

363 Engr file  
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Arent, Fox, Kintner, Plotkin & Kahn

Washington Square 1050 Connecticut Avenue, N.W.  
Washington, D.C. 20036-5339

RECEIVED

FEB 11 1988

Gerald E. Oberst, Jr.  
(202) 857-6036

February 11, 1988

Federal Communications Commission  
Office of the Secretary

Mr. H. Walker Feaster  
Acting Secretary  
Federal Communications Commission  
1919 M St., N.W.  
Washington, D. C. 20554

Attn: Mass Media Bureau  
FM Radio Branch

RECEIVED  
FEB 16 1988  
FM EXAMINERS

Re: Application for License and Program Test  
Authority: Station WPLH, Tifton, GA

Dear Mr. Feaster:

Submitted on behalf of the Georgia Public Telecommunications Commission is an original and two copies of an application for license for Station WPLH, Tifton, GA.

Pursuant to Section 73.1620(a)(2), the applicant requests program test authority because the station is authorized for a directional antenna. Antenna proof of performance and a surveyor certificate are submitted in support of this request.

The applicant's construction was authorized in construction permit File No. BPED-850618MD, with a request for extension of time pending in File No. BPED-871202JE. Because the applicant is a noncommercial educational entity, no fee is applicable.

Arent, Fox, Kintner, Plotkin & Kahn

Mr. H. Walker Feaster  
February 11, 1988  
Page 2

Please direct any questions to the undersigned  
counsel for the applicant.

Sincerely,

*Gerald E. Oberst, Jr.*

Gerald E. Oberst, Jr.

Enclosures

cc: Ms. Rebecca Brown (w/enc.)

FEB 11 1988

FILED-880211KC

APPLICATION FOR NEW BROADCAST STATION LICENSE  
(Carefully read instructions before filling out Form  
RETURN ONLY FORM TO-FCC)

For Commission Use Only  
File No.

SECTION I: General Data

Legal Name of Applicant

orgia Public Telecommunications Commission

Mailing Address

1540 Stewart Ave S W

City

Atlanta

State

GA

ZIP Code

30310

Telephone No.

(Include Area Code)  
404-656-5979

1. Facilities authorized by construction permit

This application is for:

☐

Commercial

☒

Noncommercial

☐

AM

☒

FM

☐

TV

Call Letters

Community of License

Construction Permit

Modification of Construction

Expiration Date of last

WPLH

Tifton, Ga.

File No.  
BPED-850618 MD

Permit File No(s).  
extension pending on  
file

Construction Permit  
extension pending

2. Is the station now operating pursuant to automatic program test authority in accordance with Section 73.1620 of the Commission's Rules?

☐

YES

☒

NO

If No, explain. Station has directional antenna, is conducting equipment test (73.1610 a)

3. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?

☒

YES

☐

NO

If No, state exceptions.

4. Apart from changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would cause any statement or representation contained in the construction permit application to be now incorrect?

☐

YES

☒

NO

If Yes, explain.

THE APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by licensee or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)  
THE APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations, and all exhibits are a material part hereof and are incorporated herein.

CERTIFICATION

I certify that the statements in this application are true, complete and correct to the best of my knowledge and belief, and are made in good faith.

Signed and dated this 10 day of February, 1988

GA Public Telecommunications  
Name of Applicant Commission

Frank Bugg

Signature

Deputy Director

Title

WILLFUL FALSE STATEMENTS MADE  
ON THIS FORM ARE PUNISHABLE  
BY FINE AND IMPRISONMENT, U.S.  
CODE, TITLE 18, SECTION 1001.

## Section II-B

## License Application Engineering Data - FM Broadcast

Name of Applicant

**Georgia Public Telecommunications Commission**

1. Facilities authorized in construction permit

**CH216, 91.1MHz****30Kw, 76M. HAAT.**

Call Sign

**WPLH**Frequency **91.1MHz**

Effective radiated power in kilowatts

Horizontal **30** Horizontal maximum **30**Vertical **30** Vertical maximum **30**

Antenna height above average terrain

Horizontal **76** metersVertical **76** meters

File No. of construction permit

**BPED - 850618-MD**

2. Station location

State

**Georgia**

City or Town

**Tifton**

3. Transmitter location

State

**Georgia**

County

**Tift**

City or town

**Tifton**

Street Address

(or other identification)

**Zion Hope Church Rd.  
near Hwy. IIS 41**

4. Main studio location

State

**Georgia**

County

**Fulton**

City or town

**Atlanta**

Street Address

**1540 Stewart Ave., SW**

Remote Control point location

State

**Georgia**

City or town

**Pelham**

Street Address (or other identification)

**Hwy. 93, West of Pelham (WABW-TV)**

6. Operating constants:

D.C. plate current in last  
radio stage, in amperes**1.35**Transmitter power output,  
in kW by indirect method**5Kw**Applied D.C. plate voltage of last  
radio stage, in volts**4700**RF transmission line meter  
reading**100%**

7. Antenna

Antenna make and type No.

**Jampro JSLP-6 (DA)**

Number of Sections

**6**

Power gain

**6**Height in meters of antenna radiation center above ground and mean sea level: **53 meters AGL,****172 meters****AM SL**

Geographical Coordinates of antenna (to nearest second)

North latitude **31 ° 29 ' 30 "**West longitude **83 ° 31 ' 49 "**

Description of antenna supporting structure

**Triangular, guyed, steel tower**Overall height in meters above  
ground of antenna supporting  
structure (without obstruction  
lighting)**74 M.**

8. Transmission line

Make

**Cablewave**

Type

**HCC-158-50J**

Description

**Corrugated, copper, 50 ohm, air Dielectric**

Size: (nominal inside transverse dimension) in centimeters

**39.67**

Length in meters

**55**Rated efficiency in percent for  
this length**92.5**

9. Have equipment performance measurements been taken in accordance with Section 73.1590 of the Commission's Rules, demonstrating compliance with the Commission's transmission standards and transmission system requirements, and are these measurements available for submission to the Commission upon request?

If No, explain.

☒ YES☐ NO

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit.

**Effective radiated power is 27.7Kw horizontal, 23.3Kw vertical max.**

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Date February 9, 1988

404-656-3759  
Telephone No. (Include Area Code)

John W. Vance  
Name (Please Print or Type)

J. W. Vance  
Signature (Check appropriate box below)

1540 Stewart Ave., SW  
Address (Include ZIP Code)

Atlanta, Georgia 30310

☐ Technical Director

☐ Registered Professional Engineer

☐ Consulting Engineer

☐ Chief Operator

☒ Other (specify)

Director Special Projects

DATE: 11/25/87

CIRCULARLY POLARIZED DIRECTIONAL  
FM CP ANTENNA FOR:

ANTENNA            H        V  
GAIN IN (dB) 7.78    7.02

STATION: WPLH-FM  
LOCATION: Tifton, GA  
MODEL NUMBER: JSLP-6 (DA)  
FREQUENCY AND ERP: 91.1 Mhz 30 KW  
INPUT POWER FOR ERP: 5 KW  
ANTENNA BOOM HEADING: 30 Degrees

HPOL        VPOL

CERTIFICATION

RMS OF PATTERN:    0.53        0.46

THIS CERTIFICATION ALONG WITH THE ACCOMPANYING TECHNICAL SPECIFICATION SHEET, ANTENNA MOUNTING SKETCH, AND AZIMUTH AND ELEVATION PATTERNS CERTIFY THE CONSTRUCTION AND MEASUREMENT OF THE JAMPRO FM CP ANTENNA TO THE STATION'S REQUIREMENTS AS MEASURED AT THE JAMPRO ANTENNAS SITE IN SACRAMENTO, CALIFORNIA. THE FOLLOWING IS AN OUTLINE OF CONSTRUCTION METHODS FOLLOWED, PATTERN MEASUREMENTS, INSTALLATION REQUIREMENTS, RECOMMENDED MAINTENANCE AND EQUIPMENT USED.

CONSTRUCTION

A STANDARD CP FM ANTENNA MODEL WAS USED, AND PARASITIC REFLECTORS WERE ADDED TO EACH BAY TO CREATE THE REQUIRED DIRECTIONAL PATTERN. FROM EXPERIENCE AND BY FURTHER MEASUREMENTS THESE ELEMENTS WERE ADJUSTED AS TO POSITION AND LENGTH UNTIL THE FINAL CONFIGURATION WAS DETERMINED AND THE PATTERN REQUIREMENTS WERE MET. THESE ADDITIONAL ELEMENTS ARE STEEL, HOT DIPPED GALVANIZED, AND EITHER BOLTED OR WELDED IN PLACE. MEASUREMENTS TO ESTABLISH THEIR LOCATION EXACTLY ARE SHOWN IN THE ANTENNA MOUNTING SKETCH.

MEASUREMENT

THE FULL SCALE ANTENNA WAS MOUNTED ON AN EXACT DUPLICATE OF ITS FINAL SUPPORT AT THE STATION. WE WERE CAREFUL TO DUPLICATE CONDUITS, CABLES, AND ANYTHING PECULIAR TO THIS MOUNTING. THIS WAS THEN PLACED ON A TURNTABLE AT THE JAMPRO ANTENNA RANGE. THIS DIRECTIONAL ANTENNA WAS USED FOR RECEIVING THE RADIATION FROM A TRANSMITTING ANTENNA THAT IS ELEVATED 25 FEET ABOVE GROUND AND LOCATED AT A DISTANCE OF 7000 FEET. THIS TRANSMITTING ANTENNA IS CAPABLE OF BEING ROTATED TO EITHER HORIZONTAL OR VERTICAL POLARIZATION. THE SIGNAL GENERATOR FREQUENCY WAS ACCURATELY SET TO STATION FREQUENCY BY USE OF A FREQUENCY COUNTER. A SPECTRUM ANALYZER WAS USED TO CONTINUOUSLY MEASURE FIELD STRENGTH AS THE DIRECTIONAL ANTENNA WAS ROTATED. FIELD STRENGTH AT EACH AZIMUTH WAS THEN PLOTTED USING A SCIENTIFIC ATLANTA PLOTTER.

### INSTALLATION

THE ANTENNA MUST BE INSTALLED IN EXACTLY THE MANNER IN WHICH IT WAS MEASURED AT THE FACTORY. THIS IS SHOWN IN DETAIL ON THE ANTENNA MOUNTING SKETCH, INCLUDING THE AZIMUTH BEARING OF THE MAIN BOOM OF THE ELEMENTS. THIS BOOM MUST BE VERIFIED BY A SURVEYOR AT THE SITE WHEN INSTALLATION IS BEING COMPLETED. GOOD ENGINEERING PRACTICE SHOULD BE FOLLOWED IN ANY DETAILS NOT COVERED BY SPECIFIC INSTRUCTIONS.

### MAINTENANCE

ANNUAL OR REGULAR INSPECTION SHOULD BE MADE OF AN ANTENNA SYSTEM. AT THIS TIME TIGHTNESS OF U-BOLTS OR OTHER FASTENINGS SHOULD BE ROUTINELY CHECKED. ANY DETERIORATION OF THE ANTENNA DUE TO LIGHTNING OR OTHER CAUSES SHOULD BE PROMPTLY REPAIRED. OTHER THAN THESE INSTRUCTIONS, AND MAINTAINING THE PATTERN INITIALLY ACHIEVED.

### EQUIPMENT

MODEL: 3000 Wavetec Signal Generator, Serial #66479, Calibrated 5/84

8555B H.P. Spectrum Analyzer, Serial #1829A04558, Calibrated 3/84

Tuned Cavity Dipole

Scientific Atlanta Plotter 1581-4-7-9, Serial #471229, Calibrated 4/83

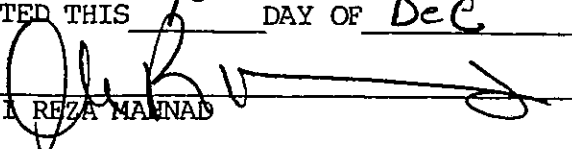
### CONCLUSION

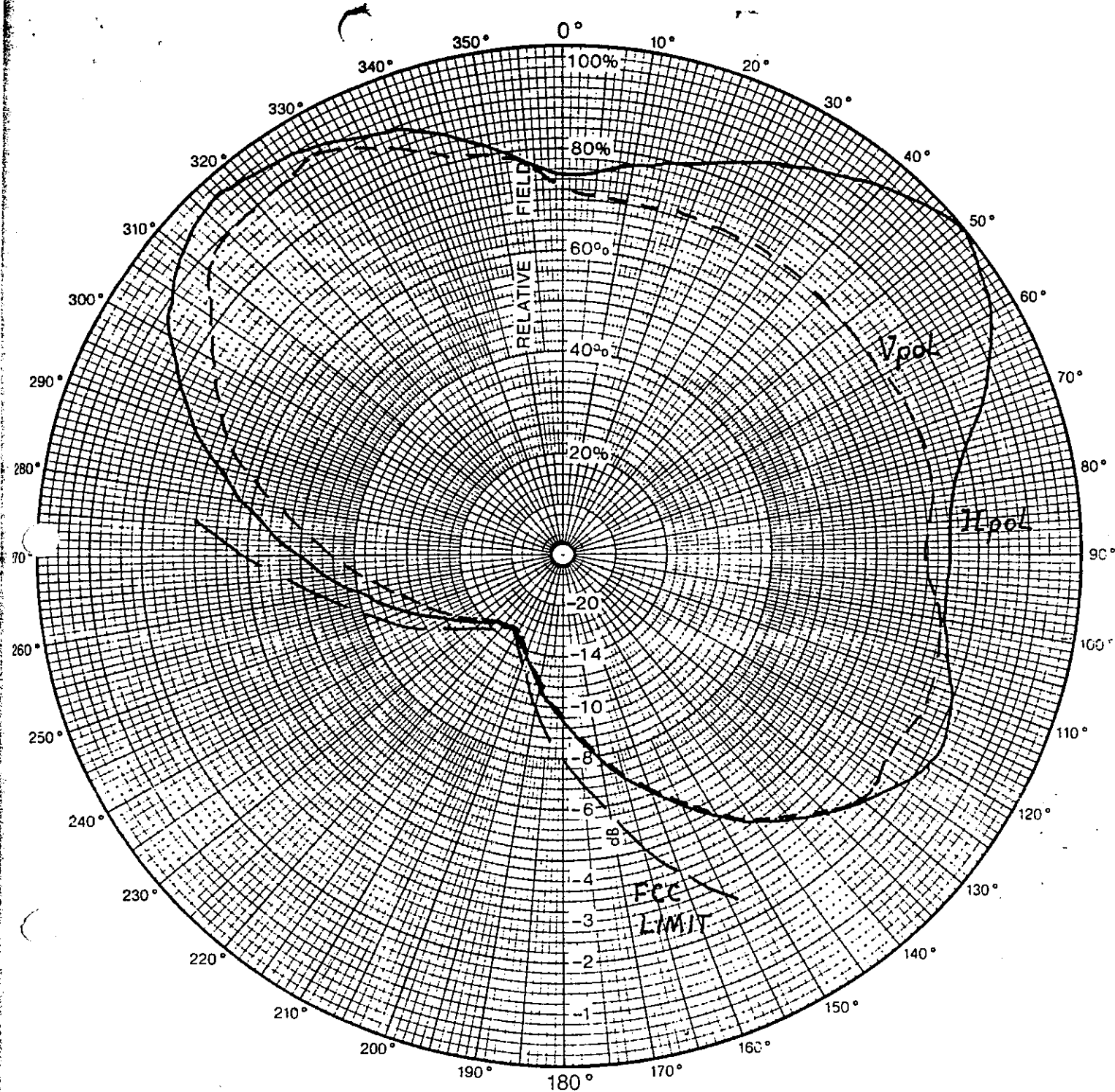
IN THE DEVELOPMENT OF THIS PATTERN JAMPRO ANTENNAS, INC OBSERVED KNOWN REQUIREMENTS OF THE FCC AS STATED ON THE STATION CONSTRUCTION PERMIT. SUCH REQUIREMENTS AS THE MAXIMUM TO MINIMUM RATIO NOT EXCEEDING 15 dB, AND THE RATE OF CHANGE OF RADIATION NOT EXCEEDING .2 PER DEGREE OF AZIMUTH WERE OBSERVED. IN ADDITION, THE RMS OF THE VERTICALLY POLARIZED PATTERN DOES NOT EXCEED THE RMS OF THE HORIZONTALLY POLARIZED PATTERN, AND IF APPLICABLE TO THIS PERMIT, NOWHERE DOES THE VERTICALLY POLARIZED FIELD EXCEED THE HORIZONTALLY POLARIZED FIELD WITHIN THE ACCURACY OF THE CALIBRATED RANGE.

GAIN FIGURES AND REQUIRED INPUT POWER TO ACHIEVE STATION ERP, AS WELL AS OTHER DETAILS, ARE TO BE FOUND ON THE ACCOMPANYING PAGES.

THESE ADJUSTMENTS AND TESTS WERE PERFORMED UNDER THE SUPERVISION OF ALI REZA MAHNAD, DIRECTOR OF ENGINEERING, JAMPRO ANTENNAS, INC.

EXECUTED THIS <sup>8<sup>th</sup></sup> DAY OF Dec, 19 87

BY   
ALI REZA MAHNAD



## Azimuth pattern

Customer	WPLH-FM	Type Number	3802
Date	11/25/87	Frequency	91.1
		Major Lobe Gain	6.0
		RMS Gain	3.0

Notes:





# JAMPRO ANTENNAS TABULATION OF AZIMUTH PATTERN

WPLH                      TIFTON, GA.                      HPOL

AZIM	REL FIELD	ERP KW	ERP DBK	F.S.FIELD (mv/m)
0	0.750	16.88	+12.27	565.0
10	0.780	18.25	+12.61	587.0
20	0.820	20.17	+13.05	618.0
30	0.880	23.23	+13.66	663.0
40	0.940	26.51	+14.23	708.0
50	1.000	30.00	+14.77	753.0
60	0.950	27.08	+14.33	715.0
70	0.860	22.19	+13.46	648.0
80	0.770	17.79	+12.50	580.0
90	0.750	16.88	+12.27	565.0
100	0.750	16.88	+12.27	565.0
110	0.800	18.25	+12.61	602.0
120	0.820	20.17	+13.05	618.0
130	0.760	17.33	+12.39	572.0
140	0.690	14.18	+11.55	520.0
150	0.600	10.80	+10.33	452.0
160	0.490	7.20	+8.58	369.0
170	0.400	4.80	+6.81	301.0
180	0.320	3.07	+4.87	241.0
190	0.260	2.03	+3.07	195.0
200	0.210	1.32	+1.22	158.0
210	0.180	0.97	-0.12	135.0
220	0.180	0.97	-0.12	135.0
230	0.210	1.32	+1.22	158.0
240	0.260	2.03	+3.07	195.0
250	0.320	3.07	+4.87	241.0
260	0.400	4.80	+6.81	301.0
270	0.500	7.50	+8.75	376.0
280	0.620	11.53	+10.62	487.0
290	0.740	16.43	+12.15	557.0
300	0.860	22.19	+13.46	648.0
310	0.930	25.95	+14.14	700.0
320	0.950	27.08	+14.33	715.0
330	0.930	25.95	+14.14	700.0
340	0.890	23.76	+13.76	670.0
350	0.820	20.17	+13.05	618.0
360	0.750	16.88	+12.27	565.0

DATE: 12-1-87

CALCULATED VALUES AT 45 DEG POINTS:

(45) 0.970 (135) 0.725 (225) 0.195 (315) 0.940

# JAMPRO ANTENNAS TABULATION OF AZIMUTH PATTERN

WPLH TIFTON, GA. VPOL

AZIM	REL FIELD	ERP KW	ERP DBK	F.S.FIELD (mv/m)
0	0.730	15.99	+12.04	550.0
10	0.710	15.12	+11.80	535.0
20	0.710	15.12	+11.80	535.0
30	0.710	15.12	+11.80	535.0
40	0.710	15.12	+11.80	535.0
50	0.700	14.70	+11.67	527.0
60	0.710	15.12	+11.80	535.0
70	0.730	15.99	+12.04	550.0
80	0.720	15.55	+11.92	542.0
90	0.700	14.70	+11.67	527.0
100	0.740	16.43	+12.16	557.0
110	0.760	17.33	+12.39	572.0
120	0.740	16.43	+12.16	557.0
130	0.760	17.33	+12.39	572.0
140	0.680	13.87	+11.42	512.0
150	0.600	10.80	+10.33	452.0
160	0.500	7.50	+8.75	376.0
170	0.400	4.80	+6.81	301.0
180	0.320	3.07	+4.87	241.0
190	0.260	2.03	+3.07	195.0
200	0.220	1.45	+1.62	165.0
210	0.180	0.97	-0.12	135.0
220	0.180	0.97	-0.12	135.0
230	0.200	1.20	+0.79	150.0
240	0.240	1.73	+2.38	180.0
250	0.290	2.52	+4.02	218.0
260	0.350	3.67	+5.65	263.0
270	0.440	5.81	+7.64	331.0
280	0.550	9.07	+9.58	414.0
290	0.680	13.87	+11.42	512.0
300	0.750	16.88	+12.27	565.0
310	0.880	23.23	+13.66	663.0
320	0.900	24.30	+13.85	678.0
330	0.910	24.84	+13.95	685.0
340	0.840	21.17	+13.26	633.0
350	0.800	19.20	+12.83	602.0
360	0.730	15.99	+12.04	550.0

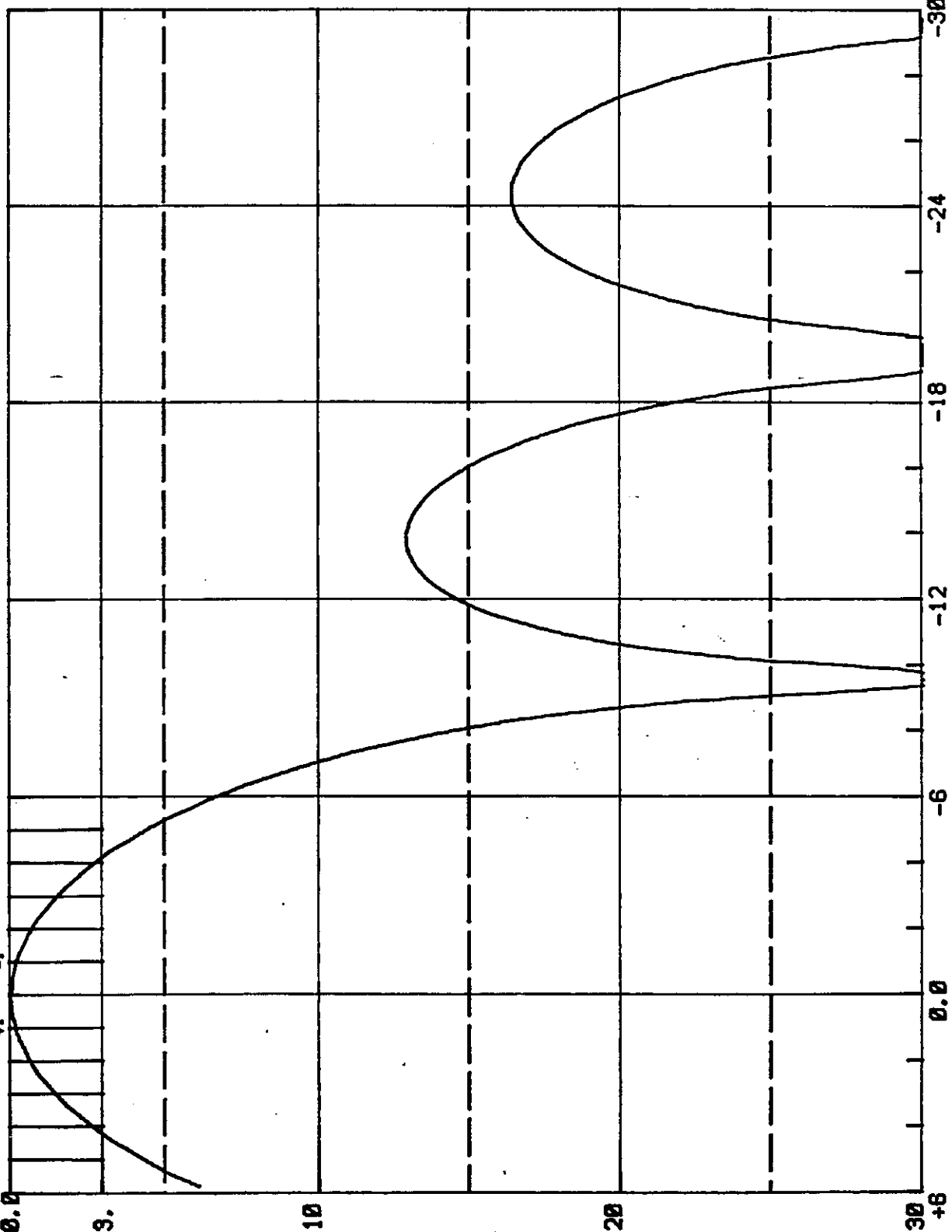
DATE: 12-1-87

CALCULATED VALUES AT 45 DEG POINTS:

(45) 0.705 (135) 0.720 (225) 0.190 (315) 0.890

# ELEVATION PATTERN AT ALL AZIMUTH HEADING(S)

(dB)



Station:

.VRLH-FM...

CH./Freq.:

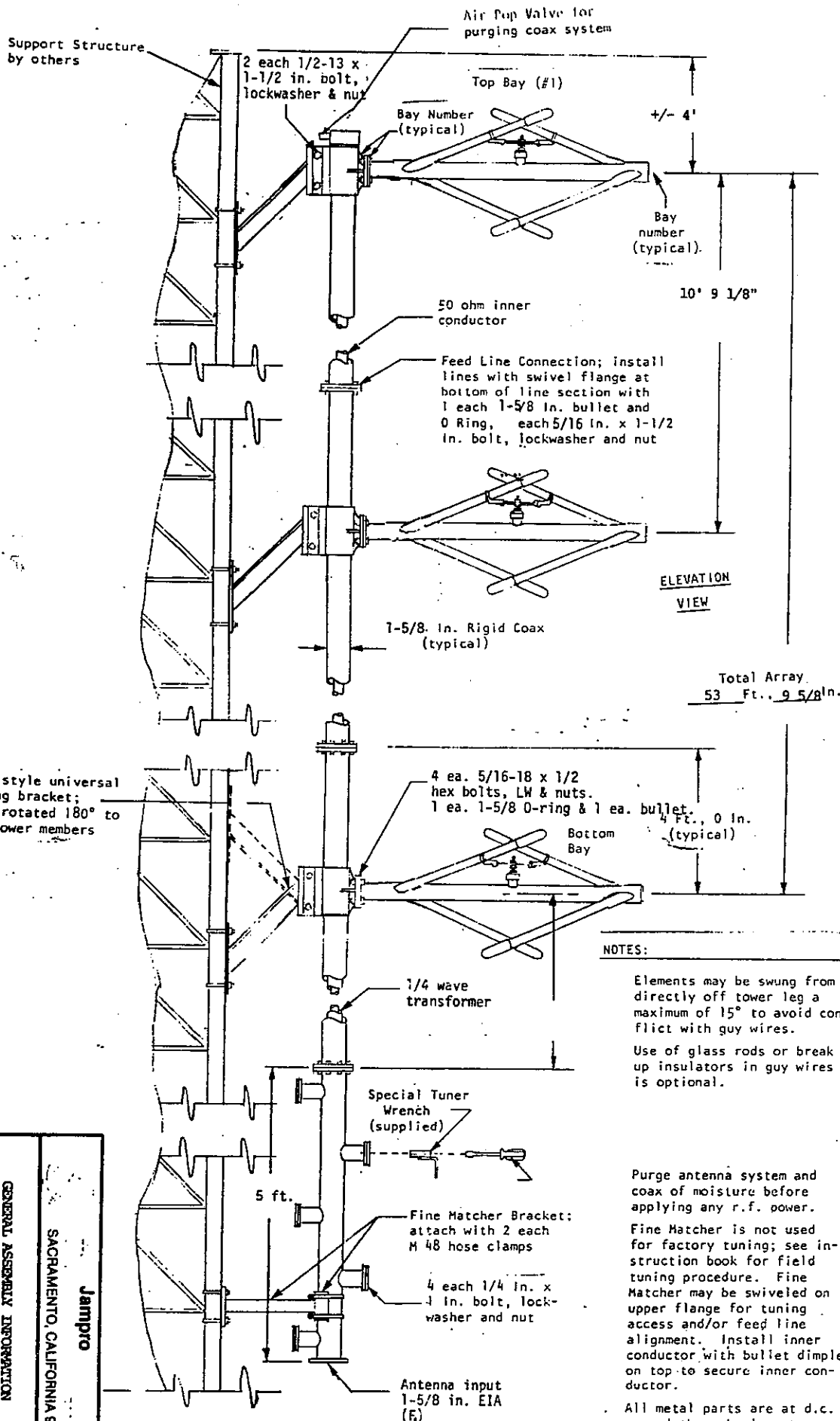
91.1

Antenna type:

.JSCP-6....

No. of Bays: 6

Comments:



# **GENERAL ASSEMBLY INFORMATION**

**Jampiro**

**SACRAMENTO, CALIFORNIA 95828**

**CUSTOMER: WFLA-TV**

**LOCATION: TIFTON, GA**

**PROJ. NO. 91.9**

**DATE: 12-3-8**

**DRAWN BY: JDO**

**APPROVED BY: JDO**

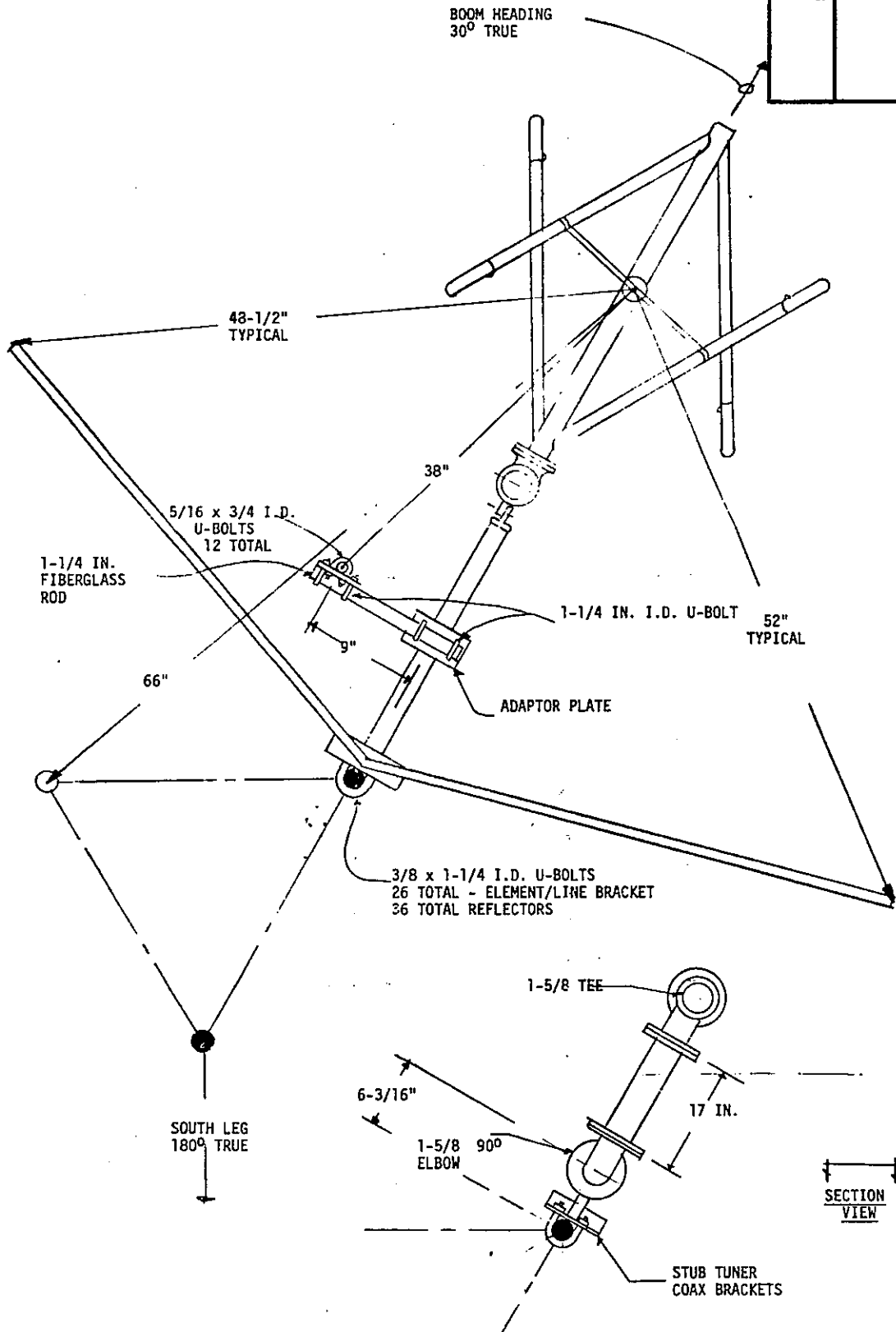
**DATE: 12-3-8**

Jampro

SACRAMENTO, CALIFORNIA 95828

TOP VIEW

CUSTOMER	WPLH-EN	INFO	91.1
LOCATION	TIFTON, GA	PROPOSAL	CALL WPLH
SCALE		APPROVED BY	DATE 12-1-82
DRAWN BY	OLVER	TEST MADE FOR	

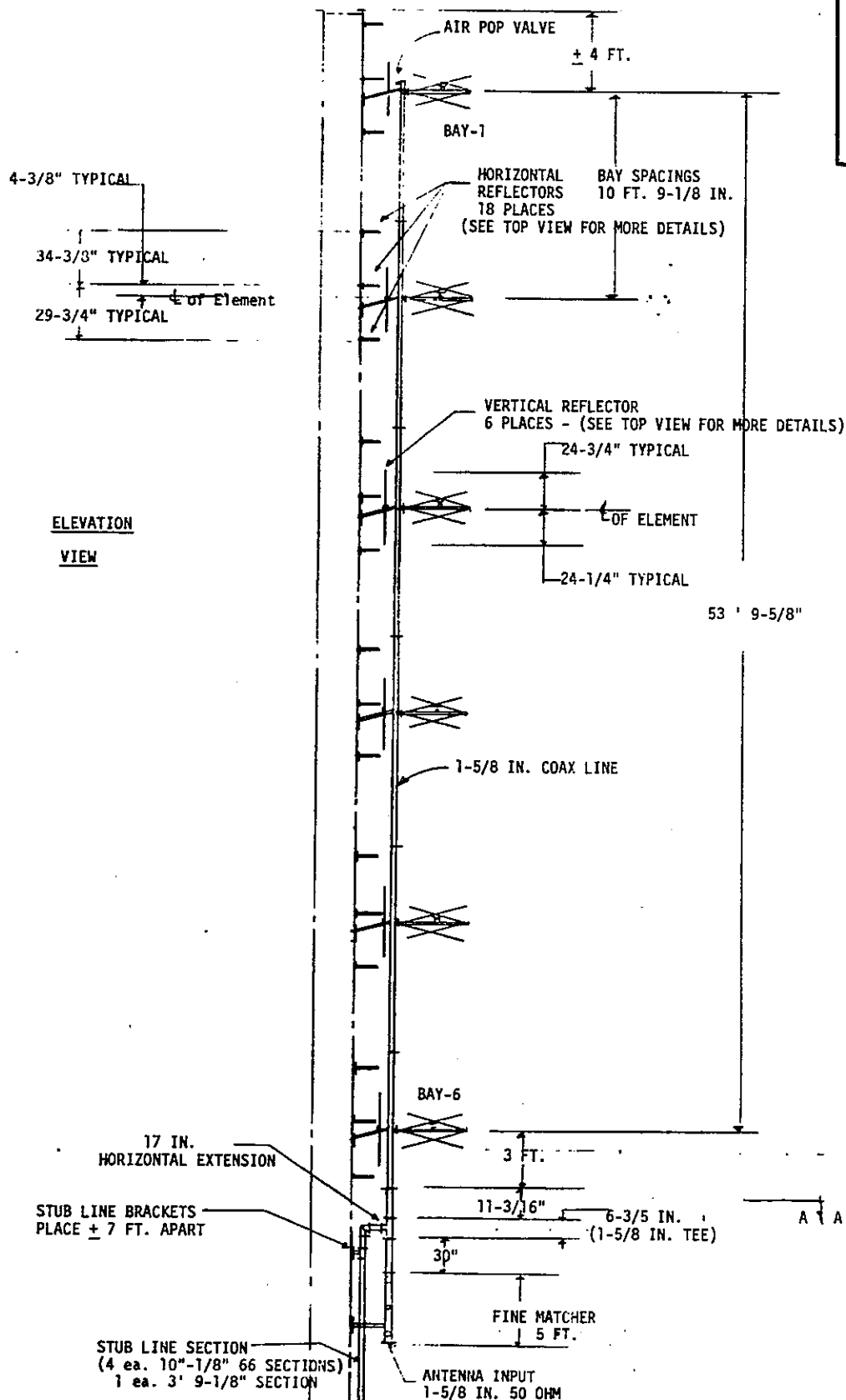


Jampro

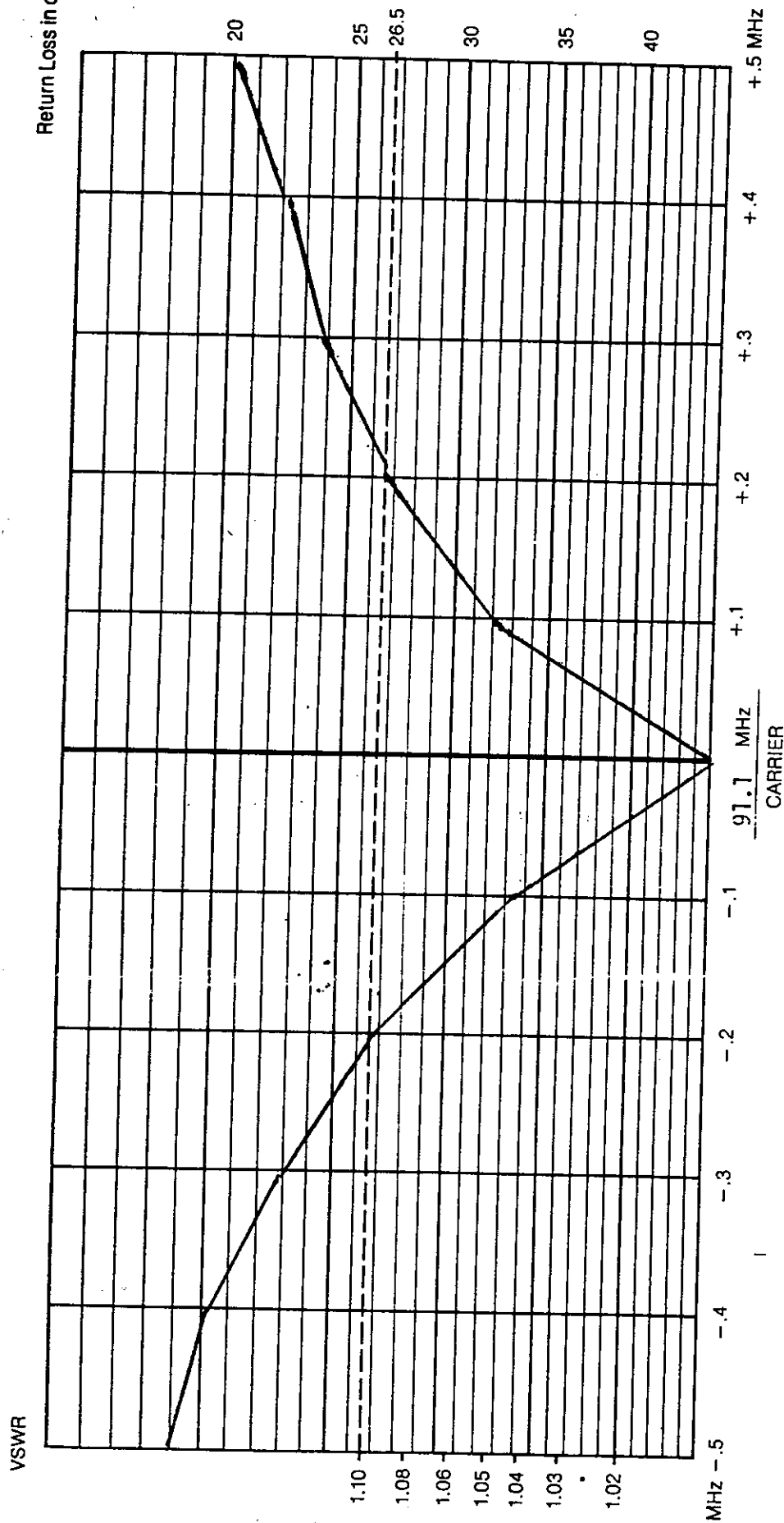
SACRAMENTO, CALIFORNIA 95828

ANTENNA MOUNTING DRAWING

CUSTOMER	NPLH-FM	PROJ. NO.	97.1
LOCATION	TIFFIN, GA	CALL	NPLH
SCALE		APPROVED BY	Part 12-1-87
DRAWN BY	OLVER	DIST. MADE FOR	



# Measured VSWR



Customer **WPLH-FM**

Date **12-3-87**

Type Number **3802**

Test Tower \_\_\_\_\_ Mounting \_\_\_\_\_

Engineer \_\_\_\_\_

Test Conditions **COMPLETE ANTENNA MOUNTED ON TEST TOWER**



# AMERICOM TOWER SERVICE CORPORATION

## LETTER OF CERTIFICATION

Mr. John Vance  
Georgia Public TV  
1540 Stuart S.W.  
Atlanta GA 30310

December 30, 1987  
RE:TEL FM Azimuth

REFERENCE: FM ANTENNAE..TIFTON GEORGIA

Dear Mr. Vance:

The Americom tower crew..at the Tifton GA site..mechanically set the FM antennae in line with the University's designated azimuth. The approximate date of the alignment was December 10, 1987.

Cordially,



John Teachman  
Pres.



# LEROY R. HALL

P. O. BOX 406  
CAMILLA, GA. 31730  
PHONE 912-336-0700

February 1, 1988

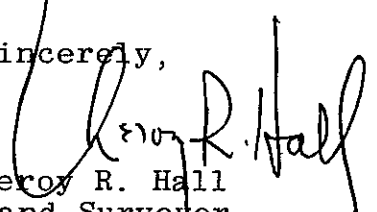
Mr. John Vance  
Georgia Public Television  
1540 Stuart Ave. SW  
Atlanta, Georgia 30310

Dear Mr. Vance:

This letter is a certification that I located two (2) reference points for antenna alignment on the site of WPLH-FM (tower) , Tifton, Georgia, in December of 1987.

The two (2) reference points are approximately two hundred (200) feet from the base of the tower with true azimuths of 30 degrees 00 minutes 00 seconds and 234 degrees 00 minutes 00 seconds. These were determined by solar observations with a Dietzgen Ten Second Theodolite.

Sincerely,



Leroy R. Hall  
Land Surveyor

LRH/nw