	8.8	0.306	26.0	0.094	46.5	0.100	67.0	0.148	87.5	0.009
0.8	1.000	9.0	0.288	26.5	0.090	47.0	0.105	67.5	0.149	88.0	0.006
1.0	0.999	9.2	0.271	27.0	0.084	47.5	0.110	68.0	0.150	88.5	0.004
1.2	0.997	9.4	0.256	27.5	0.077	48.0	0.114	68.5	0.150	89.0	0.002
1.4	0.993	9.6	0.243	28.0	0.068	48.5	0.116	69.0	0.150	89.5	0.001
1.6	0.989	9.8	0.237	28.5	0.059	49.0	0.118	69.5	0.149	90.0	0.000
1.8	0.983	10.0	0.226	29.0	0.051	49.5	0.118	70.0	0.148		
2.0	0.976	10.2	0.217	29.5	0.044	50.0	0.117	70.5	0.146		
2.2	0.967	10.4	0.210	30.0	0.041	50.5	0.115	71.0	0.144		

Exhibit 6

Date
Call Letters **WSWP-DT** Channel **10**
Location **GRANDVIEW, WV**
Customer
Antenna Type

AZIMUTH PATTERN

Gain **1.40** (**1.46 dB**)
Calculated / Measured **Calculated**
Frequency **195.00 MHz**
Drawing #



Call Letters
Location
Customer

WSWP-DT Channel
GRANDVIEW, WV

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #:

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.733	45	0.614	90	0.676	135	0.954	180	0.957	225	0.961	270	0.965	315	0.812
1	0.732	46	0.612	91	0.681	136	0.958	181	0.955	226	0.963	271	0.962	316	0.809
2	0.730	47	0.610	92	0.686	137	0.962	182	0.953	227	0.965	272	0.959	317	0.807
3	0.729	48	0.608	93	0.692	138	0.965	183	0.952	228	0.967	273	0.955	318	0.805
4	0.727	49	0.606	94	0.697	139	0.968	184	0.950	229	0.970	274	0.951	319	0.803
5	0.725	50	0.605	95	0.703	140	0.972	185	0.949	230	0.972	275	0.947	320	0.801
6	0.723	51	0.603	96	0.709	141	0.974	186	0.947	231	0.974	276	0.944	321	0.799
7	0.721	52	0.602	97	0.715	142	0.977	187	0.946	232	0.976	277	0.940	322	0.796
8	0.719	53	0.601	98	0.721	143	0.979	188	0.944	233	0.978	278	0.936	323	0.794
9	0.717	54	0.600	99	0.727	144	0.982	189	0.943	234	0.980	279	0.932	324	0.792
10	0.715	55	0.599	100	0.733	145	0.983	190	0.942	235	0.982	280	0.928	325	0.790
11	0.713	56	0.598	101	0.740	146	0.985	191	0.941	236	0.984	281	0.924	326	0.788
12	0.711	57	0.598	102	0.746	147	0.987	192	0.940	237	0.986	282	0.919	327	0.786
13	0.709	58	0.598	103	0.753	148	0.988	193	0.939	238	0.988	283	0.915	328	0.784
14	0.706	59	0.598	104	0.759	149	0.989	194	0.938	239	0.990	284	0.911	329	0.783
15	0.704	60	0.598	105	0.766	150	0.990	195	0.937	240	0.991	285	0.907	330	0.781
16	0.701	61	0.598	106	0.773	151	0.990	196	0.936	241	0.993	286	0.903	331	0.779
17	0.698	62	0.598	107	0.780	152	0.991	197	0.936	242	0.994	287	0.899	332	0.777
18	0.696	63	0.599	108	0.787	153	0.991	198	0.935	243	0.995	288	0.895	333	0.775
19	0.693	64	0.600	109	0.794	154	0.991	199	0.935	244	0.996	289	0.891	334	0.773
20	0.690	65	0.601	110	0.801	155	0.991	200	0.934	245	0.997	290	0.887	335	0.772
21	0.687	66	0.602	111	0.808	156	0.991	201	0.934	246	0.998	291	0.883	336	0.770
22	0.684	67	0.603	112	0.815	157	0.990	202	0.934	247	0.999	292	0.880	337	0.768
23	0.681	68	0.605	113	0.822	158	0.990	203	0.934	248	0.999	293	0.876	338	0.766
24	0.678	69	0.606	114	0.829	159	0.989	204	0.934	249	1.000	294	0.872	339	0.765
25	0.675	70	0.608	115	0.837	160	0.988	205	0.935	250	1.000	295	0.869	340	0.763
26	0.672	71	0.610	116	0.844	161	0.987	206	0.935	251	1.000	296	0.865	341	0.761
27	0.669	72	0.612	117	0.850	162	0.986	207	0.935	252	1.000	297	0.862	342	0.760
28	0.665	73	0.614	118	0.857	163	0.985	208	0.936	253	0.999	298	0.858	343	0.758
29	0.662	74	0.617	119	0.864	164	0.984	209	0.937	254	0.999	299	0.855	344	0.757
30	0.659	75	0.619	120	0.871	165	0.982	210	0.937	255	0.998	300	0.852	345	0.755
31	0.655	76	0.622	121	0.878	166	0.981	211	0.938	256	0.997	301	0.849	346	0.754
32	0.652	77	0.625	122	0.884	167	0.980	212	0.939	257	0.996	302	0.846	347	0.752
33	0.649	78	0.628	123	0.890	168	0.978	213	0.941	258	0.995	303	0.843	348	0.751
34	0.646	79	0.631	124	0.897	169	0.976	214	0.942	259	0.993	304	0.840	349	0.749
35	0.642	80	0.634	125	0.903	170	0.975	215	0.943	260	0.992	305	0.837	350	0.748
36	0.639	81	0.638	126	0.909	171	0.973	216	0.945	261	0.990	306	0.834	351	0.747
37	0.636	82	0.642	127	0.914	172	0.971	217	0.946	262	0.988	307	0.831	352	0.745
38	0.633	83	0.645	128	0.920	173	0.969	218	0.948	263	0.985	308	0.829	353	0.744
39	0.630	84	0.649	129	0.926	174	0.968	219	0.949	264	0.983	309	0.826	354	0.742
40	0.627	85	0.653	130	0.931	175	0.966	220	0.951	265	0.980	310	0.824	355	0.741
41	0.624	86	0.658	131	0.936	176	0.964	221	0.953	266	0.978	311	0.821	356	0.739
42	0.622	87	0.662	132	0.941	177	0.962	222	0.955	267	0.975	312	0.819	357	0.738
43	0.619	88	0.667	133	0.945	178	0.960	223	0.957	268	0.972	313	0.816	358	0.736
44	0.617	89	0.671	134	0.950	179	0.959	224	0.959	269	0.969	314	0.814	359	0.735

Exhibit 8

Top Tower Section with Antenna Mounting Plate

Mounting plate thickness = 2 1/2 inches
Clearance hole = 1 foot 6-3/8 inches
Antenna Orientation = 250 degrees

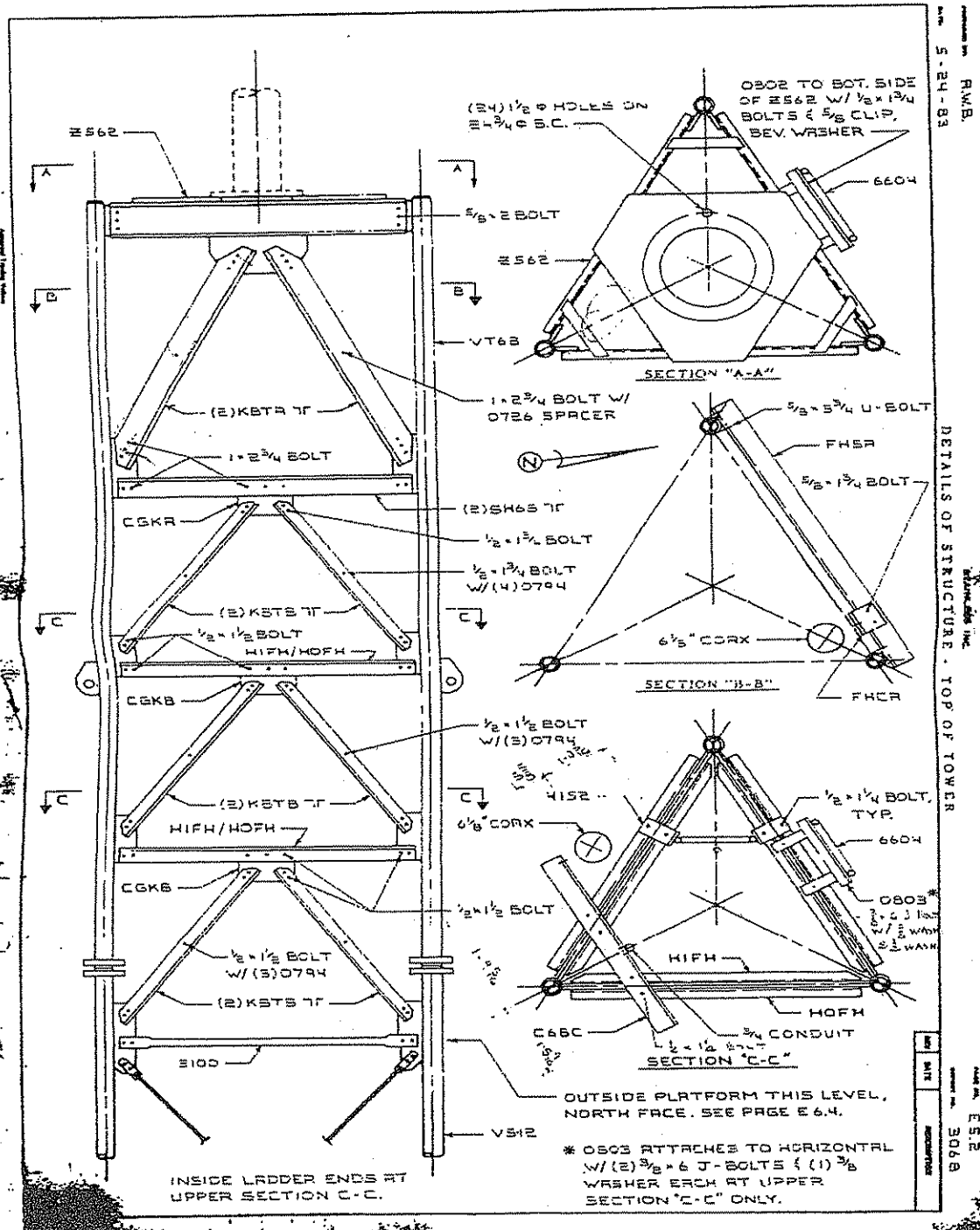
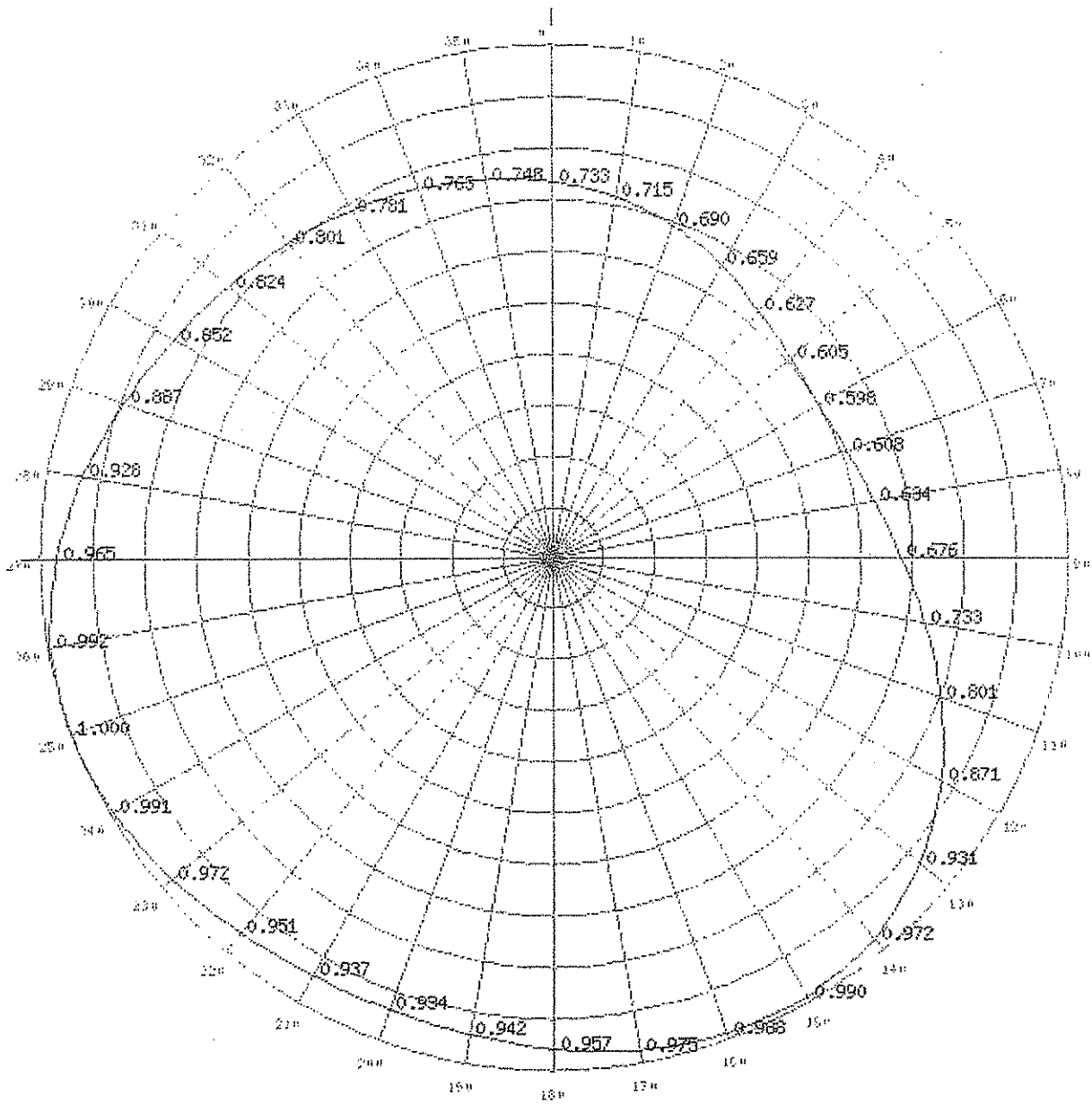


Exhibit 9

FCC Azimuth Pattern, Antenna ID 89422



FCC Azimuth Pattern
For WSWP-DI
Antenna ID 89422

Exhibit 10

FCC Relative Field Values

Antenna Make		Model		Service		Antenna Id	
						89422	
Antenna relative field values:							
0°	0.733	10°	0.715	20°	0.69	30°	0.659
40°	0.627	50°	0.605	60°	0.598	70°	0.608
80°	0.634	90°	0.676	100°	0.733	110°	0.801
120°	0.871	130°	0.931	140°	0.972	150°	0.99
160°	0.988	170°	0.975	180°	0.957	190°	0.942
200°	0.934	210°	0.937	220°	0.951	230°	0.972
240°	0.991	250°	1	260°	0.992	270°	0.965
280°	0.928	290°	0.887	300°	0.852	310°	0.824
320°	0.801	330°	0.781	340°	0.763	350°	0.748
Additional Azimuths:							

Relative Field Polar Plot

United States of America
FEDERAL COMMUNICATIONS COMMISSION
DIGITAL TELEVISION BROADCAST STATION
CONSTRUCTION PERMIT

Authorizing Official:

Official Mailing Address:

WEST VIRGINIA EDUCATIONAL BROADCASTING AUTHC
600 CAPITOL STREET
CHARLESTON WV 25301

Clay C. Pendarvis
Associate Chief
Video Division
Media Bureau

Facility Id: 71680

Grant Date: September 19, 2008

This permit expires 3:00 a.m.
local time, February 17, 2009.

Call Sign: WSWP-DT

Permit File Number: BMPEDT-20080916AEU

This permit modifies permit no.: BMPEDT-20080619ACP

Subject to the provisions of the Communications Act of 1934, as amended, subsequent acts and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions set forth in this permit, the permittee is hereby authorized to construct the radio transmitting apparatus herein described. Installation and adjustment of equipment not specifically set forth herein shall be in accordance with representations contained in the permittee's application for construction permit except for such modifications as are presently permitted, without application, by the Commission's Rules.

Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission's Rules.

Name of Permittee: WEST VIRGINIA EDUCATIONAL BROADCASTING AUTHO

Station Location: WV-GRANDVIEW

Frequency (MHz): 192 - 198

Channel: 10

Hours of Operation: Unlimited

Callsign: WSWP-DT

Permit No.: BMPEDT-20080916AEU

Transmitter: Type Accepted. See Sections 73.1660, 73.1665 and 73.1670
of the Commission's Rules.

Antenna type: (directional or non-directional): Directional

Description: DIE, THV-6A10-R 3C140

Beam Tilt: 0.75 Degrees Electrical

Major lobe directions 250
(degrees true):

Antenna Coordinates: North Latitude: 37 deg 53 min 46 sec
 West Longitude: 80 deg 59 min 21 sec

Transmitter output power: As required to achieve authorized ERP.

Maximum effective radiated power (Average); 24 kW
 13.8 DBK

Height of radiation center above ground: 135.7 Meters

Height of radiation center above mean sea level: 1037.7 Meters

Height of radiation center above average terrain: 317.9 Meters

Antenna structure registration number: 1035131

Overall height of antenna structure above ground (including obstruction
lighting if any) see the registration for this antenna structure.

Special operating conditions or restrictions:

- 1 This is to notify you that the grant of this construction permit is
subject to the condition that this facility can not commence operation
prior to midnight of February 17, 2009, or by such other date as the
Commission may establish in the future, without prior approval from the
Commission.

Special operating conditions or restrictions:

- 2 The grant of this construction permit is subject to the condition that, with ample time before commencing operation, you make a good faith effort to identify and notify health care facilities (e.g., hospitals, nursing homes, see 47 CFR 15.242(a)(1)) within your service area potentially affected by your DTV operations. Contact with state and/or local hospital associations and local governmental health care licensing authorities may prove helpful in this process. During this pre-broadcast period, you must provide all notified entities with relevant technical details of your operation, such as DTV channel, targeted on-air date, effective radiated power, antenna location, and antenna height. You are required to place in the station's public inspection file documentation of the notifications and contacts made and you may not commence operations until good faith efforts have been made to notify affected health care facilities. During this pre-broadcast period and for up to twenty (20) days after commencing operations, should you become aware of any instances of medical devices malfunctioning or that such devices are likely to malfunction due to your DTV operations, you must cooperate with the health care facility so that it is afforded a reasonable opportunity to resolve the interference problem. At such time as all provisions of this condition have been fulfilled, and either upon the expiration of twenty (20) days following commencement of operations or when all known interference problems have been resolved, whichever is later, this condition lapses.

*** END OF AUTHORIZATION ***

Exhibit 12 EBA204 Section 9: Pricing Page

All materials detailed are manufactured by Dielectric Communications and are shown for reference only. Items equal to or exceeding Dielectric specifications shall be acceptable.

If bidding an "or equal", the vendor must provide the appropriate quantities for the or equal.

Materials:

Item	Material Number / Cat. Num / Description	Quantity	Unit Price	Amount
(1)	11000000077/ ANT THV-6A10-R 3C140 WSWP CH10 <i>Per Technical Specifications, Exhibit E1</i> Antenna Description: THV-6A10-R 3C140 or equal -ATSC Channel 10 -top mounted on customer supplied 378.5' Stainless G-5 tower -Directional azimuth pattern (see attached FCC Pattern) -Electrical beam fill is 0.75 degrees. -Average Power rating, 30 kW minimum -Single 3-1/8", 50 ohm EIA input <i>Vendor shall include:</i> -Hot dip galvanized antenna mounting pedestal (if required) -Factory assembly and test of antenna components -Full cylindrical Radomes (Standard Radome Color is Orange) -4 ft lightning protection	1 ea	<u>214,702.50</u>	<u>214,702.50</u>
(2)	11000000077/ ELBOW COMPLEX 3-50 WSWP CH10	1 ea	<u>6,146.00</u>	<u>6,146.00</u>
(3)	11000000077/ SUPPORT POLE/TRANSITION MAST WSWP CH10 (if required)	1 ea	<u>99,813.00</u>	<u>99,813.00</u>
(4)	11000000077/ FEED THRU COMPONENTS WSWP CH10	1 ea	<u>12,766.00</u>	<u>12,766.00</u>
(5)	R58725 / DC 375-003 / T/L 3-50 234.00 MF EX CONN	22 ea	<u>695.10</u>	<u>15,292.20</u>
(6)	R0006085504 / DC 370-036 / HANGER VERT 3 1/8 SPG SIN GRD	36 ea	<u>132.30</u>	<u>4,762.80</u>
(7)	R66788 / 300TLS 115 / DEHYDRATOR 300TLS 115 VAC	1ea	<u>2,117.50</u>	<u>2,117.50</u>
(8)	RTT350/ TRANS TEST 3-50 1	1ea	<u>844.90</u>	<u>844.90</u>
(9)	R0011016502 / DC 370-031 / HANGER HOR 3 1/8 3 PT SUS SIN	4 ea	<u>208.60</u>	<u>834.40</u>
(10)	R0012446501 / DC 375-005 / GAS STOP 3-1/8 EIA	1ea	<u>531.30</u>	<u>531.30</u>
(11)	R74292 / DL35-022 / ELBOW 3-50 ASSY DIGIT 6X9	5 ea	<u>896.00</u>	<u>4,480.00</u>
(12)	R0004575501 / DC 370-012 / KIT ASSY HARDWARE 3 1/8 T/L	25 ea	<u>9.80</u>	<u>245.00</u>
(13)	R0015954501 / DC 370-024 / CAP ASSY SEALING 3 1/8 C	1ea	<u>261.10</u>	<u>261.10</u>
(14)	R0013705508 / DC 375-011 / CONN ANCHOR 3-50	2 ea	<u>50.40</u>	<u>100.80</u>
(15)	R0048672501 / DC 570-043 / KIT ASSY GASSING-SYSTEM	1 ea	<u>95.90</u>	<u>95.90</u>

(16) R0004264502 / DC 370-038 / LATERAL BRACE 3 1/8 T/L	1 ea	<u>114.10</u>	<u>114.10</u>
(17) R0003482502 / DC 370-028 / ANCHOR HORIZ 3 1/8 SINGLE	1 ea	<u>104.30</u>	<u>104.30</u>
(18) R0006082502 / DC 370-034 / HANGER VERT 3 1/8 FIX SINGLE	1 ea	<u>86.80</u>	<u>86.80</u>
(19) R0044901001 / DC 570-045 / DOW CORNING #4 SILICONE LUBRICANT	1 ea	<u>16.10</u>	<u>16.10</u>
(20) RTLSCR3 / 562173-99 / T/L 3-50 VAR LENGTH	2 ea	<u>573.30</u>	<u>1,146.60</u>
(21) R36610/ IB 162 MANUAL T/L INSTALLATION INSTRUCTIONS	2 ea	<u>0.00</u>	<u>0.00</u>

Labor:

Item Material Number / Cat. Num / Description		Amount
(22) REMOVAL SERVICES OF EXISTING CHANNEL 9 TRANSMISSION LINE & ANALOG TOP MOUNT ANTENNA	Lump Sum	<u>102,973.00</u>
(23) INSTALLATION SERVICES OF NEW TRANSMISSION LINE & DIGITAL CHANNEL 10 TOP MOUNT ANTENNA	Lump Sum	<u>110,931.00</u>

Total Materials and Installation Services

591,241.30

(24) FREight, Shipping & handling	1 ea	7,300.00
(25) Performance Bond	1 ea	5,576.00
(26) Customer Check out	1 ea	0.00

STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT****VENDOR OWING A DEBT TO THE STATE:**

West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

* See preceding page

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code*. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code* and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the *West Virginia Code* may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: Dielectric CommunicationsAuthorized Signature: [Signature]Date: 5-12-09



State of West Virginia
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT
West Virginia Code §21-1D-5

STATE OF WEST VIRGINIA,
COUNTY OF Fayette, TO-WIT:

I, DONALD DOTY, after being first duly sworn, depose and state as follows:

1. I am an employee of Doty Moore Tower Services LLC; and,
(Company Name)
2. I do hereby attest that Doty Moore Tower Services LLC
(Company Name)

maintains a valid written drug free workplace policy and that such policy is in compliance with **West Virginia Code** §21-1D-5.

The above statements are sworn to under the penalty of perjury.

Doty Moore Tower Services LLC
(Company Name)

By: [Signature]

Title: VICE PRESIDENT

Date: 5/11/2009

Taken, subscribed and sworn to before me this 11th day of MAY 2009.

By Commission Expires 8/9/09
COMMONWEALTH OF PENNSYLVANIA

Notarial Seal
(Seal) Kathryn R. Myers, Notary Public
Upper Gwynedd Twp., Montgomery County
My Commission Expires Aug. 9, 2009
Member, Pennsylvania Association of Notaries

[Signature]
(Notary Public)

THIS AFFIDAVIT MUST BE SUBMITTED WITH THE BID IN ORDER TO COMPLY WITH WV CODE PROVISIONS. FAILURE TO INCLUDE THE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF THE BID.

Agency _____
REQ.P.O# _____

BID BOND

**Dielectric Communications, a division
of SPX Corporation**

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned, _____
of Raymond, Maine as Principal, and The Continental Insurance
Company of Chicago, Illinois, a corporation organized and existing under the laws of the State of Pennsylvania with its principal office in the City of Chicago, IL as Surety, are held and firmly bound unto the State of West Virginia, as Obligee, in the penal sum of Five Percent of Bid (\$-----5%-----) for the payment of which, well and truly to be made, we jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to the Purchasing Section of the Department of Administration a certain bid or proposal, attached hereto and made a part hereof, to enter into a contract in writing for Digital Antenna and Transmission Line

NOW THEREFORE,

- (a) If said bid shall be rejected, or
- (b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal attached hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be null and void, otherwise this obligation shall remain in full force and effect. It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for the value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Obligee may accept such bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be affixed hereunto and these presents to be signed by their proper officers, this 11th day of May, 2009.

Principal Corporate Seal

**Dielectric Communications, a division
of SPX Corporation**

(Name of Principal)
By Kevin Kelly
(Must be President or Vice President)

Sr. VP, Secretary & General Counsel
(Title)

Surety Corporate Seal

The Continental Insurance Company
(Name of Surety)

Loretta A. Peretti
Loretta A. Peretti Attorney-in-Fact

IMPORTANT - Surety executing bonds must be licensed in West Virginia to transact surety insurance. Raised corporate seals must be affixed, a power of attorney must be attached.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania corporation, is a duly organized and existing corporation having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Brian Cook, Loretta A Peretti, Drew Brach, Julie Denman, Individually

of Grand Rapids, MI, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Board of Directors of the corporation.

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Senior Vice President and its corporate seal to be hereto affixed on this 26th day of April, 2007.



The Continental Insurance Company

Thomas P. Stillman Senior Vice President

State of Illinois, County of Cook, ss:

On this 26th day of April, 2007, before me personally came Thomas P. Stillman to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Chicago, State of Illinois; that he is a Senior Vice President of The Continental Insurance Company, a Pennsylvania corporation, described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.



My Commission Expires September 17, 2009

Eliza Price Notary Public

CERTIFICATE

I, Mary A. Ribikawskis, Assistant Secretary of The Continental Insurance Company, a Pennsylvania corporation, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 11th day of May, 2009.



The Continental Insurance Company

Mary A. Ribikawskis Assistant Secretary

Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the Board of Directors of the company.

“Article VI-Execution of Documents

Section 3. Appointment of Attorney-in-Fact. The Chairman of the Board of Directors, the President or any Executive or Senior Vice President may, from time to time, appoint by written certificates attorneys-in-fact to act in behalf of the Company in the execution of policies of insurance, bonds, undertakings and other obligatory instruments of like nature. Such attorneys-in-fact, subject to the limitations set forth in their respective certificates of authority shall have full power to bind the Company by their signature and execution of any such instruments and to attach the seal of the Company thereto. The Chairman of the Board of Directors, the President or any Executive or Senior Vice President or the Board of Directors, may, at any time, revoke all power and authority previously given to any attorney-in-fact.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolution adopted by the Executive Committee of the Board of Directors of The Continental Insurance Company by unanimous written consent dated the 13th day of January, 1989:

RESOLVED, that the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company when so affixed and in the future with respect to any bond, undertaking or contract of suretyship to which it is attached.”

Notary Acknowledgement of Surety

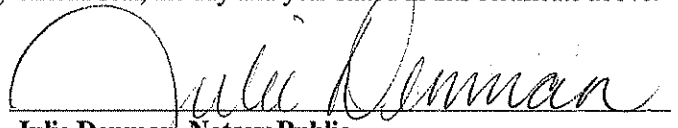
State of Michigan }
County of Kent } ss:

On **May 11, 2009**, before me, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared **Loretta A. Peretti**

known to me to be Attorney-in-Fact of **The Continental Insurance Company** the corporation described in and that executed the within and foregoing instrument, and known to me to be the person who executed the said instrument in behalf of the said corporation, and he duly acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year stated in this certificate above.

My Commission Expires December 6, 2010


Julie Denman, Notary Public

P. 1: All understood

General Terms and Conditions

1. Understood
2. Understood; however, Dielectric is unwilling to provide installation only.
3. Understood
4. Understood
5. Dielectric proposes its standard payment terms: 45% due with order, 45% due prior to shipment, 10% net 30 days. If other terms are desired, Dielectric is willing to consider alternatives to the foregoing.
6. Understood
7. Understood
8. Understood
9. Understood, except that should the order be canceled after Dielectric has begun performance, Dielectric shall be compensated for completed products and work in progress at the contracted price on a percent of completion basis.
10. Understood
11. Understood
12. Understood
13. Understood
14. Understood. Dielectric will not be performing installation services; therefore the installation subcontractor (Stainless LLC) Certificate attached.

P. 2

- Paragraph 1: As stated above, the affidavit will be signed by the installation subcontractor, Stainless LLC.
- Paragraph 2: Dielectric accepts the deadline for manufacture of the equipment, so long as the purchase order is received within 2 weeks of the bid opening. However, installation is subject to the vagaries of weather and other unforeseen conditions, and therefore may not be accomplished within the requested 180 days.
- Paragraphs 3-6: Understood

P. 3

- Paragraph 1: Understood
- Paragraph 2 (N/A)
- Paragraph 3: Understood
- Paragraph 4 (N/A)

P. 4-6 (N/A)

P. 7.

- Paragraph 1: As noted above, the installation subcontractor (Stainless LLC) is properly licensed in West Virginia.
- Paragraph 2: Understood
- Paragraph 3: Understood

P. 8

- Paragraph 1: Understood
- Paragraph 2: Understood, subject to the clarifications in this point-to-point document.
- Paragraph 3: Understood

RFQ Number EBA204
State of West Virginia, Department of Administration
Purchasing Division
Educational Broadcasting Authority
May 14, 2009

Dielectric Communications Point-by-Point Response

Technical Requirements for WSWP-DT Digital Television Broadcast Antenna and Transmission Line System

1. General Specifications

- 1.1 Understood and Comply
- 1.2 Comply: See User's List in Bid

2. Scope of Work

- 2.1 Comply
- 2.2 Comply
- 2.3 Comply
- 2.4 Comply
- 2.5 Comply
- 2.6 Comply
- 2.7 Comply
- 2.8 Comply
- 2.9 Comply
- 2.10 Comply

3. Antenna

- 3.1 Comply See Users List supplied in response to 1.2
- 3.2 Comply See attached Dielectric Warranty Clause. For purposes of this RFQ, Dielectric agrees to modify the warranty period to nine (9) years for the specified existing equipment and the new antenna and transmission line supplied in response to this RFQ.
- 3.3 Comply
- 3.3.1 Comply
- 3.4 Comply See Technical Specification C-02852-2 attached
- 3.5 Comply
- 3.6 Comply See Technical Specification C-02852-2 attached
- 3.6.1 Comply: Structural review of the tower with the new antenna configuration is the responsibility of others
- 3.6.2 Comply
- 3.6.3 Comply
- 3.7 Comply
- 3.8 Comply See Technical Specification C-02852-2 attached
- 3.9 Comply See Technical Specification C-02852-2 attached
- 3.10 Comply
- 3.11 Comply
- 3.12 Comply Dielectric uses anechoic chamber techniques during initial antenna design, and industry accepted near field techniques to test the antenna at full size following assembly, for elevation patterns and gain.
 - 3.12.1 Elevation patterns are measured using a near field probing technique on the fully assembled array. Azimuth patterns are measured on a full scale 1 or 2 layer model inside a anechoic chamber.
- 3.13 Comply
- 3.14 Comply

- 3.14.1 Comply: The antenna power rating has not been enhanced by taking the pressurization into account.
- 3.15 Comply Antenna is supplied with pole steps for easy access. Steps extend from the pole through the Radome. The pole steps do not affect the antenna circularity.
- 3.16 Comply: Radome is designed using individual panels that can be easily removed for inspection or maintenance.
- 3.16.1 Comply: Dielectric's radome is impregnated with color and does not fade like fiberglass or other radome types. There may be situations however where due to external conditions radome panels require replacing, and colors do not match exactly.
- 3.16.2 Comply: Radome panels are fabricated using a polycarbonate dielectric material similar to Lexan®
- 3.16.3 Understood and Comply (see response to 3.16)
- 3.16.4 Dielectric's radome is sectionalized, with panels approximately 3 feet long. There are two panels used to enclose the antenna over that 3 foot section, in a clamshell type fashion. Additional panels cover the entire antenna, just like roof shingles, with successive panels going up the antenna, slightly overlapping those below. Panels are bolted in place. To inspect the antenna, if needed, riggers simply need unfasten the radome to look inside.
- 3.17 Comply: To prevent damage and facilitate rigging, some radome panels may need to be removed for shipping purposes. No components critical to the performance of the antenna will be disassembled.
- 3.18 Comply
- 3.19 Comply
- 3.20 Comply See Technical Specification C-02852-2 attached
- 3.21 Comply See Minimum Expectations attached

4. Transmission Line

- 4.1 Comply
- 4.1.1 Understood and Comply
- 4.1.2 Understood and Comply
- 4.13 Understood and Comply
- 4.2 Comply
- 4.3 Comply: See attached Dielectric Warranty Clause. For purposes of this RFQ, Dielectric agrees to modify the warranty period to nine (9) years for the specified existing equipment and the new antenna and transmission line supplied in response to this RFQ.
- 4.4 Comply
- 4.5 Comply
- 4.5.1 Comply
- 4.6 Comply
- 4.6.1 Comply
- 4.6.2 Comply
- 4.7 Comply
- 4.7.1 Comply
- 4.7.2 Understood and Comply
- 4.8 Comply
- 4.9 Comply
- 4.10 Understood and Comply
- 4.11 Comply

5. Notes

- 5.1 Understood and Comply
- 5.2 Understood
- 5.2.1 Understood
- 5.3 Understood
- 5.4 Understood
- 5.5 Comply

- 5.6 Comply
- 5.7 Comply
- 5.8 Understood
- 5.9 Comply

6. Shipping, Delivery

- 6.1 Understood and Comply
- 6.1.1 Comply
- 6.1.2 Understood
- 6.1.3 Understood and Comply
- 6.1.4 Understood and Comply
- 6.2 Understood
- 6.3 Understood
- 6.4 Understood

7. Invoicing

- 7.1 Understood
- 7.2 Understood

The following Exhibits were included with the RFQ and were reviewed by Dielectric: E1, E2, E3, E4, E5, E6, E7, E8, E9, E10.



Proposal #: **C-02852-2**

Antenna Type: **THV-6A10-R 3C140**

Channel:

10 DTV

Call Letters: **WSWP-DT**

Location: **GRANDVIEW, WV**

Electrical Specifications		Value		Remarks
		Ratio	dB	
RMS Gain at Main Lobe over Halfwave Dipole	Hpol			
	Vpol			
RMS Gain at Horizontal over Halfwave Dipole	Hpol			
	Vpol			
Peak Directional Gain over Halfwave Dipole	Hpol	8.4	9.24	
	Vpol			
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol	8.2	9.14	
	Vpol			
Circularity	Directional	dB		
Axial Ratio		dB		
Beam Tilt		0.75 deg		
Average Power		30 kW	14.77 dBk	
Antenna Input:	T/L	3 1/8 in	50.0 ohm	Type: EIA/DCA
Maximum Antenna Input VSWR		Channel 1.15 : 1		Notes:
Patterns	Azimuth	3C140		
	Elevation	06V060075	06V060075-90	
Mechanical Specifications		Metric	English	With Support Pole & Antenna
Height with Lightning Protector	H4	13.4 m	44.1 ft	90.1 ft
Height Less Lightning Protector	H2	12.2 m	40.1 ft	TIA/EIA-222-F. 86.1 ft
Height of Center of Radiation	H3	7.0 m	21.9 ft	Above tower top 67.9 ft
Basic Wind Speed	V	112.7 km/h	70 mi/h	
Force Coeff. x Projected Area	CaAc	5.3 m ²	57.5 ft ²	Above base flange 115.0 ft ²
Moment Arm	D1	6.6 m	21.8 ft	Above base flange 48.8 ft
Force Coeff. x Projected Area	CaAc	m ²	ft ²	
Moment Arm	D3	m	ft	
Pole Bury Length	D2	m	ft	
Weight	W	4.6 t	10,200 lbs	18,600 lbs
Radome				
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F.				

NOTE:

Prepared By :

JBC

TLB

Approved By :

KWC

Original Date : 8-Aug-07

Revision: 2

Rev. Date:

11-May-09

JBC

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Jim Chadwick

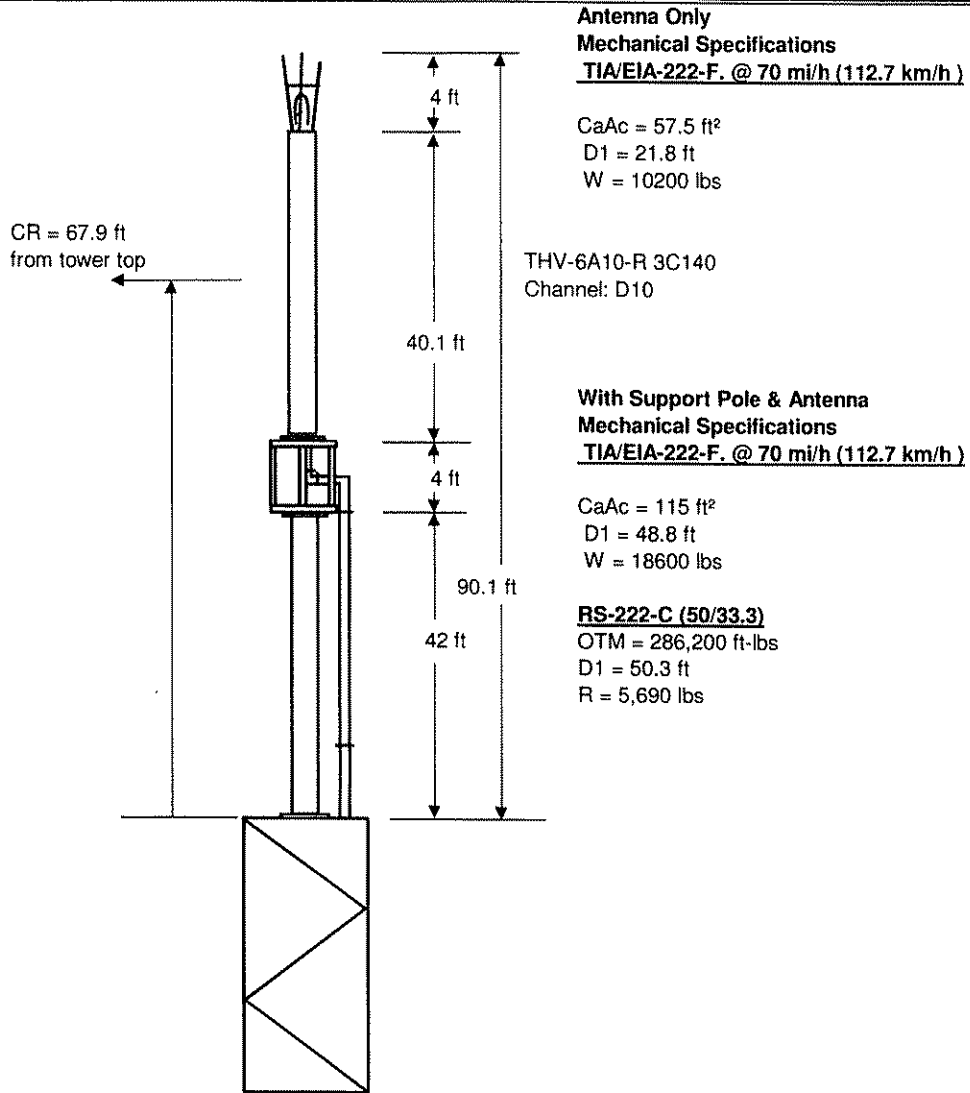
Digitally signed by Jim Chadwick
DN: CN = Jim Chadwick, C = US
Date: 2009.05.11 09:17:37 -0400

Proposal #: C-02852-2
 Call Letters: WSWP-DT

Antenna Type:
 Location:

THV-6A10-R 3C140
 GRANDVIEW, WV

Channel: 10 DTV



JBC-082108-1

Not to Scale

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Proposal Number **C-02852** Revision: **2**
Date **11-May-09**
Call Letters **WSWP-DT** Channel **10**
Location **GRANDVIEW, WV**
Customer
Antenna Type **THV-6A10-R 3C140**

DTV SYSTEM SUMMARY

Antenna:

Type:	THV-6A10-R 3C140	ERP:	24.0 kW	H Pol	(13.80 dBk)
Channel:	10	Peak Gain*:	8.40		(9.24 dB)
Location:	GRANDVIEW, WV	Input Power:	2.9 kW		(4.56 dBk)

Transmission Line:

Type:	EIA/DCA	Attenuation:		0.61 dB
Size:	3-1/8 in	Efficiency:	86.9%	
Impedance:	50 ohm			
Length:	450 ft		137.2 m	

Transmitter:

Power Required: **3.3 kW** **(5.17 dBk)**

* Gain is with respect to half wave dipole.

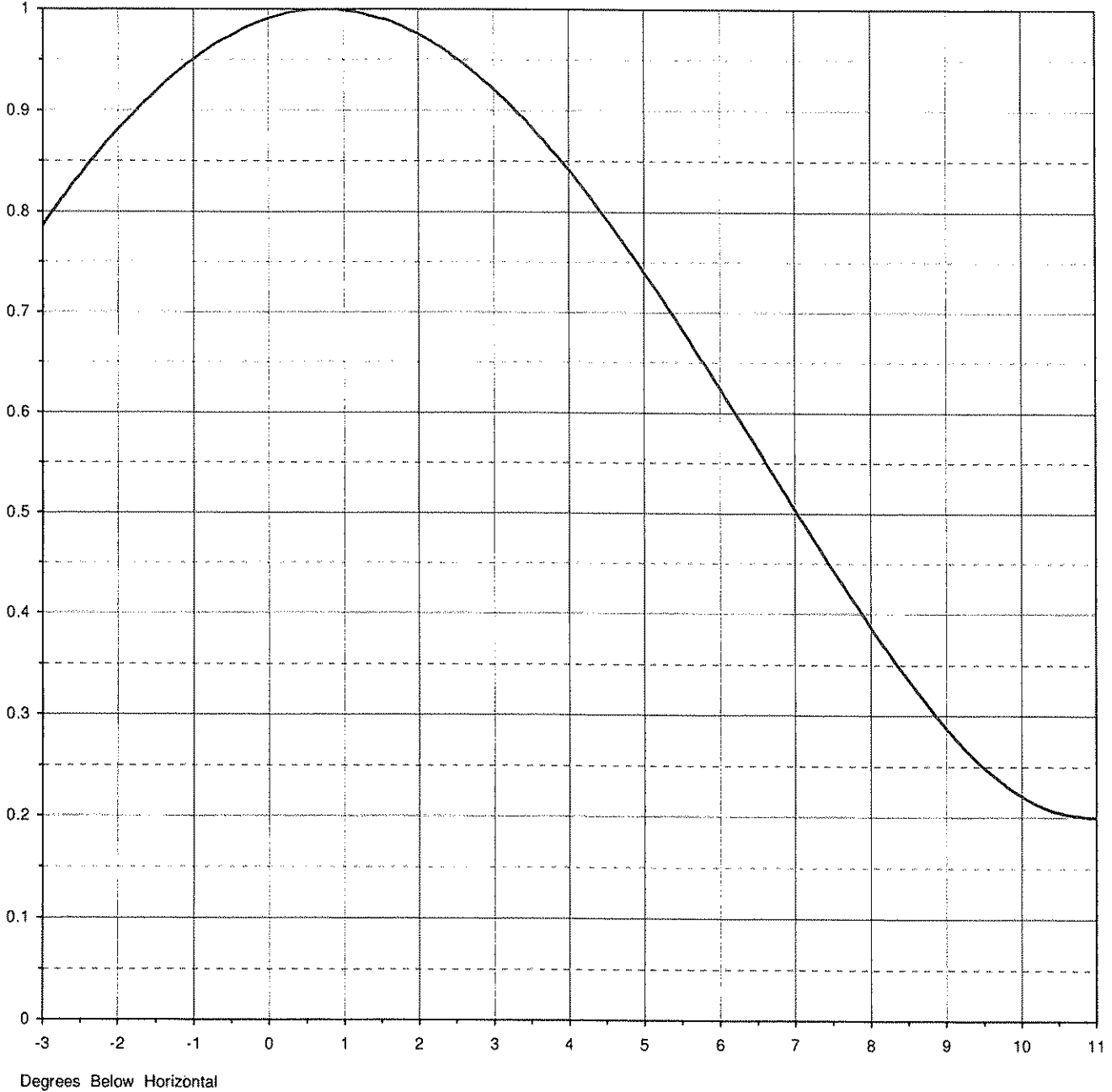
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Proposal Number **C-02852** Revision: **2**
Date **11-May-09**
Call Letters **WSWP-DT** Channel **10**
Location **GRANDVIEW, WV**
Customer
Antenna Type **THV-6A10-R 3C140**

ELEVATION PATTERN

RMS Gain at Main Lobe	6.00 (7.78 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	5.90 (7.71 dB)	Frequency	195.00 MHz
Calculated / Measured	Calculated	Drawing #	06V060075



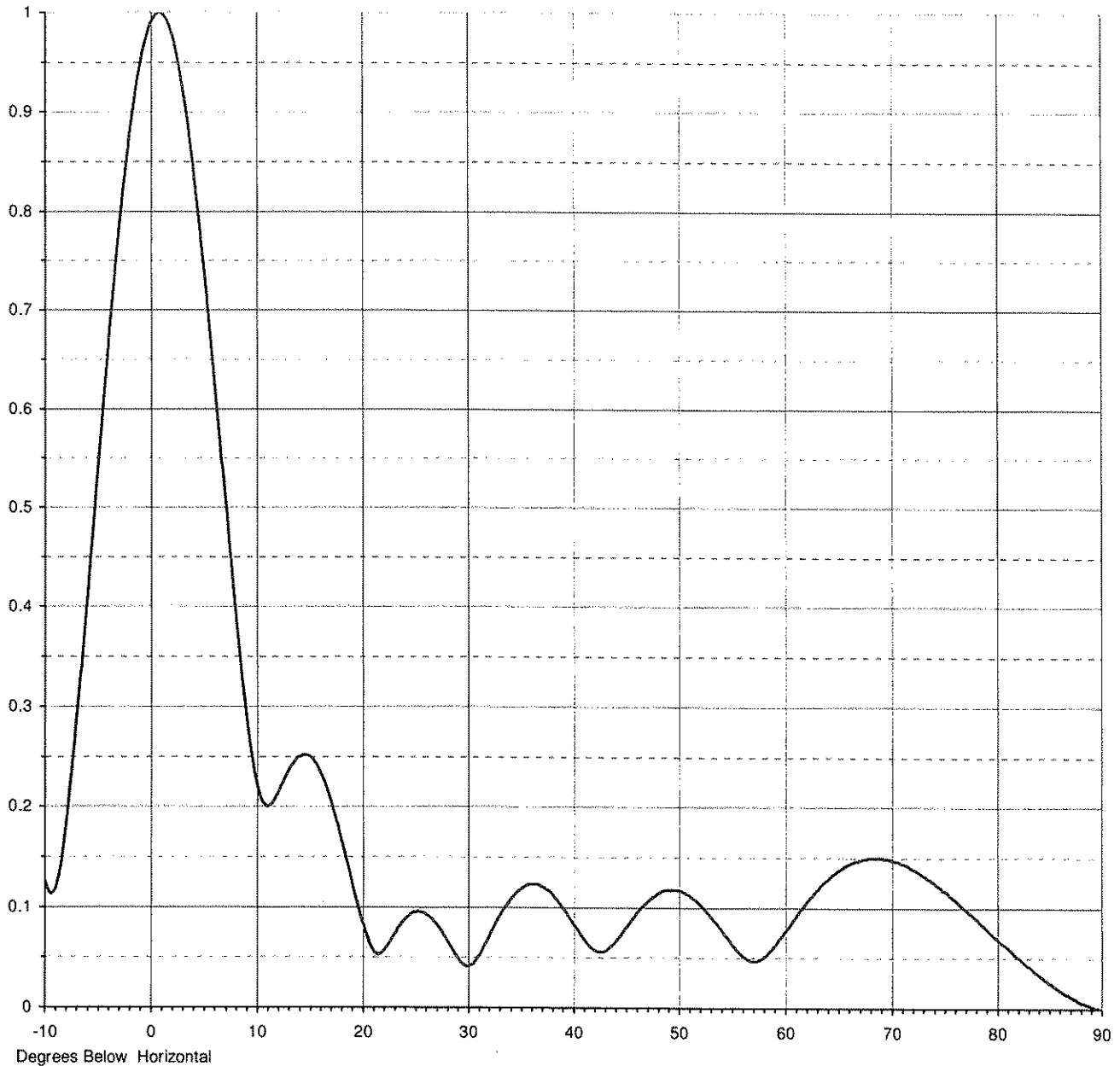
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Proposal Number **C-02852** Revision: **2**
Date **11-May-09**
Call Letters **WSWP-DT** Channel **10**
Location **GRANDVIEW, WV**
Customer
Antenna Type **THV-6A10-R 3C140**

ELEVATION PATTERN

RMS Gain at Main Lobe	6.00 (7.78 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	5.90 (7.71 dB)	Frequency	195.00 MHz
Calculated / Measured	Calculated	Drawing #	06V060075-90



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Proposal Number **C-02852** Revision: **2**
 Date **11-May-09**
 Call Letters **WSWP-DT** Channel **10**
 Location **GRANDVIEW, WV**
 Customer
 Antenna Type **THV-6A10-R 3C140**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **06V060075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.126	2.4	0.958	10.6	0.205	30.5	0.043	51.0	0.113	71.5	0.142
-9.5	0.114	2.6	0.947	10.8	0.202	31.0	0.050	51.5	0.109	72.0	0.139
-9.0	0.119	2.8	0.935	11.0	0.200	31.5	0.059	52.0	0.104	72.5	0.136
-8.5	0.143	3.0	0.922	11.5	0.203	32.0	0.069	52.5	0.099	73.0	0.132
-8.0	0.184	3.2	0.908	12.0	0.212	32.5	0.080	53.0	0.092	73.5	0.129
-7.5	0.234	3.4	0.893	12.5	0.223	33.0	0.090	53.5	0.086	74.0	0.125
-7.0	0.291	3.6	0.876	13.0	0.234	33.5	0.099	54.0	0.079	74.5	0.121
-6.5	0.353	3.8	0.859	13.5	0.243	34.0	0.107	54.5	0.072	75.0	0.117
-6.0	0.416	4.0	0.842	14.0	0.250	34.5	0.113	55.0	0.065	75.5	0.112
-5.5	0.481	4.2	0.823	14.5	0.252	35.0	0.118	55.5	0.058	76.0	0.108
-5.0	0.547	4.4	0.803	15.0	0.251	35.5	0.122	56.0	0.053	76.5	0.103
-4.5	0.611	4.6	0.783	15.5	0.245	36.0	0.123	56.5	0.049	77.0	0.098
-4.0	0.673	4.8	0.762	16.0	0.236	36.5	0.123	57.0	0.047	77.5	0.094
-3.5	0.731	5.0	0.740	16.5	0.224	37.0	0.121	57.5	0.047	78.0	0.089
-3.0	0.786	5.2	0.718	17.0	0.208	37.5	0.118	58.0	0.050	78.5	0.084
-2.8	0.807	5.4	0.695	17.5	0.190	38.0	0.114	58.5	0.055	79.0	0.079
-2.6	0.827	5.6	0.672	18.0	0.170	38.5	0.108	59.0	0.061	79.5	0.074
-2.4	0.846	5.8	0.649	18.5	0.149	39.0	0.101	59.5	0.068	80.0	0.069
-2.2	0.864	6.0	0.625	19.0	0.128	39.5	0.093	60.0	0.075	80.5	0.064
-2.0	0.881	6.2	0.601	19.5	0.107	40.0	0.085	60.5	0.082	81.0	0.060
-1.8	0.897	6.4	0.577	20.0	0.087	40.5	0.077	61.0	0.090	81.5	0.055
-1.6	0.912	6.6	0.552	20.5	0.070	41.0	0.069	61.5	0.097	82.0	0.050
-1.4	0.926	6.8	0.528	21.0	0.058	41.5	0.063	62.0	0.104	82.5	0.046
-1.2	0.939	7.0	0.504	21.5	0.053	42.0	0.058	62.5	0.111	83.0	0.042
-1.0	0.950	7.2	0.480	22.0	0.056	42.5	0.056	63.0	0.117	83.5	0.037
-0.8	0.961	7.4	0.456	22.5	0.063	43.0	0.056	63.5	0.123	84.0	0.033
-0.6	0.970	7.6	0.433	23.0	0.072	43.5	0.060	64.0	0.128	84.5	0.029
-0.4	0.978	7.8	0.410	23.5	0.080	44.0	0.065	64.5	0.134	85.0	0.025
-0.2	0.985	8.0	0.387	24.0	0.087	44.5	0.072	65.0	0.138	85.5	0.022
0.0	0.991	8.2	0.366	24.5	0.092	45.0	0.079	65.5	0.141	86.0	0.018
0.2	0.995	8.4	0.345	25.0	0.095	45.5	0.086	66.0	0.144	86.5	0.015
0.4	0.998	8.6	0.325	25.5	0.095	46.0	0.093	66.5	0.146	87.0	0.012
0.6	1.000	8.8	0.306	26.0	0.094	46.5	0.100	67.0	0.148	87.5	0.009
0.8	1.000	9.0	0.288	26.5	0.090	47.0	0.105	67.5	0.149	88.0	0.006
1.0	0.999	9.2	0.271	27.0	0.084	47.5	0.110	68.0	0.150	88.5	0.004
1.2	0.997	9.4	0.256	27.5	0.077	48.0	0.114	68.5	0.150	89.0	0.002
1.4	0.993	9.6	0.243	28.0	0.068	48.5	0.116	69.0	0.150	89.5	0.001
1.6	0.989	9.8	0.237	28.5	0.059	49.0	0.118	69.5	0.149	90.0	0.000
1.8	0.983	10.0	0.226	29.0	0.051	49.5	0.118	70.0	0.148		
2.0	0.976	10.2	0.217	29.5	0.044	50.0	0.117	70.5	0.146		
2.2	0.967	10.4	0.210	30.0	0.041	50.5	0.115	71.0	0.144		

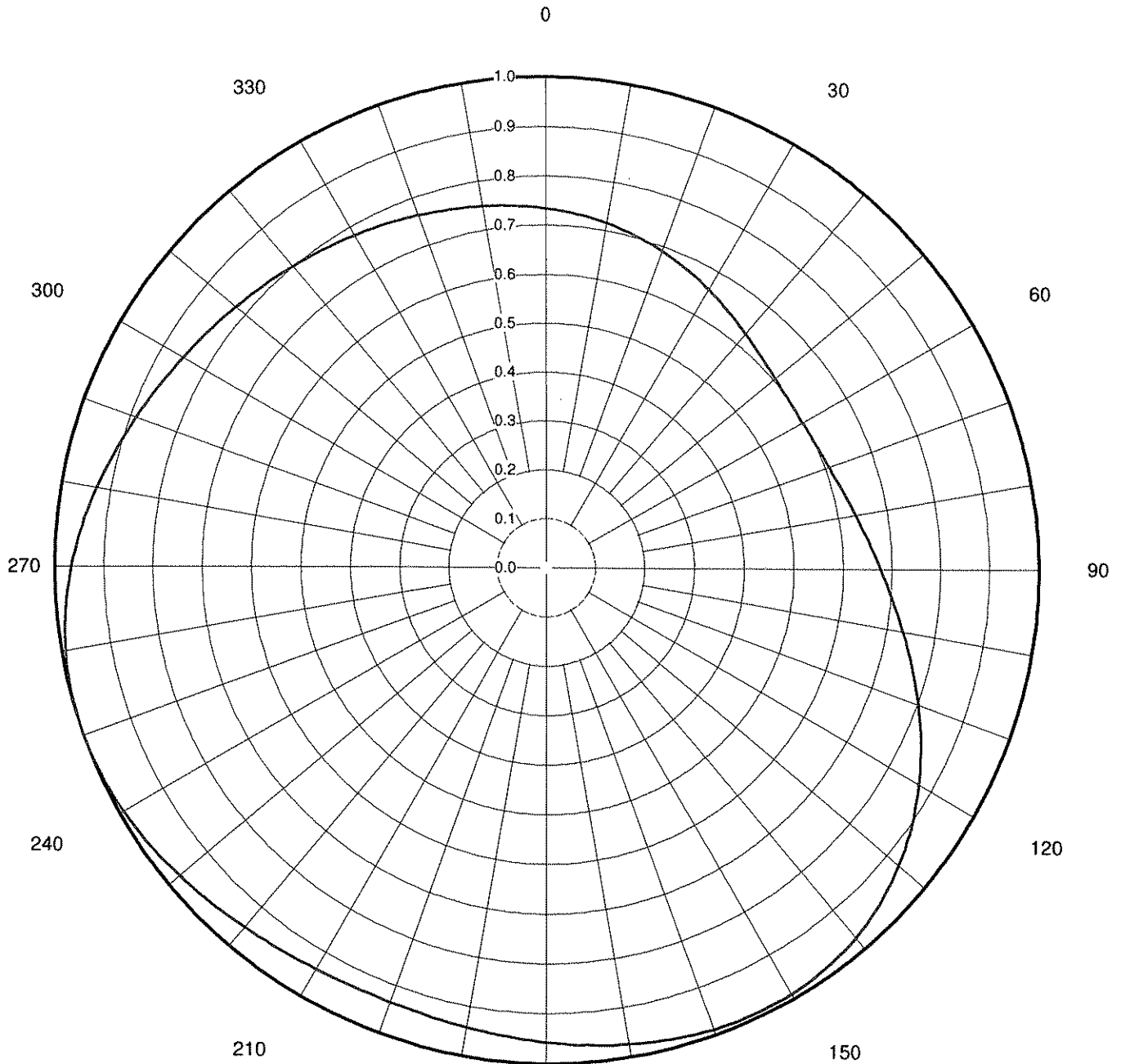
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Proposal Number	C-02852	Revision:	2
Date	11-May-09		
Call Letters	WSWP-DT	Channel	10
Location	GRANDVIEW, WV		
Customer			
Antenna Type	THV-6A10-R 3C140		

AZIMUTH PATTERN

Gain **1.40** (**1.46 dB**)
Calculated / Measured **Calculated**

Frequency **195.00 MHz**
Drawing # **3C140**



180



Proposal Number **C-02852** Revision: **2**
 Date **11-May-09**
 Call Letters **WSWP-DT** Channel **10**
 Location **GRANDVIEW, WV**
 Customer
 Antenna Type **THV-6A10-R 3C140**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **3C140**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.733	45	0.614	90	0.676	135	0.954	180	0.957	225	0.961	270	0.965	315	0.812
1	0.732	46	0.612	91	0.681	136	0.958	181	0.955	226	0.963	271	0.962	316	0.809
2	0.730	47	0.610	92	0.686	137	0.962	182	0.953	227	0.965	272	0.959	317	0.807
3	0.729	48	0.608	93	0.692	138	0.965	183	0.952	228	0.967	273	0.955	318	0.805
4	0.727	49	0.606	94	0.697	139	0.968	184	0.950	229	0.970	274	0.951	319	0.803
5	0.725	50	0.605	95	0.703	140	0.972	185	0.949	230	0.972	275	0.947	320	0.801
6	0.723	51	0.603	96	0.709	141	0.974	186	0.947	231	0.974	276	0.944	321	0.799
7	0.721	52	0.602	97	0.715	142	0.977	187	0.946	232	0.976	277	0.940	322	0.796
8	0.719	53	0.601	98	0.721	143	0.979	188	0.944	233	0.978	278	0.936	323	0.794
9	0.717	54	0.600	99	0.727	144	0.982	189	0.943	234	0.980	279	0.932	324	0.792
10	0.715	55	0.599	100	0.733	145	0.983	190	0.942	235	0.982	280	0.928	325	0.790
11	0.713	56	0.598	101	0.740	146	0.985	191	0.941	236	0.984	281	0.924	326	0.788
12	0.711	57	0.598	102	0.746	147	0.987	192	0.940	237	0.986	282	0.919	327	0.786
13	0.709	58	0.598	103	0.753	148	0.988	193	0.939	238	0.988	283	0.915	328	0.784
14	0.706	59	0.598	104	0.759	149	0.989	194	0.938	239	0.990	284	0.911	329	0.783
15	0.704	60	0.598	105	0.766	150	0.990	195	0.937	240	0.991	285	0.907	330	0.781
16	0.701	61	0.598	106	0.773	151	0.990	196	0.936	241	0.993	286	0.903	331	0.779
17	0.698	62	0.598	107	0.780	152	0.991	197	0.936	242	0.994	287	0.899	332	0.777
18	0.696	63	0.599	108	0.787	153	0.991	198	0.935	243	0.995	288	0.895	333	0.775
19	0.693	64	0.600	109	0.794	154	0.991	199	0.935	244	0.996	289	0.891	334	0.773
20	0.690	65	0.601	110	0.801	155	0.991	200	0.934	245	0.997	290	0.887	335	0.772
21	0.687	66	0.602	111	0.808	156	0.991	201	0.934	246	0.998	291	0.883	336	0.770
22	0.684	67	0.603	112	0.815	157	0.990	202	0.934	247	0.999	292	0.880	337	0.768
23	0.681	68	0.605	113	0.822	158	0.990	203	0.934	248	0.999	293	0.876	338	0.766
24	0.678	69	0.606	114	0.829	159	0.989	204	0.934	249	1.000	294	0.872	339	0.765
25	0.675	70	0.608	115	0.837	160	0.988	205	0.935	250	1.000	295	0.869	340	0.763
26	0.672	71	0.610	116	0.844	161	0.987	206	0.935	251	1.000	296	0.865	341	0.761
27	0.669	72	0.612	117	0.850	162	0.986	207	0.935	252	1.000	297	0.862	342	0.760
28	0.665	73	0.614	118	0.857	163	0.985	208	0.936	253	0.999	298	0.858	343	0.758
29	0.662	74	0.617	119	0.864	164	0.984	209	0.937	254	0.999	299	0.855	344	0.757
30	0.659	75	0.619	120	0.871	165	0.982	210	0.937	255	0.998	300	0.852	345	0.755
31	0.655	76	0.622	121	0.878	166	0.981	211	0.938	256	0.997	301	0.849	346	0.754
32	0.652	77	0.625	122	0.884	167	0.980	212	0.939	257	0.996	302	0.846	347	0.752
33	0.649	78	0.628	123	0.890	168	0.978	213	0.941	258	0.995	303	0.843	348	0.751
34	0.646	79	0.631	124	0.897	169	0.976	214	0.942	259	0.993	304	0.840	349	0.749
35	0.642	80	0.634	125	0.903	170	0.975	215	0.943	260	0.992	305	0.837	350	0.748
36	0.639	81	0.638	126	0.909	171	0.973	216	0.945	261	0.990	306	0.834	351	0.747
37	0.636	82	0.642	127	0.914	172	0.971	217	0.946	262	0.988	307	0.831	352	0.745
38	0.633	83	0.645	128	0.920	173	0.969	218	0.948	263	0.985	308	0.829	353	0.744
39	0.630	84	0.649	129	0.926	174	0.968	219	0.949	264	0.983	309	0.826	354	0.742
40	0.627	85	0.653	130	0.931	175	0.966	220	0.951	265	0.980	310	0.824	355	0.741
41	0.624	86	0.658	131	0.936	176	0.964	221	0.953	266	0.978	311	0.821	356	0.739
42	0.622	87	0.662	132	0.941	177	0.962	222	0.955	267	0.975	312	0.819	357	0.738
43	0.619	88	0.667	133	0.945	178	0.960	223	0.957	268	0.972	313	0.816	358	0.736
44	0.617	89	0.671	134	0.950	179	0.959	224	0.959	269	0.969	314	0.814	359	0.735

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Quotation

Customer
WSWP 600 CAPITOL STREET CHARLESTON WV 25301 USA

Ship-To-Party
WSWP CALVIN HANNAH 304-254-7867 MANN MOUNTAIN LAYLAND WV 25864 USA

Information	
Quote Number	2006379
Quote Date	09/20/2007
Customer No.	112546
Currency	USD
Validity Start Date	09/20/2007
Validity End Date	08/10/2009

Header Information

Terms of payment: Billing Plan
Incoterms: PPD FOB DESTINATION
 Standard Payment Terms:

45% due with order
 45% due prior to shipment
 10% due net 30 days,

or Other Terms to be Negotiated.

Shipment: 135-165 days ARO, depends upon backlog at time of order.

Item	Material Number / Cat. Num / Description	Quantity	Unit Price	Amount
10	11000000077/ ANT THV-6A10-R 3C140 WSWP CH10	1 EA	306,725.00	306,725.00
			Item Discount %30.000-	-92,017.50
			Item NET Price	214,707.50
	Per Technical Spec C-02852-2			
	Antenna Description: THV-6A10-R 3C140 -Channel 10 -top mounted on customer supplied tower -Directional azimuth pattern -Electrical beam tilt is .75 degrees. -Ave Power rating 30 kW -Single 3-1/8# 50 ohm EIA input			
	Includes:			
	-Hot dip galvanized steel pole -Factory assembly and test of antenna components -Full cylindrical Radome (Standard Radome Color is Orange) -3 Conductor wire to top Beacon (Beacon not include)			

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22 Tower Road
 Raymond, ME 04071
 Phone: 207-655-4555
 Fax: 207-655-8173
 Internet: www.dielectric.com



Quotation

Quote Number 2006379

Quote Date 09/20/2007

Customer No. 112546

Item	Material Number / Cat. Num / Description	Quantity	Unit Price	Amount
	-4\ ft lightning protection			
20	11000000077/ ELBOW COMPLEX 3-50 WSWP CH10	1 EA	8,780.00	8,780.00
			Item Discount %30.000-	-2,634.00
			Item NET Price	6,146.00
30	11000000077/ SUPPORT POLE/TRANSITION MAST WSWP CH10	1 EA	142,590.00	142,590.00
			Item Discount %30.000-	-42,777.00
			Item NET Price	99,813.00
40	11000000077/ FEED THRU COMPONENTS WSWP CH10	1 EA	18,230.00	18,230.00
			Item Discount %30.000-	-5,469.00
			Item NET Price	12,761.00
50	R58725 / DC 375-003 / T/L 3-50 234.00 MF EX CONN	22 EA	993.00	21,846.00
			Item Discount %30.000-	-6,553.80
			Item NET Price	15,292.20
60	R0006085504 / DC 370-036 / HANGER VERT 3 1/8 SPG SIN GRD	36 EA	189.00	6,804.00
			Item Discount %30.000-	-2,041.20
			Item NET Price	4,762.80
70	R66788 / 300TLS 115 / DEHYDRATOR 300TLS 115 VAC	1 EA	3,025.00	3,025.00
			Item Discount %30.000-	-907.50
			Item NET Price	2,117.50
80	RTT350/ TRANS TEST 3-50	1 EA	1,207.00	1,207.00
			Item Discount %30.000-	-362.10
			Item NET Price	844.90
90	R0011016502 / DC 370-031 / HANGER HOR 3 1/8 3 PT SUS SIN	4 EA	298.00	1,192.00
			Item Discount %30.000-	-357.60
			Item NET Price	834.40
100	R0012446501 / DC 375-005 / GAS STOP 3-1/8 EIA	1 EA	759.00	759.00
			Item Discount %30.000-	-227.70
			Item NET Price	531.30

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Quotation

Quote Number 2006379

Quote Date 09/20/2007

Customer No. 112546

Item	Material Number / Cat. Num / Description	Quantity	Unit Price	Amount
110	R74292 / DL 375-022 / ELBOW 3-50 ASSY DIGIT 6X9	5 EA	1,280.00	6,400.00
			Item Discount %30.000-	-1,920.00
			Item NET Price	4,480.00
120	R0004575501 / DC 370-012 / KIT ASSY HARDWARE 3 1/8 T/L	25 EA	14.00	350.00
			Item Discount %30.000-	-105.00
			Item NET Price	245.00
130	R0015954501 / DC 370-024 / CAP ASSY SEALING 3 1/8 C	1 EA	373.00	373.00
			Item Discount %30.000-	-111.90
			Item NET Price	261.10
140	R0013705508 / DC 375-011 / CONN ANCHOR 3-50	2 EA	72.00	144.00
			Item Discount %30.000-	-43.20
			Item NET Price	100.80
150	R0048672501 / DC 570-043 / KIT ASSY GASSING-SYSTEM	1 EA	137.00	137.00
			Item Discount %30.000-	-41.10
			Item NET Price	95.90
160	R0004264502 / DC 370-038 / LATERAL BRACE 3 1/8 T/L	1 EA	163.00	163.00
			Item Discount %30.000-	-48.90
			Item NET Price	114.10
170	R0003482502 / DC 370-028 / ANCHOR HORIZ 3 1/8 SINGLE	1 EA	149.00	149.00
			Item Discount %30.000-	-44.70
			Item NET Price	104.30
180	R0006082502 / DC 370-034 / HANGER VERT 3 1/8 FIX SINGLE	1 EA	124.00	124.00
			Item Discount %30.000-	-37.20
			Item NET Price	86.80
190	R0044901001 / DC 570-045 / DOW CORN.#4 SILICONE LUBRI	1 EA	23.00	23.00
			Item Discount %30.000-	-6.90
			Item NET Price	16.10

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22 Tower Road
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Quotation

Quote Number 2006379

Quote Date 09/20/2007

Customer No. 112546

Item	Material Number / Cat. Num / Description	Quantity	Unit Price	Amount
200	RTLSCR3 / 562173-99 / T/L 3-50 VAR LENGTH	2 EA	819.00	1,638.00
			Item Discount %30.000-	-491.40
			Item NET Price	1,146.60
210	R36610/ IB 162 MANUAL T/L INSTALL INSTRUCTIONS	2 EA	10.00	20.00
			100% discount100.000-	-20.00
			Item NET Price	0.00
220	RINSRTV/ INSTALL SERVICES RAYMOND TV	1 EA	213,904.00	213,904.00
	1.0 Mobilize to Site			
	2.0 Offload and inventory material and equipment			
	3.0 Set up site and rig tower			
	4.0 Install and jump gin pole			
	5.0 Remove top mounted strobe and disconnect cable for reuse			
	6.0 Remove existing TW-15A9-R Antenna and store on site			
	7.0 Remove existing 6 1/8# line and store on site			
	8.0 Punch existing clip angles to accept 3 1/8# hangers			
	9.0 Install new 3 1/8# line (approximately 400ft)			
	10.0 Install new top mounted THV-7A10-R 4C150 D10, adapter and support pole			
	11.0 Assist with testing and tuning of antenna system			
	12.0 Reinstall strobe light			
	13.0 Lower and remove gin pole			
	14.0 Down rig and clean site			
	15.0 De-mobilize from site			
	NOTES:			
	1.0 All material to be neatly stacked on site for customer removal			
	2.0 Structural analysis performed by others			
	3.0 Proposal assumes site is easily accessible with two wheel drive vehicles with no power lines, utilities or standing water interfering with installation or product delivery			
	4.0 Price does not include any additional steel that may be required for t/l run			
	5.0 Price includes temporary strobe on tower top when existing top beacon is disassembled			
	6.0 Price includes two weather days. Additional days will be billed at \$3,650 per day			
	7.0 All work to be completed during daylight hours			
	8.0 Assumes no RF protective clothing is required			
	9.0 RF safe environment shall be provided			
	10.0 Assumes service crews have full access to Customer#s site and tower			
230	RFREIGHT/ FREIGHT, SHIPPING, AND HANDLING	1 EA	7,300.00	7,300.00
	Note: The quoted price is subject to change to reflect increases in fuel costs, shipper surcharges, etc.			
	This is for freight only and excludes any off loading of equipment			

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Quotation

Quote Number 2006379

Quote Date 09/20/2007

Customer No. 112546

Item	Material Number / Cat. Num / Description	Quantity	Unit Price	Amount
	unless specified. If off loading is required please notify the customer service rep.			
240	11000000077/ PERFORMANCE BOND	1 EA	5,576.00	5,576.00
250	11000001830/ CUSTOMER CHECKOUT	1 EA	8,000.00	8,000.00
			100% discount	100.000-
			Item NET Price	0.00
	Additional days at \$1,600 per day plus expenses(15% on expenses only)			
	Please call (3) days in advance to request services.			
Items total:				591,241.30
Total Tax				
Final amount:				591,241.30

ACCEPTANCE:

By execution below, or by sending a Purchase Order referencing this proposal, the undersigned accepts this proposal to furnish equipment and services on this schedule subject to the Terms and Conditions of Sale for Broadcast, Lighting, Monitoring and Related Products and Services (Rev O)("Dielectric Terms") attached hereto and/or incorporated by reference herein, and authorizes Dielectric to proceed with the procurement and fabrication of this equipment. Your acceptance of this proposal is conditioned upon your acceptance of the Dielectric Terms and your agreement to be bound by and comply with the Dielectric Terms. Dielectric's failure to object to provisions contained in any Purchase Order or other document from you shall not be construed as a waiver by Dielectric of the Dielectric Terms or an acceptance of any such provisions. Any conflicting or additional terms or conditions set forth in a Purchase Order or other document from you are not binding upon Dielectric, and Dielectric hereby expressly objects thereto.

Signature _____ Date _____

Requested Ship Date: _____

This requested ship date is subject to review by Dielectric. If Dielectric can not meet the requested ship date, you will be contacted to work out a mutually acceptable shipment date. Dielectric requires that the customer take ownership of the product no later than 14 calendar days after the agreed-upon ship date.



THV Antenna

USERS LIST Current Projects THV

<u>Call Letters</u>	<u>Location</u>	<u>Type</u>	<u>Ship Date</u>
CANADA	Trois-Riveres, Quebec	THV-12A13-R S190 SM	Jun-03
WXYZ	Detroit, MI	THV-5A7-R C140 SM	Aug-03
WHTM	Harrisburg, PA	THV-6A10-R S190	Apr-04
WMAK	Knoxville, TN	THV-11A7-R C160	Jun-04
WTSP-DT	Tampa-St. Petersburg, FL	THV-11A10 C150	Nov-04
KNTV	San Jose, CA	THV-11A11/VP-R 04	Dec-04
WJSU-DT	Anniston, AL	THV-6A9-R S190 SM	Jan-05
WVER-DT	Rutland, VT	THV-6A9/VP-R C160 SM	Apr-05
KGUN	Tucson, AZ	THV-5A9-R C140	Jul-05
WFXL-DT	Albany, GA	THV-12A12-R C170 SM	Dec-05
KIII-DT	Corpus Christi, TX	THV-11A8 C135 SM	Mar-06
KGO,-DT	San Francisco, CA	THV-5A7-R C170	Dec-07
WPLG-DT	Miami, FL	THV-8A10/VP P210	Dec-07
WACS-DT	Dawson, GA	THV-5A8-R C170	Mar-08
KFWD-DT	Ft. Worth, TX	THV-6A9-R C180	May-08
WPTV-DT	West Palm Beach, FL	THV-10A12/VP O4	May-08
KWTX-DT	Waco, TX	THV-12A10-CP-R-04	Aug-08
KXII-DT	Sherman, TX	THV-12A12/CP-R O4	Aug-08
KVIE-DT	Sacramento, CA	THV-5A9/VP-R 04	Aug-08
WCPO-DT	Cincinnati, OH	THV-9A10/CP-R3C120	Oct-08
KJRH-DT	Tulsa, OK	THV-9A8/CP-R O4	Sep-08
WTOL-DT	Toledo, OH	THV-6A11-R C170	Sep-08
KEZI-DT	Eugene, OR	THV-10A9/VP-R-C170	Sep-08
WWDP-DT	Norwell, MA	THV-5A10-R O4	Oct-08
WVTM-DT	Harrisburg, PA	THV-9A13/VP-R O4	Oct-08
WMBB-DT	Panama City, FL	THV-10A13 C170	Nov-08
WJHL-DT	Johnson City, TN	THV-9A11-R 4C130	Nov-08
WJZ-DT	Baltimore, MD	THV-11A13/VP-R C150SP	Apr-09
KBRR-DT	Thief River Falls, MN	THV-6A10-R 04 SM	Dec-09
WPEC-DT	West Palm Beach, FL	THV-6A13/VP-R BP240	Feb-09
WSVN-DT	Miami Gardens, FL	THV-10A7/VP P210	In Fab
WTVC-DT	Chattanooga, TN	THV-5A9/VP-R C140	In Fab
WENH-DT	Deerfield, NH	THV-10A11/VP-R 4C130	In Fab
WSPA-DT	Spartanburg, SC	THV-10A7/VP-R O4	In Fab

Recent Major Projects

<u>Project</u>	<u>Location</u>	<u>Type</u>	<u>Date</u>	<u>Price</u>
Sutro Tower	San Francisco CA	DTV Conversion - Multiple Antennas, RF systems and Transmission line	2007-2008	\$5.9 million
SCETV	Georgia Public Statewide	DTV Conversion - Multiple Antennas, RF systems and Transmission line	2007-2008	\$5.2 million
Lake Cedar Group	Denver CO	DTV Conversion - Multiple Antennas, RF systems and Transmission line	2007-2008	\$3.9 million

Dielectric Communications

MINIMUM EXPECTATIONS FOR FIELD TEST REPORTS DONE ON DIELECTRIC BROADCAST ANTENNAS, TRANSMISSION LINE AND RF SYSTEMS

FORMAT

- Preferred Software: PDF
- Please have the field service engineer's name on the report
- Please have pages or plots/figures numbered on the report

COVER PAGE

- Date & Location of Service
- Station Call Letters & MSO #
- Channel Number: Digital or NTSC
- Antenna Model: New or Existing
- Transmission Line: New or Existing
- T/L or wg model new or existing and overall length (within approx. 20 feet) Specify *digiTLine*, EHT coated, Ultimate or Standard line, etc.
- Also indicate individual line lengths for the transmission line, i.e., 11.5, 12, 19.5, 20 feet or *digiTLine*
- RF System if measured, please note type of system, i.e., 1 Tube, 2 Tube, etc.
- Site Conditions, i.e. other stations in the area (if available)

ABSTRACT

- Description of report
- Equipment used
- Particular Information: antenna optimized with variable, elbow complex measured separately; line optimized; size of line; concerns and/or problems

Antenna and Transmission Line

This is a list of measurements to be taken for both antenna and transmission line for **each channel of interest**. *The measurements listed below should be fully documented and taken after tuning. Before measurements are only necessary if a problem is noted and only appropriate measurements specific to the problem and correction need to be included. Please include these measurements, and any comments, on a separate appendix at the end of the report.*

Please note measurement reference e.g. gas stop, patch panel, switches.

- 1) Polar plot of system impedance over 6 MHz centered on channel, 1601 points.
 - a) For NTSC locate markers at lower channel edge, upper channel edge, VIS, Color, AUR and for DTV lower channel edge, mid-channel and upper edge. **Please have a brief description of each marker below its respective plot.**
 - b) Scale 100mU, or most reasonable
- 2) VSWR plot of system impedance over 6 MHz centered on channel, 1601 points
 - a) Markers as in 1a
 - b) Vertical scale 20 m per division, or most reasonable.
- 3) Plot with system return loss over 6 MHz in dB centered on channel, 1601 points.
 - a) Markers as in 1a
 - b) Vertical scale 5 dB per division, or most reasonable.
- 4) TDR in VSWR with 6 MHz bandwidth centered on Channel with 1601 points.
 - a) Vertical scale 10mU per division, or most reasonable.
 - b) Markers where appropriate (**Please describe i.e. Antenna, elbow, etc...**)
- 5) Polar plot of system impedance over 12 MHz centered on channel, 1601 points
 - a) Markers as in 1a
 - b) Scale 100mU, or most reasonable.
- 6) VSWR plot of system impedance over 12 MHz centered on channel, 1601 points
 - a) Markers as in 1a
 - b) Vertical scale 20 m per division, or most reasonable.
- 7) Plot with system return loss over 12 MHz in dB centered on channel, 1601 points.
 - a) Markers as in 1a
 - b) Vertical scale 5 dB per division, or most reasonable.
- 8) TDR in VSWR with 12 MHz bandwidth centered on Channel with 1601 points.

- a) Vertical scale 10mU per division.
 - b) Markers where appropriate (**Please describe i.e. Antenna, elbow, etc...**)
- 9) TDR in VSWR with 100 MHz bandwidth centered at channel center with 1601 points.
- a) Vertical scale 10 mU per division.
 - b) Markers where appropriate (**Please describe i.e. Antenna, elbow, etc...**)
- 10) Frequency Domain VSWR plot over 100 MHz centered on channel of interest. Antenna and far end elbow complexes must be **gated out** for this measurement. This will show flange reflections on fixed length lines and no flange reflections on *digiTLine*.
- a) Markers as described in 1a
- 11) Wide band TDR in VSWR using the parameters described below with 1601 points.
- a) Vertical scale 2 m per division
 - b) Frequency span line type dependent (see below)
 - c) Data to be plotted in 1 microsecond intervals per plot.
 - d) Marker 1 at far end and displaying distance in meters.
 - e) Other markers where appropriate (**Please describe i.e. Antenna, elbow, etc...**)

Frequency bandwidth choices for TDR will vary with line size and between coax and waveguide. Please use the following:

For 6-50 Ohm and smaller lines sizes: Please use 470 to 806 MHz.

For 6-75: Please use 470 to 806 MHz.

For 7-75: Please use 450 to 800 MHz.

For 8-75: Please use 400 to 700 MHz.

For 9-75: Please use 300 to 613 MHz.

For WR1800: Please use 350 to 700 MHz.

For WR1500: Please use 400 to 750 MHz.

For WR1150: Please use 550 to 900 MHz.

For DTW1750: Please use 400 to 700 MHz.

For DTW1500: Please use 450 to 750 MHz.

For DTW1350: Please use 500 to 800 MHz.

- 12) Explode any area of No. 11 with interesting features.
- a) Expand horizontal scale to show more detail.

NOTES:

- **Anomalies noted in any above plots and specific locations associated with any anomalies in the TDR plots should be explored, explained and fixed prior to final test.**
- **Set velocity factor to 1.0 for all TDR Measurements, otherwise specify value.**
- **If at any time the scale is not sufficient to show the maximum value use appropriate scale and note on exhibit.**

COMMENTS

The purpose and requirements of the wideband TDR is to provide an accurate picture of the performance of each insulator, connector and flange plus any anomalies in the transmission line. The large discontinuities generally seen on this plot such as the antenna are not of interest. We are interested in discontinuities from elbows, gas barriers and other small anomalies.

We want a trace with the vertical scale with a VSWR=1.002 /div to highlight the insulators in the transmission line.

The horizontal scale should begin at ZERO and end at the antenna input, thereby expanding the data between these two points.

The TDR window function should generally be set to normal. The minimum setting causes the large peaks to be broader and to bleed into the smaller peaks, thereby obscuring the data that we want. The maximum window reduces the peak values and obscures some of the data.

RF System or Filter System

- VSWR of items tested or modified. Include markers at equal ripple bandwidth of filters. Use 30 MHz bandwidth and 5 dB/div scale.
- Measure loss at .1dB/DIV at equal ripple BW and VIS and AUR for NTSC. For DTV include markers at equal ripple BW and +/- 2.69 MHz and center band. Use 30 MHz wide overall bandwidth.
- Measure Group Delay. Place marker 1 at low value of delay. Place two additional markers at channel edges and two markers at the peaks of delay. Use 30 MHz wide sweep and 20 – 50 ns/div.
- Isolation of hybrids, phase shifters and similar devices (when they are the point of the trip). Use 30 MHz frequency sweep for single channels and greater for multiple channels.

CONCLUSION

- Brief summary of measurements
- List any changes made to the system
- List any concerns and/or comments
- Statement of authenticity and signature



Dielectric
COMMUNICATIONS

Engineering Excellence Since 1942

THV Series High Band VHF Pylon Antenna

Single Frequency
NTSC & DTV

Low Windload, Economical

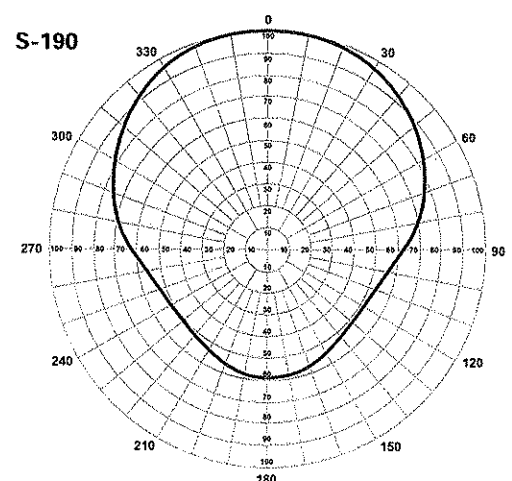
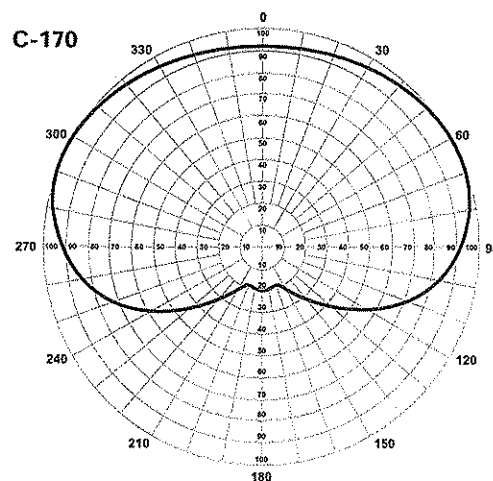
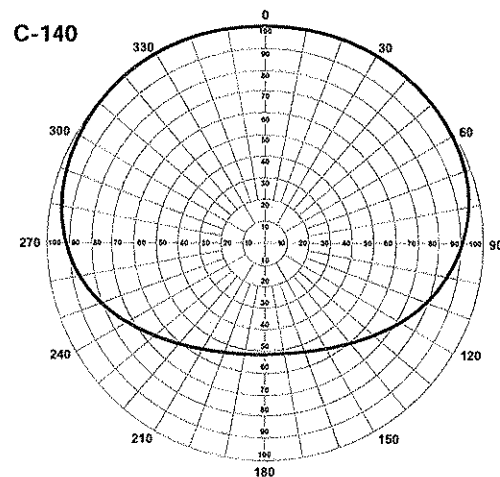
VHF Antenna for single frequency high band operations

- Top or Side Mounting Options
- Low Windload/Economical Design
- Available in Directional Configurations with custom azimuth patterns available
- Elevation Gains from 6.0 (7.78dB) to 12.0 (10.79dB)
- Peak Gains to 22.8 (13.58dB)
- Full Lexan® Radome Standard
- High Input Power Handling
- Ideal for NTSC and DTV Applications
- Custom azimuth patterns available

The THV antenna is designed for directional high-band VHF applications in both top and side-mounted configurations. The THV utilizes the simplicity and reliability of pylon technology. This antenna combines high power handling, pattern diversity (elevation and azimuth), and Dielectric's conservative design approach to produce a superior product for single frequency high band operations.

The THV azimuth pattern can be custom designed to fit a variety of applications, catering to facilities proposing maximization for DTV, those with protection requirements or those wishing to focus the energy towards the market of interest.

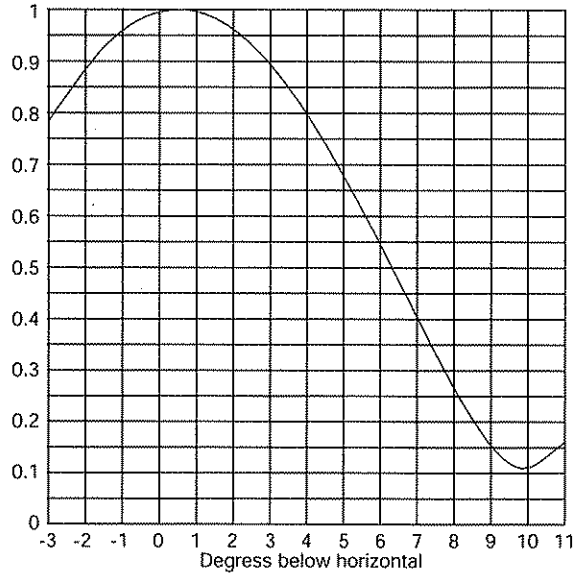
Typical Azimuth Patterns



Standard Elevation Patterns

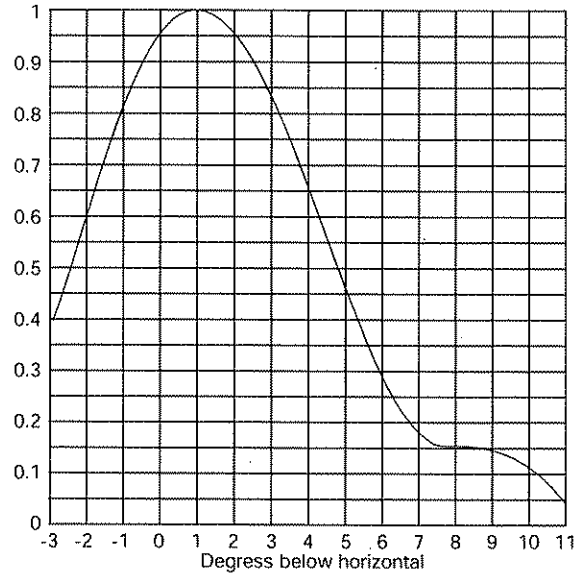
THV-6A

RMS Gain at Main Lobe	6.0 (7.78 dB)	Beam Tilt	0.50 Degrees
RMS Gain at Horizontal	5.9 (7.71 dB)	Drawing #	06V060050
Calculated / Measured	Calculated		



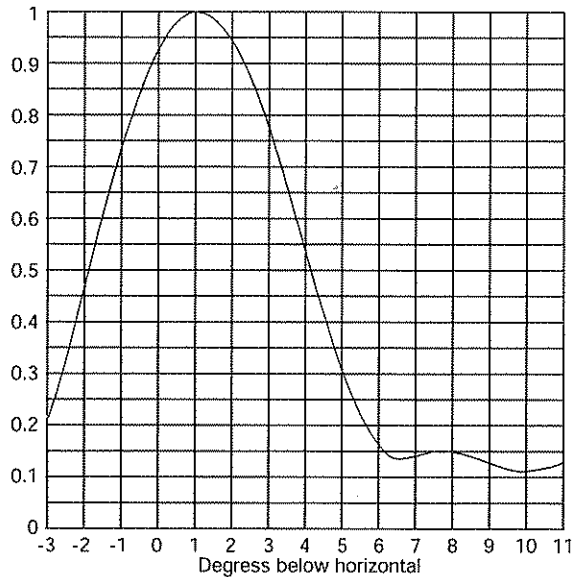
THV-10A

RMS Gain at Main Lobe	10.0 (10.00 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	9.1 (9.59 dB)	Drawing #	10V100100
Calculated / Measured	Calculated		



THV-12A

RMS Gain at Main Lobe	12.0 (10.79 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	10.4 (10.17 dB)	Drawing #	12V120100
Calculated / Measured	Calculated		



Mechanical Specifications

Cardioid Pattern

NOTE: Typical loads for Cardioid Pattern
 x = Channel number
 R = Radomed

H2 - Overall height without lightning protection
 H3 - Centerline of radiation
 H4 - Overall height with lightning protection

Side Mount

	Channel	H2 (ft)	RS-222-C		TIA/EIA-222-F	
			H3 (ft)	W (lbs)	A (ft ²)	CaAc (ft ²)
THV-6Ax-R	7	44.0	24.2	2480	56	52
	8	42.6	23.4	2410	54	51
	9	41.3	22.6	2340	52	49
	10	40.1	21.9	2280	51	48
	11	38.9	21.3	2220	49	46
	12	37.9	20.7	2160	48	45
	13	36.8	20.1	2110	47	44
THV-10Ax-R	7	61.7	30.8	3400	84	79
	8	59.8	29.9	3300	81	76
	9	58.0	29.0	3210	79	74
	10	56.3	28.1	3120	77	72
	11	54.7	27.4	3040	74	70
	12	53.2	26.6	2960	72	68
	13	51.8	25.9	2890	70	66
THV-12Ax-R	7	72.8	36.4	3980	100	94
	8	70.5	35.3	3860	97	91
	9	68.4	34.2	3750	94	88
	10	66.4	33.2	3650	91	85
	11	64.5	32.3	3550	88	83
	12	62.7	31.4	3460	86	80
	13	61.1	30.5	3370	83	78

Top Mount

	Channel	H4 (ft)	H2 (ft)	H3 (ft)	W (lbs)	RS-222-C		TIA/EIA-222-F		Limits
						A (ft ²)	D1 (ft)	CaAc (ft ²)	D1 (ft)	
THV-6Ax-R	7	48.0	44.0	24.2	7900	58	23.9	55	24.3	120 psf or 135 mph bws
	8	46.6	42.6	23.4	7660	57	23.2	54	23.6	
	9	45.3	41.3	22.6	7440	55	22.5	52	22.9	
	10	44.1	40.1	21.9	7230	53	21.8	51	22.3	
	11	42.9	38.9	21.3	7030	52	21.2	49	21.7	
	12	41.9	37.9	20.7	6850	51	20.7	48	21.1	
	13	40.8	36.8	20.1	6670	49	20.1	47	20.5	
THV-10Ax-R	7	65.7	61.7	30.8	10870	87	31.8	82	32.0	50 psf or 90 mph bws
	8	63.8	59.8	29.9	10550	84	30.9	79	31.1	
	9	62.0	58.0	29.0	10240	81	30.0	77	30.2	
	10	60.3	56.3	28.1	9960	79	29.1	75	29.3	
	11	58.7	54.7	27.4	9690	77	28.3	73	28.5	
	12	57.2	53.2	26.6	9430	75	27.6	71	27.8	
	13	55.8	51.8	25.9	9190	73	26.9	69	27.1	
THV-12Ax-R	7	76.8	72.8	36.4	12760	102	37.4	96	37.6	75 mph bws
	8	74.5	70.5	35.3	12370	99	36.2	93	36.4	
	9	72.4	68.4	34.2	12010	96	35.2	91	35.4	
	10	70.4	66.4	33.2	11670	93	34.2	88	34.4	
	11	68.5	64.5	32.3	11350	91	33.2	86	33.4	
	12	66.7	62.7	31.4	11050	88	32.3	83	32.5	
	13	65.1	61.1	30.5	10180	86	31.5	81	31.7	

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www.dielectric.com



Engineering Excellence Since 1942



Sales Tax Questionnaire

Dielectric is responsible for collecting all applicable sales and use taxes. Please help us ensure your order is properly taxed- or exempted- by completing and returning this form as soon as possible.

1. Please provide address information: *(For multiple sites, provide all applicable addresses on an attached document)*

Billing Address:

Shipping Address:

Site Name _____

Site Name _____

Street _____

Street _____

City _____

City _____

State _____ Zip Code _____ - _____

State _____ Zip Code _____ - _____

Accounting Contact (Name/Title) _____ Phone (____) _____ - _____

2. Please indicate the nature of your order: *(check all that apply)*

Digital Equipment

Repair Project (including installation)

Analog Equipment

New Construction Project (including installation)

Initial Digital System

FCC-Licensed Station

3. Are you tax-exempt? Yes No

Note: If claiming exempt status, you must include the appropriate Exemption Certificate with this form. Without a valid certificate, Dielectric will charge applicable sales/use taxes based on your ship-to jurisdiction.

4. Please indicate any special tax considerations or exemptions at the city, county, or district level:

Company/Station _____

Name _____ Signature _____ Date _____

Please submit this Questionnaire to:

Dielectric Communications
22 Tower Road
Raymond, ME 04071
Tax Manager
Fax: (207) 655-8215

For assistance contact:

Scott Emerson
Tax Manager
Phone: (207) 655-8204
Email: scott.emerson@dielectric.spx.com