

ORIGINAL

BEFORE THE
Federal Communications Commission
Washington, DC 20554

In re applications of)	MM Docket No. 93-241
)	
DARRELL BRYAN)	File No. BPH-920109MA
)	
SBH PROPERTIES, INC.)	File No. BPH-920123MD
)	
For a Construction Permit)	
for a New FM Station on)	
Channel 276A (107.3 MHz))	
in Tusculum, Tennessee)	

To: The Hon. John M. Frysiak
Administrative Law Judge

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BRYAN RESPONSE TO SBH PETITION TO REOPEN RECORD
AND RECEIVE EVIDENCE

Darrell Bryan, by his attorney, hereby responds to the Petition to Reopen the Record and Receive Evidence filed by SBH Properties, Inc. ("SBH") in this proceeding. SBH seeks to introduce a new SBH Exhibit 17 as a rebuttal exhibit. The question of allowing rebuttal and surrebuttal was discussed at the hearing and the Presiding Judge instructed SBH to file a motion if it wanted to submit rebuttal evidence. Tr. 173-175. Bryan hereby requests that if the record is reopened for the purpose of receiving SBH Exhibit 17, it is requested that the attached surrebuttal exhibit, Bryan Ex. 10, also be received into evidence. In support whereof, the following is shown:

1. In its petition, SBH seeks to introduce into evidence an additional exhibit consisting

of an engineering statement presenting a propagation path analysis for the Studio-Transmitter Link (STL) system that would be used to connect the transmitter site and the studio if Bryan uses his current AM station building as his FM studio location.

2. In his original budget, Bryan had included rent for a studio location. The application had indicated that the studio location was to be determined. At hearing, Mr. Bryan testified that at the present time his intention is to retain his AM studio building and to locate his FM studios at that location and to rent studio space to the buyer if the buyer desires to stay at that location. Mr. Bryan was asked if he had investigated whether or not there is line-of-sight from the transmitter location to the AM studio building for the microwave STL. Mr. Bryan stated that he had not yet checked this point., but that as an alternative, he could either relay from another tower that he owns, or, use telephone lines for which he had prices for stereo lines. TR. 101.

3. The purpose of the proffered SBH exhibit is to demonstrate that to obtain line-of-sight from the transmitter site to the AM studio building would require a 134 ft. tower at the studio because intervening ground elevation is 1660 feet AMSL and there is a ridge topped with trees. The sole aim of the SBH exhibit is to enable SBH to argue that additional STL equipment is necessary for a relay tower.

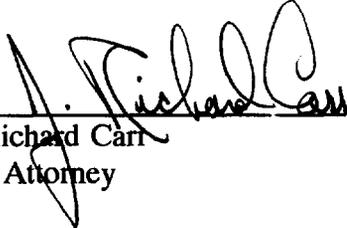
4. Attached hereto is Bryan Ex. 10, an engineering statement of Richard Mertz, consulting engineer, responding to SBH Ex. 17 in which he explains that a studio to transmitter link is the "equipment that operates as a system to LINK or convey the program material (music or voice) from the studio to a remote transmitter site". He states that when the two locations are close a simple pair of audio cables is sufficient, and that "[d]edicated telephone lines (or loops) are capable of providing full quality stereo service". He states that if there is a line of sight

problem caused by terrain between the transmitter site and the AM studio building which affects microwave STL use, a simple alternative would be use of stereo telephone lines instead of microwave STL. Mr. Bryan testified to telephone lines as an alternative. Tr. 101. Mr. Mertz contacted the telephone company in the Greeneville, Tennessee area and independently verified that the cost of installing stereo lines would be \$900 and the monthly charge would be \$737.10 per month. He points out that use of the telephone lines would eliminate the need for the STL package which would reduce the overall equipment costs by \$7197.80. In summary, the STL line-of-sight issue has no adverse impact on the Bryan equipment costs.

WHEREFORE, Bryan does not oppose receipt of SBH Exhibit No. 17 into evidence if the attached Bryan Ex. 10 is also received into evidence.¹

Respectfully submitted,

DARRELL BRYAN

By: 
J. Richard Carr
His Attorney

P.O. Box 70725
Chevy Chase, Maryland 20813-0725

September 21, 1994

¹ Counsel has retained the original and one copy of the attached Exhibit for transmission to the Dockets Branch for inclusion with the record.

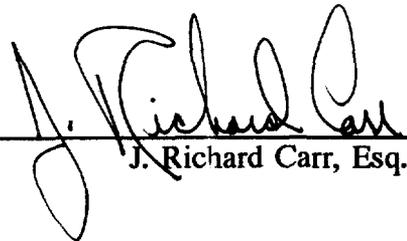
CERTIFICATE OF SERVICE

I, J. Richard Carr, hereby certify that copies of the foregoing "BRYAN RESPONSE TO SBH PETITION TO REOPEN RECORD AND RECEIVE EVIDENCE" were sent via first class mail, postage prepaid, or as otherwise indicated, to each of the following on this 21st of September 1994:

The Hon. John M. Frysiak*
Administrative Law Judge
Federal Communications Commission
2000 L Street, NW
Room 223
Washington, DC 20554

Timothy K. Brady, Esq. **
P.O. Box 986
Brentwood, TN 37024
Counsel to SBH Properties, Inc.

Robert Zauner, Esq.
Hearing Branch
Enforcement Division
Federal Communications Commission
2025 M Street, NW
Suite 7212
Washington, DC 20554



J. Richard Carr, Esq.

* Hand Delivery

ATTACHMENT

**BRYAN EXHIBIT NO. 10
MM DOCKET NO. 93-241**

Engineering Statement

prepared for
Darrell Bryan
in response to the
PETITION TO REOPEN THE RECORD AND RECEIVE EVIDENCE

This engineering statement has been prepared on behalf of Mr. Darrell Bryan ("Bryan") applicant for a new FM Station to operate on Channel 276A in Tusculum, Tennessee, in response to a *Petition To Reopen The Record and Receive Evidence* ("Petition") advanced by SBH Properties, Inc. ("SBH"). On July 26, 1994 a hearing was held as part of the comparative hearing process at which SBH questioned Bryan's cost estimates. SBH raised engineering issues above and beyond those normally considered when preparing a cost estimate as required by the FCC in Form 301.

Background

At the July hearing, Bryan testified that he intended to locate the studio for the proposed station in a building that he already owns and in which he presently operates WSMG(AM). Bryan's original cost estimates, prepared several years ago to show that adequate funds were available to construct the proposed station, included estimated costs for a microwave (Part 74) *Studio to Transmitter Link* (STL). At the hearing, SBH's attorney raised the question of whether Bryan's intended choice of a studio location would permit proper operation of a microwave STL because of intervening terrain. On September 12, 1994, SBH, by its attorney, petitioned the presiding judge to reopen the record and accept further evidence from SBH's technical advisor that attempts to advance SBH's arguments. This statement

will demonstrate that SBH's arguments are questionable, that Bryan has alternative means of providing STL capabilities, and that the Bryan cost estimate is technically justified.

What Is An STL ?

Before replying to SBH's petition request, it is important to explore the concept of an STL. An STL is a *Studio to Transmitter Link*. It is the equipment that operates as a system to LINK or convey the program material (music or voice) from the studio to a remote transmitter site. It can also be used to convey signals to control the transmitter. The concept is much like having a home stereo system in the den of a home and wiring remote speakers in another room. The speaker wiring is much like an STL in that it conveys music from one room to another.

What Comprises An STL ?

An STL can be as simple as an audio cable or as elaborate as multi-hop microwave radio system. If a transmitter is located in a building behind a studio, a simple pair of audio cables is more than adequate for use as an STL. If the distances are greater, then a broadcaster has several alternatives, including microwave, special equalized telephone lines dedicated for broadcast use, fiber optic lines, or other systems. Dedicated telephone lines (or loops) are capable of providing full quality stereo service across the street or across the country. This alternative is particularly attractive when a broadcaster-owned microwave STL is not feasible due to terrain, cost or lack of available frequencies. Some broadcasters use

a combination of telephone company provided loops with a microwave STL.

Discussion

Bryan's original estimate was prepared and submitted to the FCC for the purpose of demonstrating that sufficient funds were available to construct the proposed station. The items listed in the original estimate do not represent a hard and fast determination of the final design or equivalent equipment selection for the proposed station. In the normal course of the construction of a broadcast facility, as with any construction project, field conditions or equipment availability often cause the builder to make modifications to the design. This is particularly true when a delay of several years is encountered in the FCC approval process, during which time equipment costs and common carrier tariffs may change.

SBH has repeatedly alleged that Bryan lacks sufficient funding to cover the proposed construction and operation of the station. Final station construction details, such as full engineering studies for the implementation of an STL, are normally addressed after the FCC has issued a construction permit to avoid unnecessary costs. Since several alternatives are available, STL system considerations would not normally be decisional in the selection of a studio site, location of a transmitter site, or the preparation of cost estimates.

SBH's STL Path Evaluation

SBH's engineering exhibit indicates that the intervening terrain will not permit proper implementation of a microwave STL. Bryan has conducted an

independent review of the exhibit, and concurs that intervening terrain will attenuate the proposed microwave STL signal. However, it is noted that the terrain features along the path will attenuate the signal to some degree, but will not necessarily prevent the use of a microwave STL.¹

The above notwithstanding, Bryan has now concluded that another STL method can be used for a lower up-front cost than the microwave STL. Bryan now believes, based on data from the local telephone company, that the capital and first three months outlay for a dedicated telephone loop based STL system will be considerably less than the microwave system.

Ms. Ann Moore, a representative of the United Telephone-Southeast, the local telephone company, was contacted by both Bryan and the undersigned. Ms. Moore was asked to provide cost estimates for the installation and operation of two 15 kHz (full fidelity) broadcast loops with stereo conditioning² and a 4 wire data circuit³. The cost to install this set of dedicated telephone loops as an STL is \$900. This is \$7197.80 less than the capital investment required to purchase a microwave STL system. The monthly cost for the telephone company provided service is \$737.10 per month.

¹It is well known that radio signals will diffract across terrain features, causing attenuation. Only in severe cases is that attenuation sufficient to block the signal entirely.

²"Stereo Conditioning" is a telephone company construction technique that is required when two broadcast loops are used for transmission of stereo programs.

³The data circuit specified is for interconnection of transmitter remote control equipment.

Table 1 is an updated estimate showing revised costs. Also attached as Attachments 1 and 2 are copies of confirming letters from Ms. Moore outlining the cost estimates quoted.

Conclusion

The line-of-site problem for the microwave STL is easily solved by the use of dedicated telephone loops which lowers the overall cost of equipment. These lower costs give further proof of Bryan's financial qualifications. Additionally, these cost reductions provide confirmation of the reasonableness of Bryan's original cost estimates.

Certification

The undersigned hereby certifies under penalty of perjury that the foregoing statement was prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief. Mr. Mertz is a principal in the firm of Suffa & Cavell, Inc., and has submitted numerous technical materials to the Federal Communications Commission. His qualifications are a matter of record with that agency. Mr. Mertz has been a radio engineer for over 25 years.

original signed by

Richard H. Mertz

TABLE 1 - TUSCULUM, TENNESSEE FM STATION - REVISED TO RELFECT CHANGE FROM MICROWAVE STL TO TELCO STL

Item Number	Original Budget Equipment Description	Quantity	Original Estimated Cost	Updated Estimate Equipment Description	Quantity	List Price	Extended List Price	Price Source
1	Transmitter/Exciter	1	\$16,000.00	QEI Exciter	1	\$2,996.00	\$2,996.00	RFS
				Henry 6 kW RF amplifier	1	\$20,000.00	\$20,000.00	RFS
2	Antenna System (6 Bay)	1	\$4,500.00	4 Bay Shively 6813NX	1	\$5,900.00	\$5,900.00	Shively
3	Transmission Line	1	\$450.00	Andrew HJ5-50 7/8" Heliax cable	280 ft	\$7.54	\$2,111.20	AND
4	Connectors		\$100.00	Andrew 75 AR 7/8" EIA Flange	1	\$128.00	\$128.00	AND
				Andrew 75 AG 7/8" Gas Barrier Flange	1	\$190.00	\$190.00	AND
				Andrew 1860A 7/8" to 1 5/8" adapter	1	\$208.00	\$208.00	AND
				Andrew 42396A-5 Hanger kits	9	\$41.00	\$369.00	AND
				Andrew 204989-2 Grounding kits	3	\$29.00	\$87.00	AND
				Andrew 19256B Hoisting grip	1	\$43.50	\$43.50	AND
				Andrew 31670-2 Round member adapter	12	\$25.00	\$300.00	AND
5	BE Audio Console	1	\$1,595.00	Ramsa WR-5208	1	\$1,750.00	\$1,750.00	NE
6	Orban Optimod	1	\$3,500.00	Hnat/Hindes UltraMod	1	\$2,995.00	\$2,995.00	RFS
7	ITC Stereo Play Carts	3	\$4,000.00	Tapecaster 900PS Stereo Cart Machines	3	\$1,195.00	\$3,585.00	NE
8	Various length carts	120	\$425.00	Fidelipac	120	\$5.10	\$612.00	RFS
9	Technics Turntables	2	\$1,250.00	Technics SL1200 MKII Turntables	2	\$449.95	\$899.90	NE
10	Technics Amps	2	\$400.00	Shure M64 Phono preamps	2	\$125.00	\$250.00	NE
				Stanton 500A MKII Phono cartridges	2	\$37.50	\$75.00	NE
11	EV Microphone & Amp	1	\$825.00	EV 635A Microphone	1	\$145.00	\$145.00	NE
				Fostex 6301 Amplified speakers (pair)	1	\$350.00	\$350.00	NE
12	Moseley STL PKG (used)	1	\$5,500.00	15 kHz "loop" installation	2	\$333.00	\$666.00	UNITED
13	Scala Paraflector Ant (used)	1	\$500.00	Data Circuit installation	1	\$234.00	\$234.00	UNITED
14	Transmission line		\$200.00		0	\$0.00	\$0.00	
					0	\$0.00	\$0.00	
					0	\$0.00	\$0.00	
					0	\$0.00	\$0.00	
					0	\$0.00	\$0.00	
15	Gentner VRC Remote Control	1	\$3,860.00	Gentner VRC-2000	1	\$3,359.00	\$3,359.00	NE
				Gentner command relay unit	1	\$679.00	\$679.00	NE
				Gentner setup software	1	\$99.00	\$99.00	NE

TABLE 1 - TUSCULUM, TENNESSEE FM STATION - REVISED TO RELFECT CHANGE FROM MICROWAVE STL TO TELCO STL

Item Number	Original Budget Equipment Description	Quantity	Original Estimated Cost	Updated Estimate Equipment Description	Quantity	List Price	Extended List Price	Price Source
16	Belar stereo monitor	1	\$879.00	Belar FMS-2 Stereo modulation monitor	1	\$1,650.00	\$1,650.00	NE
				Belar FMM-2 FM Modulation monitor	1	\$1,450.00	\$1,450.00	NE
17	Tascam 32 Reel Recorder	1	\$1,200.00	Tascam 32 Reel Recorder	1	\$1,799.00	\$1,799.00	NE
18	ITC Delta recorder (used)	1	\$2,500.00	Tapecaster 900 RPS Stereo cart recorder	1	\$1,995.00	\$1,995.00	NE
19	Distribution Amplifier	1	\$425.00	Radio Systems DA-16	1	\$425.00	\$425.00	NE
18	8' Equipment rack	1	\$80.00	Equipment rack	1	\$555.00	\$555.00	RFS
19	IGM Automation		\$7,500.00	Digital automation	1	\$9,515.00	\$9,515.00	RFS
TOTAL Vendor items list price							\$65,420.60	
Cost with expected 10% package discount							\$58,878.54	
20	Generators	2	\$9,000.00	Generators	1	\$9,000.00	\$9,000.00	Bryan-note 1
21	Installation (generators)		\$8,000.00	Generator installation	1	\$8,000.00	\$8,000.00	Bryan
22	Equipment installation		\$1,500.00	Equipment installation	1	\$1,500.00	\$1,500.00	Bryan
23	Studio furniture		\$800.00	Studio Furniture	1	\$800.00	\$800.00	Bryan
24	Office furniture		\$500.00	Office furniture	1	\$500.00	\$500.00	Bryan
25	300 foot tower	1	\$18,000.00	Rohn 300 foot tower installed	1	\$16,000.00	\$16,000.00	Stone
26	Transmitter building	1	\$5,000.00	Transmitter building	1	\$3,800.00	\$3,800.00	Stone
Mr. Bryan's original estimated cost of construction			\$98,489.00	Current estimated construction costs			\$98,478.54	
							Percent change from original estimate	-0.01%

NOTES: 1. Only one generator has been priced. Bryan already owns the second generator.
2. Bryan owns an EBS monitor so none was listed.

Pricing Source Legend

AND	Andrew U.S. Price List for Catalog 35	Shively	Shively price list from consultant's catalog
NE	Northeast Broadcast Lab, Inc. Catalog #2	Bryan	Mr. Darrell Bryan's original estimate of costs
RFS	RFS Specialties Mid-Atlantic Office	Stone	Mr. Walter Stone, American Aviation, Inc.
UNITED	United Telephone-Southeast		

ATTACHMENT 1

United Telephone - Southeast

*112 210th Street
Greenville, Tennessee 37743*

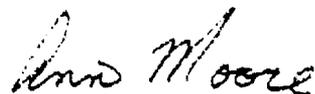
September 1, 1994

W S M G Radio
Attn: Darrell Bryan
P. O. Box 737
Greeneville, TN 37743
Fax No. 638-3180

Dear Mr. Bryan:

An equalized radio loop operating at 50 to 15000 hertz broadcast capability from Snapps Ferry Rd. in Greeneville, TN to Horse Creek Rd. in Limestone, TN would cost you \$342.00 per month plus tax and the installation to demarc on both ends will be \$333.00. If we need to do any inside wiring on either end, it will cost a little extra. Also, I will need a nearby number on Limestone location or a 911 address if 911 is available in Limestone. Please allow at least fourteen (14) work days for installation especially if we need to set any poles or run cable to Limestone location.

Sincerely,



Ann Moore
Access Service Coordinator

AKM:b

ATTACHMENT 2

United Telephone – Southeast

*112 Sixth Street
Bristol, Tennessee 37620*

September 16, 1994

W S M G Radio

Attn: Richard Mertz

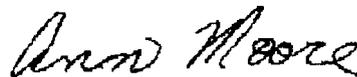
Fax No. 703/591-0115

Telephone No. 703/591-0110

Dear Mr. Mertz:

A 4-wire analog data circuit that can operate at 9600 bauds per minute will cost approximately \$53.10 per month with the installation charges being \$234.00 to the demarcation point. Inside wiring would be \$68.00 and time that installer is at both sites doing the wiring would bill to you at \$60.00 per hour with minimum of \$30.00. The reason for an approximate monthly charge is because of not knowing exact location in Limestone in order to verify mileage. As stated in my previous letter to Mr. Darrell Bryan dated 9/01/94, I will need a nearby number or a 911 address in Limestone in order to install circuits. Please allow at least fourteen (14) work days for installation especially if we need to set poles or run cable to Limestone location.

Sincerely,



Ann Moore

Access Service Coordinator

AKM:bcm