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2018 MAY -8 PM 12:35

ANDREW S. KERSTING
REGULATORY COUNSEL

(404) 260-6761
ANDY.KERSTING@CUMULUS.COM

May 3, 2018

By Hand

Accepted / Filed

MAY -3 2018

Federal Communications Commission
Office of the Secretary

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
Attn: Audio Division

Re: **Application for Broadcast Station License**
Radio License Holding CBC, LLC
Station KAAY(AM), Little Rock, AR
Facility ID 33253

Dear Ms. Dortch:

Transmitted herewith in triplicate behalf of Radio License Holding CBC, LLC, licensee of radio station KAAY(AM), Little Rock, Arkansas, is an application on FCC Form 302-AM seeking a new broadcast station license. A method of moments computer analysis of the directional operation of station KAAY has been submitted herewith pursuant to Section 73.151(c) of the Commission's rules.

Please note that the associated filing fee for this application has been paid via the FCC Fee Filer. Accordingly, proof of payment of that filing fee has been included with this submission.

Should any questions arise concerning this application, please contact the undersigned.

Sincerely,

Andy

Andrew S. Kersting
Regulatory Counsel

Enclosure

Agency Tracking ID:PGC3091086
Authorization Number:285674
Successful Authorization -- Date Paid: 5/3/18
FILE COPY ONLY!!

READ INSTRUCTIONS CAREFULLY BEFORE PROCEEDING (1) LOCKBOX #979089	FEDERAL COMMUNICATIONS COMMISSION **REMITTANCE ADVICE** **FORM 159** PAGE NO 1 OF 1	APPROVED BY OMB 3060-059 SPECIAL USE FCC USE ONLY

SECTION A - Payer Information

(2) PAYER NAME (if paying by credit card, enter name exactly as it appears on your card)	(3) TOTAL AMOUNT PAID (dollars and cents)
Cumulus Media Inc.	**$1505.00**

(4) STREET ADDRESS LINE NO. 1
3280 Peachtree Road, NW
(5) STREET ADDRESS LINE NO. 2
Suite 2200

(6) CITY	(7) STATE	(8) ZIP CODE
Atlanta	**GA**	**30305**

(9) DAYTIME TELEPHONE NUMBER (INCLUDING AREA CODE)	(10) COUNTRY CODE (IF NOT IN U.S.A.)
404-9490700	**US**

FCC REGISTRATION NUMBER (FRN) AND TAX IDENTIFICATION NUMBER (TIN) REQUIRED

(11) PAYER (FRN)	(12) FCC USE ONLY
0009621244	

IF PAYER NAME AND THE APPLICANT NAME ARE DIFFERENT, COMPLETE SECTION B
IF MORE THAN ONE APPLICANT, USE CONTINUATION SHEETS (FORM 159-C)

(13) APPLICANT NAME
Radio License Holding CBC, LLC
(14) STREET ADDRESS LINE NO. 1
3280 Peachtree Road, NW
(15) STREET ADDRESS LINE NO. 2
Suite 2200

(16) CITY	(17) STATE	(18) ZIP CODE
Atlanta	**GA**	**30305**

(19) DAYTIME TELEPHONE NUMBER (INCLUDING AREA CODE)	(20) COUNTRY CODE (IF NOT IN U.S.A.)
404-9490700	**US**

FCC REGISTRATION NUMBER (FRN) AND TAX IDENTIFICATION NUMBER (TIN) REQUIRED

(21) APPLICANT (FRN)	(22) FCC USE ONLY
0019721638	

COMPLETE SECTION C FOR EACH SERVICE, IF MORE BOXES ARE NEEDED, USE CONTINUATION SHEET

(23A) FCC Call Sign/Other ID	(24A) Payment Type Code(PTC)	(25A) Quantity
KAAY	**MMR**	**1**
(26A) Fee Due for (PTC)	(27A) Total Fee	FCC Use Only
$700.00	**$700.00**	
(28A) FCC CODE 1	(29A) FCC CODE 2	
33253	**FCCForm302-AM**	

(23B) FCC Call Sign/Other ID	(24B) Payment Type Code(PTC)	(25B) Quantity
KAAY	**MOR**	**1**
(26B) Fee Due for (PTC)	(27B) Total Fee	FCC Use Only

$805.00	**$805.00**	
(28B) FCC CODE 1 **33253**	(29B) FCC CODE 2 **FCCForm302-AM**	

Federal Communications Commission
Washington, D. C. 20554

Approved by OMB
3060-0627
Expires 01/31/98

FOR FCC USE ONLY

Accepted / Filed

MAY - 3 2018

Federal Communications Commission
Office of the Secretary

FCC 302-AM
APPLICATION FOR AM BROADCAST STATION LICENSE

(Please read instructions before filling out form.

FOR COMMISSION USE ONLY
FILE NO. BMML-20180503ADM

SECTION I - APPLICANT FEE INFORMATION

1. PAYOR NAME (Last, First, Middle Initial)

Radio License Holding CBC, LLC

MAILING ADDRESS (Line 1) (Maximum 35 characters)
3280 Peachtree Road, NW

MAILING ADDRESS (Line 2) (Maximum 35 characters)
Suite 2200

CITY	STATE OR COUNTRY (If foreign address)	ZIP CODE
Atlanta	GA	30305

TELEPHONE NUMBER (include area code)	CALL LETTERS	OTHER FCC IDENTIFIER (If applicable)
(404) 949-0700	KAAY	33253

2. A. Is a fee submitted with this application? [✓] Yes [ ] No

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section

[ ] Governmental Entity [ ] Noncommercial educational licensee [ ] Other (Please explain):

C. If Yes, provide the following information:

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter fee amount due in Column (C).

(A) FEE TYPE CODE	(B) FEE MULTIPLE	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY
M M R	0 0 0 1	$ 700.00	

To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)	(B)	(C)	FOR FCC USE ONLY
M O R	0 0 0 1	$ 805.00	

	TOTAL AMOUNT REMITTED WITH THIS APPLICATION	FOR FCC USE ONLY
ADD ALL AMOUNTS SHOWN IN COLUMN C, AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.	$ 1,505.00	

SECTION II - APPLICANT INFORMATION		
1. NAME OF APPLICANT Radio License Holding CBC, LLC		
MAILING ADDRESS 3280 Peachtree Road, NW, Suite 2200		
CITY Atlanta	STATE GA	ZIP CODE 30305

2. This application is for:

☑ Commercial ☐ Noncommercial

☑ AM Directional ☐ AM Non-Directional

Call letters	Community of License	Construction Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of Last Construction Permit
KAAY	Little Rock, AR	Not Applicable	Not Applicable	Not Applicable

3. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620? The station is operating pursuant to an STA (File No. BSTA-20101208AEP, as extended, inter alia, by BESTA-20171102ABJ).
If No, explain in an Exhibit.

☐ Yes ☑ No

Exhibit No.

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

If No, state exceptions in an Exhibit.

☐ Yes ☐ No

Exhibit No. N/A

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

If Yes, explain in an Exhibit.

☐ Yes ☐ No

Exhibit No. N/A

6. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)?

If No, explain in an Exhibit.

☐ Yes ☐ No

☑ Does not apply

Exhibit No.

7. Has an adverse finding been made or an adverse final action been taken by any court or administrative body with respect to the applicant or parties to the application in a civil or criminal proceeding, brought under the provisions of any law relating to the following: any felony; mass media related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?

If the answer is Yes, attach as an Exhibit a full disclosure of the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and the disposition of the litigation. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 U.S.C. Section 1.65(c), the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and the date of filing; and (ii) the disposition of the previously reported matter.

☐ Yes ☑ No

Exhibit No.

8. Does the applicant, or any party to the application, have a petition on file to migrate to the expanded band (1605-1705 kHz) or a permit or license either in the existing band or expanded band that is held in combination (pursuant to the 5 year holding period allowed) with the AM facility proposed to be modified herein?

☐ Yes ☑ No

If Yes, provide particulars as an Exhibit.

Exhibit No.

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 use of the same, whether by license or otherwise, and requests and 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 that all the exhibits are a material part hereof and are incorporated herein as set out in full in

CERTIFICATION

1. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☑ Yes ☐ No

2. 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.

Name	Signature	
Richard S. Denning	Richard S. Denning	
Title	Date	Telephone Number
Senior Vice President & General Counsel	5/3/2018	(404) 949-0700

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

TECHNICAL EXHIBIT

5971 B NEW JESUP HIGHWAY • BRUNSWICK, GA 31523 • P.O. BOX 24466 • ST. SIMONS ISLAND, GA 31522-7466
912-638-8028 • FAX 912-275-8869
www.grahambrock.com

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant

Radio License Holding CBC, LLC

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☒ Station License ☐ Direct Measurement of Power

1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
				Night	Day
KAAY		1090	U	50.0	50.0

2. Station location

State	City or Town
Arkansas	Little Rock

3. Transmitter location

State	County	City or Town	Street address (or other identification)
AR	Pulaski	Little Rock	5401 McDonald Road

4. Main studio location

State	County	City or Town	Street address (or other identification)
AR	Pulaski	Little Rock	700 Wellington Hills Road

5. Remote control point location (specify only if authorized directional antenna)

State	County	City or Town	Street address (or other identification)
AR	Pulaski	Little Rock	700 Wellington Hills Road

6. Has type-approved stereo generating equipment been installed? ☐ Yes ☒ No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68? ☒ Yes ☐ No ☐ Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed. Exhibit No.

8. Operating constants:

RF common point or antenna current (in amperes) without modulation for night system	RF common point or antenna current (in amperes) without modulation for day system
32.45	28.63

Measured antenna or common point resistance (in ohms) at operating frequency		Measured antenna or common point reactance (in ohms) at operating frequency	
Night	Day	Night	Day
50.0	61.0	0.0	-J188

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day
Twr #1 West	-0.3	-----	0.455	-----		
Twr #2 Center	0.0	-----	1.000	-----		
Twr #3 East	-0.2	-----	0.457	-----		

Manufacturer and type of antenna monitor: Potomac 1901-3

9. Description of antenna system (If directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator	Overall height in meters of radiator above base insulator, or above base, if grounded.	Overall height in meters above ground (without obstruction lighting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized, describe fully in an Exhibit.
Uniform cross section guyed steel tower	Twrs #1,2,3 152	Twrs # 1 & 3 155 Twrs #2 154.8	Twr #1 155.6 Twr #2 155.7 Twr #3 156.0	Exhibit No.

Twr#1 West Twr#2 Center Twr#3 East

Excitation ☐ Series ☐ Shunt

Twr #1 (West) ASRN 1054671
Twr #2 (Center) ASRN 1049577
Twr #3 (East) ASRN 1054670

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	West Longitude
34 ° 36 ' 00 "	921 ° 13 ' 30 "

If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Exhibit No.

Also, if necessary for a complete description, attach as an Exnibit a sketch of the details and dimensions of ground system. Exhibit 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?

None.

11. Give reasons for the change in antenna or common point resistance.

Licensing under computer analysis

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.

Name (Please Print or Type)	Signature (check appropriate box below)
R. Stuart Graham	
Address (include ZIP Code)	Date
Graham Brock, Inc. P. O. Box 24466 St. Simons Island GA 31527	April 5, 2018
	Telephone No. (Include Area Code)
	912-638-8028

☐ Technical Director

☐ Registered Professional Engineer

☐ Chief Operator

☒ Technical Consultant

☐ Other (specify)

APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

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APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

TECHNICAL STATEMENT

This Technical Statement was prepared on behalf of Radio License Holding CBC, LLC ("RLH"), licensee of radio station KAAY, 1090 kHz, Little Rock, Arkansas. RLH is operating KAAY under Special Temporary Authority (BESTA-20171102ABJ) following theft of the station's ground system. RLH has replaced the ground system and updated the system phasing system. This application seeks program test authority and a station license with computer analyzed directional operation under the provisions of §73.151(c) of the Commission's rules. The calculations shown herein are for the non-directional daytime power of 50.0 kilowatts from the center tower and the directional nighttime power of 50.0 kilowatts from the existing three radiating towers.

The towers are identified using the following number sequence: Tower #1 (west), Tower #2 (center) and Tower #3 (east). The towers and ground system were constructed in accordance with the KAAY construction permit and license.

Information is provided herein to demonstrate the directional antenna parameters for the authorized directional pattern is in accordance with the requirements of §73.151(c) of the Commission's rules. The system has been adjusted to produce antenna monitor parameters

within +/- 5 percent in ratio and +/- 3 degrees in phase of the modeled values, as required by the rules.

We have tried to be as accurate as possible in the preparation of this application. All information contained in this application was extracted from the CDBS database. We assume no liability for omissions or errors in this source. Should there be any questions concerning the information contained herein, we welcome the opportunity to discuss the matter by phone at 912-638-8028 or by email at rsg@grahambrock.com.

APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

EXHIBIT #1

Analysis of Tower Impedance Measurements to Verify Method of Moments Model

Tower base impedance measurements were made at the tower base using an Array Solutions PowerAim 1000 Network Analyzer SN 1104, in a calibrated setup. The other tower(s) were short circuited at the same points where impedance measurements were made ("reference points"), in compliance with §73.151(c)(1) of the Commission's rules.

Circuit calculations were performed to relate the Method of Moments modeled impedances of the tower feed points, as shown on the following pages. The XL shown for each tower, which was calculated for the assumed stray inductance, was less than 10 uH, in compliance with §73.151(c)(1)(vii) of the Commission's rules.

The modeled and measured base impedances at the ATU output jacks, with the other towers short circuited at their ATU output jacks agree within +/- 2 ohms and +/- 4 percent for resistance, as required by §73.151(c)(2) of the Commission's rules.

APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

EXHIBIT #1A

KAAY Little Rock AR
1090 50 kW DAN

Day/Night

TOWER	L(uH) - series	X(L)	Z(tower-modeled)	Z(measured)	Z(tower-measured) *
1 (northwest)	6.44	+j 44.1	64.40 -j 241.39	64.40 -j 197.30	64.40 -j 197.30
2 (center)	6.61	+j 45.2	62.00 -j 236.24	62.00 -j 191.00	62.00 -j 191.00
3 (southeast)	6.29	+j 43.1	63.90 -j 240.30	63.90 -j 197.20	63.90 -j 197.20

From Moment Method Calculated Values - Other Towers Shorted
Tower Impedance Tolerance Resistance & Reactance +/- 2 Ohms and +/- 4%

Tower	Resistance	(+/- ohms)	High	Low
1 (northwest)	64.40	4.58	69.0	59.8
2 (center)	62.00	4.48	66.5	57.5
3 (southeast)	63.90	4.56	68.5	59.3

	Reactance	(+/- ohms)	High	Low
1 (northwest)	241.39	11.66	253.0	229.7
2 (center)	236.24	11.45	247.7	224.8
3 (southeast)	240.30	11.61	251.9	228.7

* - Z(tower-measured): Resistance = Z(ATU-measured)
Reactance = Z(ATU-measured) - X(L)

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1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

EXHIBIT #2

Derivation of Operating Parameters for Directional Antenna

The Method of Moments model of the array, following verification with the measured individual short circuited base impedances, was utilized for directional antenna calculations. Calculations were made to determine the complex voltage values for sources located at ground level under each tower of the array to produce current moment sums for the towers that, when normalized, equated to the theoretical field parameters of the authorized directional antenna pattern. The tower currents were calculated using these voltage sources. Twenty segments were used for each tower so that the modeled current pulse at the base of the tower would correspond to the toroid pick-up at the output of the ATU. As the tower structures, sampling pickups, and sampling lines are identical, the antenna monitor ratios and phases corresponding to the theoretical parameters were calculated directly from the modeled tower currents.

APPLICATION FOR STATION LICENSE
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1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
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EXHIBIT #2A

Daytime Non-Directional
Nighttime Directional
Operating Parameters

KAAY Little Rock AR
1090 50 kW DAN
DAY - NON-DIRECTIONAL TOWER #2

TOWER	Current Magnitude (amperes)
1 (northwest)	--
2 (center)	28.63
3 (southeast)	--

Day Tower Base Impedance			Tower Base Current	Transmitter Power Output
Resistance	61.00	Ohms	28.63	50,000
Reactance	-188.00	+/- J Ohms		

1090 50 kW Night DAN
Night - REFERENCE TOWER #2

TOWER	Current Magnitude (amperes)	Current Phase (degrees	Moment Method Calculations of Antenna Monitor Values		Antenna Monitor As Adjusted	
			Ratio	Phase	Ratio	Phase
1 (northwest)	10.14	0.00	0.455	-0.3	0.455	-0.5
2 (center)	22.31	0.31	1.000	0.0	1.000	0.0
3 (southeast)	10.19	0.10	0.457	-0.2	0.456	-0.4

Night Common Point Impedance			Common Point Current	Transmitter Power Output
Resistance	50.00	Ohms	32.45	52,650
Reactance	0.00	+/- J Ohms		

Night Operating Parameter Tolerances

Tower	Ratio (5%)		Phase (3°)	
	(+)	(-)	(+)	(-)
1 (northwest)	0.477	0.432	2.7	-3.3
2 (center)	1.050	0.950	3.0	-3.0
3 (southeast)	0.480	0.434	2.8	-3.2

APPLICATION FOR STATION LICENSE
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EXHIBIT #3

Method of Moments Model Details for Towers Driven Individually

The array of towers was modeled using Westberg Engineering PhasorPro 2.1.1.21. One wire was used to represent each tower. The electrical height of each tower was specified using degrees at the operating frequency of 1090 kHz (1.09 MHz), as taken from the theoretical directional antenna specifications. Each tower was modeled using twenty segments. As the towers are 199.0° in electrical height, the segment length is 9.05 electrical degrees, in compliance with §73.151(c)(1)(iii) of the Commission's rules.

The individual tower's characteristics were adjusted to provide a match of its modeled impedances, when presented to a circuit model, that included branches representing the stray inductances at the tower bases, with the base impedances that were measured at tower base, while the other tower(s) in the array were short circuited. The Method of Moments model assumed loads at ground level having the reactance that was calculated for them using the base circuit models for the short circuited towers of the array.

Each tower's modeled height, relative to its physical height, falls within the required range of 75% to 125%, in compliance with §73.151(c)(1)(v) of the Commission's rules. Each tower's modeled radius falls within the range of 80% to 150% of the radius of a circle having a

circumference equal to the sum of the widths of the tower sides, which is in compliance with §73.151(c)(1)(i) of the Commission's rules. The array consists of identical, uniform cross section towers having a face of 30 inches.

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LITTLE ROCK, ARKANSAS
APRIL 2018

EXHIBIT #3A

KAAY Little Rock AR
1090 50 kW DAN

Day/Night

Tower	Physical Height (degrees)	Velocity Factor Adjustment	Modeled Height (degrees)	Modeled Percent of Height	Physical Equivalent Radius (inches)	Modeled Radius (inches)	Percent of Equivalent Radius
1 (west)	199	0.91012	218.65	109.9%	14.324	13.856	96.7%
2 (center)	199	0.90596	219.66	110.4%	14.324	13.856	96.7%
3 (east)	199	0.90917	218.88	110.0%	14.324	13.856	96.7%

	Tower Height Tolerance >75% <125%			Tower Radius Tolerance >80% <150%		
Tower	Height	Minimum	Maximum	Actual	Minimum	Maximum
1 (northwest)	199	149.3	248.8	14.324	11.459	21.486
2 (center)	199	149.3	248.8	14.324	11.459	21.486
3 (southeast)	199	149.3	248.8	14.324	11.459	21.486

Tower	Face Size (inches)	Equivalent Radius (inches)
1 (northwest)	30	14.3239
2 (center)	30	14.3239
3 (southeast)	30	14.3239

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1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

EXHIBIT #4

Method of Moments Model Details for Directional Antenna Pattern(s)

The array of towers was modeled using Westberg Engineering PhasorPro 2.1.1.21 with the individual tower characteristics that were verified by the individual tower impedance measurements. Calculations were made to determine the complex voltage values for sources located at ground level under each tower of the array to produce current moment sums for the tower that, when normalized, equated to the theoretical field parameters of the authorized directional antenna pattern(s). The following pages contain details of the Method of Moments model of the directional antenna patterns.

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APRIL 2018

EXHIBIT #4A

STATION INFORMATION		
Call Letters	No. Towers	Frequency
KAAY	3	1.0900

TOWER INFORMATION						
	Tower Height (°)	Spacing (°)	Orientation	Face Width (in.)	Radius (in.)	Velocity Factor
Tower 1	199.0000	0.0000	0.0000	30.0000 / 30.0000	13.8564 / 13.8564	0.910120
Tower 2	199.0000	188.0000	72.5000	30.0000 / 30.0000	13.8564 / 13.8564	0.905960
Tower 3	199.0000	376.0000	72.5000	30.0000 / 30.0000	13.8564 / 13.8564	0.909170

MATRIX INFORMATION		
	Impedance (other towers open)	Impedance (other towers shorted)
Tower 1	65.05 - j245.54	64.40 - j241.39
Tower 2	63.14 - j242.72	62.00 - j236.24
Tower 3	64.53 - j244.15	63.90 - j240.03

DETUNED TOWER CURRENTS
Tower 1
0.000000 > 0.000000 - 199.00° above ground
0.871067 > -13.055619 - 189.05° above ground
1.491075 > -12.780060 - 179.10° above ground
1.978606 > -12.529917 - 169.15° above ground
2.329032 > -12.294512 - 159.20° above ground
2.537180 > -12.068640 - 149.25° above ground
2.599389 > -11.846505 - 139.30° above ground
2.515686 > -11.619825 - 129.35° above ground
2.290526 > -11.374197 - 119.40° above ground
1.932994 > -11.079333 - 109.45° above ground
1.456661 > -10.654309 - 99.50° above ground
0.879221 > -9.774881 - 89.55° above ground
0.222836 > -4.059646 - 79.60° above ground
0.494234 > 165.177482 - 69.65° above ground
1.239198 > 167.297376 - 59.70° above ground
1.989843 > 167.887382 - 49.75° above ground
2.720755 > 168.186941 - 39.80° above ground
3.409232 > 168.378489 - 29.85° above ground
4.037982 > 168.517715 - 19.90° above ground
4.597237 > 168.628729 - 9.95° above ground
5.226377 > 168.752451 - 0.00° above ground

Tower 2
0.000000 > 0.000000 - 199.00° above ground
0.899475 > -12.901666 - 189.05° above ground
1.540369 > -12.567566 - 179.10° above ground
2.044390 > -12.257829 - 169.15° above ground
2.406487 > -11.959280 - 159.20° above ground
2.621116 > -11.664717 - 149.25° above ground
2.684396 > -11.365479 - 139.30° above ground
2.596354 > -11.048564 - 129.35° above ground
2.361698 > -10.690737 - 119.40° above ground
1.990019 > -10.242470 - 109.45° above ground
1.495651 > -9.570344 - 99.50° above ground
0.897368 > -8.134254 - 89.55° above ground
0.220552 > 1.660779 - 79.60° above ground
0.525221 > 163.821204 - 69.65° above ground
1.292610 > 167.138167 - 59.70° above ground
2.064453 > 168.104863 - 49.75° above ground
2.813629 > 168.623559 - 39.80° above ground
3.516249 > 168.982428 - 29.85° above ground
4.154017 > 169.271738 - 19.90° above ground
4.716354 > 169.532473 - 9.95° above ground
5.339494 > 169.866695 - 0.00° above ground

Tower 3
0.000000 > 0.000000 - 199.00° above ground
0.543230 > 160.788828 - 189.05° above ground
0.930004 > 161.064212 - 179.10° above ground
1.234893 > 161.324299 - 169.15° above ground
1.455420 > 161.581009 - 159.20° above ground
1.588582 > 161.841725 - 149.25° above ground
1.632109 > 162.115577 - 139.30° above ground
1.585812 > 162.416291 - 129.35° above ground
1.452042 > 162.768087 - 119.40° above ground
1.235828 > 163.221513 - 109.45° above ground
0.944827 > 163.908387 - 99.50° above ground
0.589190 > 165.329631 - 89.55° above ground
0.182513 > 172.775921 - 79.60° above ground
0.270481 > -24.540259 - 69.65° above ground
0.741490 > -19.857305 - 59.70° above ground
1.222740 > -18.640851 - 49.75° above ground
1.698586 > -17.990602 - 39.80° above ground
2.155525 > -17.526843 - 29.85° above ground
2.583594 > -17.136075 - 19.90° above ground
2.977779 > -16.768373 - 9.95° above ground
3.445485 > -16.282127 - 0.00° above ground

ZMatrix		
65.05 - j245.54	6.16 - j27.49	-1.93 + j12.87
6.16 - j27.49	63.14 - j242.72	6.11 - j27.39
-1.93 + j12.87	6.11 - j27.39	64.53 - j244.15

YMatrix		
0.001032 + j0.003867	-0.000142 - j0.000457	0.000092 + j0.000242
-0.000142 - j0.000457	0.001039 + j0.003960	-0.000142 - j0.000458
0.000092 + j0.000242	-0.000142 - j0.000458	0.001036 + j0.003890

HMatrix - [I] = [H] X [F]		
-0.011018 + j0.005272	0.001852 - j0.001360	-0.001127 + j0.001012
0.001914 - j0.001376	-0.011219 + j0.005244	0.001911 - j0.001373
-0.001133 + j0.001015	0.001857 - j0.001363	-0.011066 + j0.005275

HMatrix-inverse - [F] = $[H]^{-1}$ X [I]		
-77.592023 - j35.450416	-13.956637 - j3.689483	7.672593 + j1.268255
-14.276923 - j3.931258	-78.626146 - j34.585842	-14.199240 - j3.889576
7.701948 + j1.283982	-13.940257 - j3.667475	-77.352027 - j35.204446

TOWER CURRENTS
Mode 1
Tower 1
0.000000 > 0.000000 - 199.00° above ground
0.871067 > -13.055619 - 189.05° above ground
1.491075 > -12.780060 - 179.10° above ground
1.978606 > -12.529917 - 169.15° above ground
2.329032 > -12.294512 - 159.20° above ground
2.537180 > -12.068640 - 149.25° above ground
2.599389 > -11.846505 - 139.30° above ground
2.515686 > -11.619825 - 129.35° above ground
2.290526 > -11.374197 - 119.40° above ground
1.932994 > -11.079333 - 109.45° above ground
1.456661 > -10.654309 - 99.50° above ground
0.879221 > -9.774881 - 89.55° above ground
0.222836 > -4.059646 - 79.60° above ground
0.494234 > 165.177482 - 69.65° above ground
1.239198 > 167.297376 - 59.70° above ground
1.989843 > 167.887382 - 49.75° above ground
2.720755 > 168.186941 - 39.80° above ground
3.409232 > 168.378489 - 29.85° above ground
4.037982 > 168.517715 - 19.90° above ground
4.597237 > 168.628729 - 9.95° above ground
5.226377 > 168.752451 - 0.00° above ground

TOWER CURRENTS
Mode 1
Tower 2
0.000000 > 0.000000 - 199.00° above ground
7.716271 > -169.733197 - 189.05° above ground
13.707822 > -169.174132 - 179.10° above ground
18.933358 > -168.595535 - 169.15° above ground
23.318154 > -167.973451 - 159.20° above ground
26.774055 > -167.289712 - 149.25° above ground
29.216692 > -166.521403 - 139.30° above ground
30.584700 > -165.636971 - 129.35° above ground
30.847810 > -164.590288 - 119.40° above ground
30.011091 > -163.310094 - 109.45° above ground
28.117168 > -161.679290 - 99.50° above ground
25.247810 > -159.490413 - 89.55° above ground
21.527345 > -156.338370 - 79.60° above ground
17.135734 > -151.321110 - 69.65° above ground
12.364736 > -142.031230 - 59.70° above ground
7.907187 > -120.603871 - 49.75° above ground
6.159024 > -71.402443 - 39.80° above ground
9.345243 > -30.338516 - 29.85° above ground
14.585290 > -13.742405 - 19.90° above ground
20.335656 > -5.834775 - 9.95° above ground
28.169134 > 0.000000 - 0.00° above ground

TOWER CURRENTS
Mode 1
Tower 3
0.000000 > 0.000000 - 199.00° above ground
0.874459 > -13.066192 - 189.05° above ground
1.497029 > -12.788511 - 179.10° above ground
1.986612 > -12.536211 - 169.15° above ground
2.338517 > -12.298527 - 159.20° above ground
2.547513 > -12.070184 - 149.25° above ground
2.609900 > -11.845283 - 139.30° above ground
2.525699 > -11.615374 - 129.35° above ground
2.299390 > -11.365738 - 119.40° above ground
1.940115 > -11.065386 - 109.45° above ground
1.461535 > -10.631460 - 99.50° above ground
0.881464 > -9.731507 - 89.55° above ground
0.222268 > -3.845091 - 79.60° above ground
0.497930 > 165.121839 - 69.65° above ground
1.245789 > 167.277763 - 59.70° above ground
1.999110 > 167.880125 - 49.75° above ground
2.732307 > 168.187010 - 39.80° above ground
3.422522 > 168.384171 - 29.85° above ground
4.052330 > 168.528411 - 19.90° above ground
4.611846 > 168.644397 - 9.95° above ground
5.239921 > 168.775054 - 0.00° above ground

TOWER CURRENTS
Mode 2
Tower 1
0.000000 > 0.000000 - 199.00° above ground
3.165531 > -168.160879 - 189.05° above ground
5.661651 > -167.719833 - 179.10° above ground
7.877073 > -167.261784 - 169.15° above ground
9.779411 > -166.769081 - 159.20° above ground
11.329734 > -166.228920 - 149.25° above ground
12.489387 > -165.625469 - 139.30° above ground
13.227813 > -164.937418 - 129.35° above ground
13.525899 > -164.134468 - 119.40° above ground
13.377770 > -163.171410 - 109.45° above ground
12.791701 > -161.977153 - 99.50° above ground
11.790491 > -160.432658 - 89.55° above ground
10.411740 > -158.322115 - 79.60° above ground
8.709044 > -155.210681 - 69.65° above ground
6.757771 > -150.083321 - 59.70° above ground
4.682959 > -140.013296 - 49.75° above ground
2.826234 > -114.262950 - 39.80° above ground
2.487852 > -56.740380 - 29.85° above ground
4.233992 > -21.111636 - 19.90° above ground
6.646733 > -7.861126 - 9.95° above ground
10.142788 > 0.000000 - 0.00° above ground

TOWER CURRENTS
Mode 2
Tower 2
0.000000 > 0.000000 - 199.00° above ground
6.714827 > -168.885730 - 189.05° above ground
11.981748 > -168.422105 - 179.10° above ground
16.626187 > -167.941003 - 169.15° above ground
20.579828 > -167.423437 - 159.20° above ground
23.761487 > -166.855381 - 149.25° above ground
26.091903 > -166.219362 - 139.30° above ground
27.510375 > -165.491657 - 129.35° above ground
27.981839 > -164.638195 - 119.40° above ground
27.500575 > -163.607495 - 109.45° above ground
26.092018 > -162.317303 - 99.50° above ground
23.813519 > -160.627034 - 89.55° above ground
20.755191 > -158.274789 - 79.60° above ground
17.043931 > -154.712762 - 69.65° above ground
12.862358 > -148.592137 - 59.70° above ground
8.544272 > -135.726114 - 49.75° above ground
5.174737 > -100.809334 - 39.80° above ground
5.948992 > -43.232828 - 29.85° above ground
10.144652 > -16.907256 - 19.90° above ground
15.211686 > -6.442167 - 9.95° above ground
22.314962 > 0.311388 - 0.00° above ground

TOWER CURRENTS
Mode 2
Tower 3
0.000000 > 0.000000 - 199.00° above ground
3.172856 > -168.176310 - 189.05° above ground
5.674614 > -167.734263 - 179.10° above ground
7.894535 > -167.275236 - 169.15° above ground
9.800038 > -166.781534 - 159.20° above ground
11.352009 > -166.240317 - 149.25° above ground
12.511670 > -165.635703 - 139.30° above ground
13.248411 > -164.946305 - 129.35° above ground
13.543154 > -164.141696 - 119.40° above ground
13.390145 > -163.176445 - 109.45° above ground
12.797868 > -161.979042 - 99.50° above ground
11.789414 > -160.429607 - 89.55° above ground
10.402763 > -158.310440 - 79.60° above ground
8.691998 > -155.181902 - 69.65° above ground
6.733210 > -150.014340 - 59.70° above ground
4.653124 > -139.823909 - 49.75° above ground
2.801542 > -113.614256 - 39.80° above ground
2.502457 > -55.748676 - 29.85° above ground
4.272905 > -20.709923 - 19.90° above ground
6.691828 > -7.670152 - 9.95° above ground
10.186957 > 0.101675 - 0.00° above ground

FIELD INFORMATION - DAY		
	Field Ratio	Field Phase
Tower 2	1.0000	0.0000

FIELD INFORMATION - NIGHT		
	Field Ratio	Field Phase
Tower 1	1.0000	0.0000
Tower 2	2.0000	0.0000
Tower 3	1.0000	0.0000

TOWER DRIVE INFORMATION - DAY					
	Field Ratios	Field Phase	Drive Imped. (Ω)	Current	Power (W)
Tower 1	0.0000	0.0000	1.64 - j93.81	5.23 ∠ 168.75	44.6705
Tower 2	1.0000	0.0000	62.90 - j232.27	28.17 ∠ 0.00	49907.7439
Tower 3	0.0000	0.0000	1.73 - j93.26	5.24 ∠ 168.78	47.5856

TOWER DRIVE INFORMATION - NIGHT					
	Field Ratios	Field Phase	Drive Imped. (Ω)	Current	Power (W)
Tower 1	1.0000	0.0000	76.97 - j293.02	10.14 ∠ 0.00	7918.4809
Tower 2	2.0000	0.0000	68.62 - j267.74	22.31 ∠ 0.31	34170.2981
Tower 3	1.0000	0.0000	76.24 - j291.29	10.19 ∠ 0.10	7911.2210

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EXHIBIT #5

Direct Measurement of Power

KAAY will operate with a daytime non-directional power of 50.0 kilowatts and a tower base impedance of 61.0 -J, 188.0 ohms and operating with an Antenna Input Power of 50.0 kilowatts of power to achieve a nominal power of 50.0 kilowatts.

50,000 Watts
Base Resistance = 61 Ohms
Manipulating $I^2 * R = P$
Where I = Common Point Current, R = Common Point Resistance, P = Power in Watts
$I = (50{,}000/61)^{\wedge 5} = 28.63$ Amps at Tower Base

The daytime non-directional power will be monitored at the tower base.

It is noted the other two towers in the array are detuned at the tower base using inductance coils adjusted to compensate for the proper values as determined using the PhasorPro software. The coil impedance was adjusted to a value equal to the inductance determined in the Tower Drive Information - Day analysis less the open circuit calculated value of the base impedance as shown in Exhibit #4.

Tower #1 (west)	
Calculated base reactance under non-directional, open circuit conditions:	-93.81 ohms
Calculated tower reactance (open circuit):	-245.54 ohms
Remaining base reactance:	-151.73 ohms
Required value of de-tune inductor:	+151.73 ohms
Required value of base coil:	22.2 mhy
Tower #3 (east)	
Calculated base reactance under non-directional, open circuit conditions:	-93.26 ohms
Calculated tower reactance (open circuit):	-244.15 ohms
Remaining base reactance:	-150.89 ohms
Required value of de-tune inductor:	+150.89 ohms
Required value of base coil:	22.0 mhy

KAAY will operate with a nighttime directional power of 50.0 kilowatts and a common point impedance of 50.0 +J, 0.0 ohms and operating with an Antenna Input Power of 52,650 kilowatts of power to achieve a nominal power of 50.0 kilowatts, in accordance with §73.51(b)(1).

Adjusting the nighttime input power by 0.053 results in the following:
50,000 Watts * 1.053 = 52,650 Watts
Common Point Resistance = 50 Ohms
Manipulating $I^2 * R = P$
Where I = Common Point Current, R = Common Point Resistance, P = Power in Watts
$I = (52,650/50)^{\wedge 5} = 32.45$ Amps at Common Point

The nighttime directional power will be monitored at the common point.

Non-directional tower base impedance and common point impedance were measured utilizing a Array Solutions PowerAim 1000 Network Analyzer SN 1104, in a calibrated setup.

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EXHIBIT #6

Sampling System and Measurements

The sample system for KAAY consists of equal electrical lengths of Andrew LDF-4, one half inch foam, phase stabilized coaxial transmission lines terminated into Delta Electronics TCT-1HV, 0.5 V/A toroid sample transformers. A tabulation of the sample line lengths and characteristic impedances are included as Exhibit #6A.

Impedance measurements of the antenna monitor sample lines with toroid sample transformers attached were made using an Array Solutions PowerAim 1000 Network Analyzer SN 1104, in a calibrated setup. The impedance at the input to the sample lines, terminated by the toroid sample transformers was measured and tabulated in Exhibit #6A.

Impedance measurements of the antenna monitor sampling lines were made using an Array Solutions PowerAim 1000 Network Analyzer SN 1104, in a calibrated setup. The measurements were made looking into the antenna monitor ends of the sampling lines, without the sampling lines connected to the toroid samples under open-circuited conditions. The sampling line length was found to be between 345.2 and 345.5 electrical degrees at the operating frequency of 1090 kHz, within the 1.0 degree variance as specified by §73.151(c)(2)(i) of the Commission's rules.

The characteristic impedance values of the sampling lines, was found to be between 50.4 and 50.7 ohms, within the 2.0 ohm variance as specified by §73.151(c)(2)(i).

Toroid current transformer calibration was checked by connection at the antenna monitor with short, equal length jumpers and fed a 1090 kHz RF signal into a known load and was found to exhibit identical phase and ratio indications (within the manufacturer's specifications) on the monitor.

The antenna monitor is a Potomac Instruments 1901-3. The monitor is recently calibrated at the factory and was checked and calibrated in the field according to the manufacturer's recommended procedure.

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EXHIBIT #6A

KAAY Little Rock AR
1090 50 kW DAN

Andrew LDF-4

Sample Line and Sample Transformer Combined Impedance at 590 kHz

Tower Sample System	Sample Transformer Make / Type / SN	Resistance (ohms)	Reactance (ohms)
1 (northwest)	Delta TCT-1HV : sn 3670	50.2	0.3
2 (center)	Delta TCT-1HV : sn 3623	50.6	0.5
3 (southeast)	Delta TCT-1HV : sn 3624	50.4	0.4

Sample Line Length and Impedance Calculations

Tower Sample Line	Calculated Electrical Length at 590 kHz (degrees)	Measured Characteristic Impedance
1 (northwest)	345.3	50.4
2 (center)	345.5	50.7
3 (southeast)	345.2	50.7

Sample Line Lengths : +/- 0.16 Degrees : Limit +/- 0.5°

Characteristic Impedance : +/- 0.1 Ohms : Limit +/- 1.0 Ohms

EXHIBIT #6B
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TOWER 1 SAMPLE LINE

Station Freq (MHz)	Resonant Freq (MHz)
1.09	0.852300

Closest To Station Freq	Line Velocity Factor From Mfg. (%)	
0.852300	88	
Length of Line ° @ Station Freq	Calculated Physical Length	
345.3	762.0	feet

		Impedance at Offset Freq	
-45° Offset (MHz)	Resistance	Reactance	Line Characteristic Impedance (Ohms)
0.7103	4.500	-50.700	
+45° Offset (MHz)			50.4
0.9944	6.100	49.600	

TOWER 2 SAMPLE LINE

Station Freq (MHz)	Resonant Freq (MHz)
1.09	0.851700

Closest To Station Freq	Line Velocity Factor From Mfg. (%)	
0.851700	88	
Length of Line ° @ Station Freq	Calculated Physical Length	
345.5	762.5	feet

		Impedance at Offset Freq	
-45° Offset (MHz)	Resistance	Reactance	Line Characteristic Impedance (Ohms)
0.7098	4.600	-50.900	
+45° Offset (MHz)			50.7
0.9937	6.200	49.900	

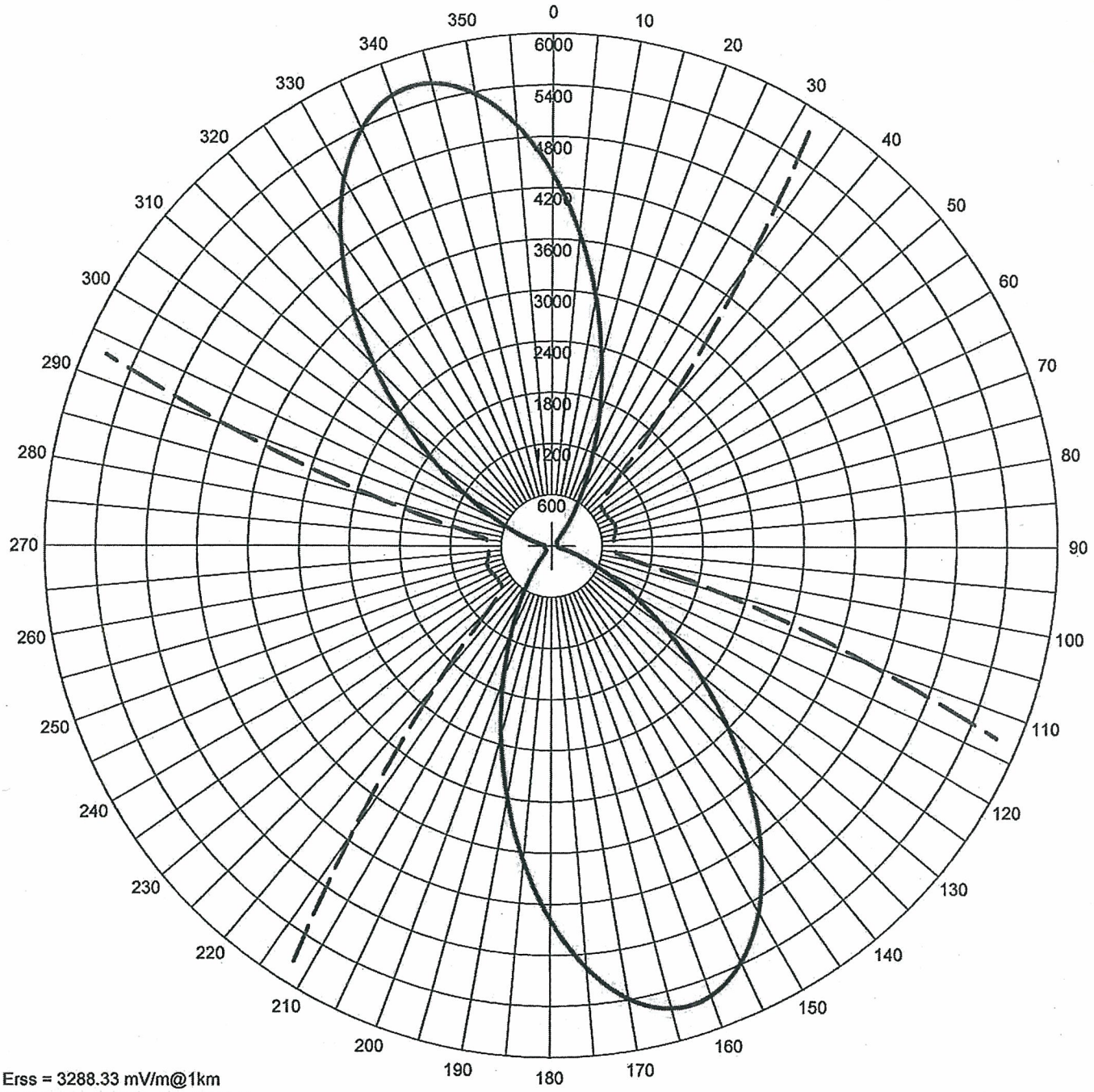
TOWER 3 SAMPLE LINE

Station Freq (MHz)	Resonant Freq (MHz)
1.09	0.852500

Closest To Station Freq	Line Velocity Factor From Mfg. (%)	
0.852500	88	
Length of Line ° @ Station Freq	Calculated Physical Length	
345.2	761.8	feet

		Impedance at Offset Freq	
-45° Offset (MHz)	Resistance	Reactance	Line Characteristic Impedance (Ohms)
0.7104	4.630	-50.800	
+45° Offset (MHz)			50.7
0.9946	6.100	50.000	

KAAY AM Nighttime Directional Pattern - Exhibit #7A



Erss = 3288.33 mV/m@1km
Theo RMS: 2623.0 mV/m@1km
Std RMS: 2755.153 mV/m@1km
Q: 70.8 mV/m@1km

Standard Horizontal Plane Pattern

Pattern (mV/m @ 1km)
Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	199.0	0	0	0.0	0.0	0.0	0.0
2	2.000	0.0	188.0	72.5	199.0	0	0	0.0	0.0	0.0	0.0
3	1.000	0.0	376.0	72.5	199.0	0	0	0.0	0.0	0.0	0.0

Call: KAAY
Freq: 1090 kHz
LITTLE ROCK, AR, US
Hours: N
Lat: 34-36-00 N
Lng: 092-13-30 W
Power: 50.0 kW - Custom Q
Value Used: 70.8
Theo RMS: 2623.00 mV/m@1km
@ 50.0 kW
# of Augmentations: 10

KAAY Little Rock AR
1090 50 kW DAN

PATTERN NULL

Radial (°T)	Point #	N. Latitude	W. Longitude	Dist (mi)	Dist (km)	mv/m	Time (24 hr)	Date
55°	1	34° 37' 04.2"	92° 11' 36.4"	2.17	3.49	60.00	1450	2/2/2018
		Asher Road (CR 87) @double wooden fence anchor post on SW side.						
		Centerline of roadway; no other landmarks available						
55°	2	34° 37' 30.4"	92° 10' 54.8"	2.99	4.81	39.00	1441	2/2/2018
		Frazier Pike @ bend in road to North.						
		Centerline of roadway in middle of bend; no other landmarks available						
55°	3	34° 38' 49.1"	92° 08' 32.4"	5.70	9.18	11.80	1527	2/2/2018
		Lower Steel Bend Road, 0.5 mile North of 11823 Steel Bend Road.						
		Centerline of roadway between heavy wooden fence anchor posts, both sides						

Geographic Coordinates Datum: NAD '83
Latitude and Longitude Format: DD-MM-SS.s
FIM: Potomac : FIM-41 : SN 2082 Calibrated 06/06/2016

GPS: Galaxy S7 GPS, verified by Google Earth

Field Measurements: Mike Patton

PATTERN NULL

Radial (°T)	Point #	N. Latitude	W. Longitude	Dist (mi)	Dist (km)	mv/m	Time (24 hr)	Date
89°	1	34° 36' 01.0"	92° 12' 56.0"	0.53	0.86	330.00	1419	2/2/2018
		4th Street at Walnut Street in Wrightsville, AR						
		At fireplug on NW corner of intersection						
89°	2	34° 36' 01.7"	92° 11' 46.6"	1.68	2.70	66.00	1430	2/2/2018
		Asher Road (CR 87) 0.2 miles south of Hwy 386						
		At 2nd double wooden fence anchor post South of Hwy 386						
89°	3	34° 36' 03.5"	92° 07' 09.3"	6.02	9.69	6.20	1538	2/2/2018
		Intersection of Hwy 161 and Tree Lane						
		NW corner of intersection						

Geographic Coordinates Datum: NAD '83
Latitude and Longitude Format: DD-MM-SS.s
FIM: Potomac : FIM-41 : SN 2082 Calibrated 06/06/2016

GPS: Galaxy S7 GPS, verified by Google Earth

Field Measurements: Mike Patton

EXHIBIT #7B
APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

KAAY Little Rock AR
1090 50 kW DAN

PATTERN MAJOR LOBE

Radial (°T)	Point #	N. Latitude	W. Longitude	Dist (mi)	Dist (km)	mv/m	Time (24 hr)	Date
162°	1	34° 32' 04.5"	92° 11' 59.9"	4.74	7.63	250.00	945	2/9/2018
		23700 Hwy 365						
		East edge of roadway across from mailbox						
162°	2	34° 31' 54.5"	92° 11' 54.8"	4.95	7.96	205.00	932	2/9/2018
		Pennington Road 1/4 mile South of Hwy 365						
		SW edge of roadway across from power pole 275088; no other landmarks						
162°	3	34° 28' 15.1"	92° 10' 30.9"	9.38	15.10	58.00	918	2/9/2018
		1748 Oates Drive, Redfield, AR						
		West edge of roadway at mailbox						

Geographic Coordinates Datum: NAD '83
Latitude and Longitude Format: DD-MM-SS.s
FIM: Potomac : FIM-41 : SN 2082 Calibrated 06/06/2016

GPS: Galaxy S7 GPS, verified by Google Earth

Field Measurements: Mike Patton

PATTERN NULL

Radial (°T)	Point #	N. Latitude	W. Longitude	Dist (mi)	Dist (km)	mv/m	Time (24 hr)	Date
235°	1	34° 35' 13.1"	92° 14' 55.6"	1.63	2.63	55.00	1230	2/2/2018
		3000 Border Lane						
		South edge of roadway across from first power pole east of house						
235°	2	35° 34' 23.6"	92° 16' 23.6"	3.32	5.35	11.90	1323	2/2/2018
		922 Audra Lane						
		North edge of roadway across from fireplug						
235°	3	34° 34' 11.8"	92° 16' 44.9"	3.73	6.00	5.90	1331	2/2/2018
		Intersection of Wilma Sue Land and Marilyn Drive						
		NE corner of intersection at fireplug						

Geographic Coordinates Datum: NAD '83
Latitude and Longitude Format: DD-MM-SS.s
FIM: Potomac : FIM-41 : SN 2082 Calibrated 06/06/2016

GPS: Galaxy S7 GPS, verified by Google Earth

Field Measurements: Mike Patton

EXHIBIT #7C
APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
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LITTLE ROCK, ARKANSAS
APRIL 2018

KAAY Little Rock AR
1090 50 kW DAN

PATTERN NULL

Radial (°T)	Point #	N. Latitude	W. Longitude	Dist (mi)	Dist (km)	mv/m	Time (24 hr)	Date
269°	1	34° 35' 59.1"	92° 15' 20.1"	1.75	2.82	27.50	1245	2/2/2018
		16516 Lorance Heights Road						
		East edge of roadway across from first power pole North of mailbox						
269°	2	34° 35' 58.6"	92° 16' 42.6"	3.05	4.91	17.50	1302	2/2/2018
		625 Hidden Acres Lane						
		West edge of roadway across from mailbox						
269°	3	35° 35' 58.4"	92° 17' 16.9"	3.60	5.79	11.50	1315	2/2/2018
		Intersection of Inronton Road and Pleasant Valley Drive						
		West edge of roadway on Ironton at centerline of Pleasant Vally						

Geographic Coordinates Datum: NAD '83
Latitude and Longitude Format: DD-MM-SS.s
FIM: Potomac : FIM-41 : SN 2082 Calibrated 06/06/2016

GPS: Galaxy S7 GPS, verified by Google Earth

Field Measurements: Mike Patton

PATTERN MAJOR LOBE

Radial (°T)	Point #	N. Latitude	W. Longitude	Dist (mi)	Dist (km)	mv/m	Time (24 hr)	Date
342°	1	34° 36' 57.6"	92° 13' 51.3"	1.14	1.83	2,150.00	1053	2/9/2018
		4307 145th Street						
		North edge of roadway 75 paces West of mailbox						
342°	2	34° 38' 46.8"	92° 14' 31.4"	3.32	5.35	375.00	1048	2/9/2018
		Intersection of German Road and Woten Lane						
		West edge of German Road at multiple mailboxes						
342°	3	34° 40' 20.0"	92° 15' 06.2"	5.19	8.36	210.00	1040	2/9/2018
		Mills High School on Dixon Road						
		NorthWest corner of East entrance to school at fireplug						

Geographic Coordinates Datum: NAD '83
Latitude and Longitude Format: DD-MM-SS.s
FIM: Potomac : FIM-41 : SN 2082 Calibrated 06/06/2016

GPS: Galaxy S7 GPS, verified by Google Earth

Field Measurements: Mike Patton

EXHIBIT #7D
APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

Affidavit:

I, George Michael Patton, do hereby swear to and affirm the following:

That I am a broadcast engineer regularly engaged in the design, construction and repair of AM directional antennas, and my qualifications are a matter of record with the FCC;

That RADIO LICENSE HOLDING CBC, LLC, licensee of KAAY, Little Rock, Arkansas, contracted my firm to make a moment method proof of performance on the KAAY array;

That all measurements made during the course of this work were made by me or under my direct supervision, and that all the measurements made by me are true and correct, and, as regards all measurements made by others, that I believe them to be both true and correct.

Sworn to this day, April 11, 2018

G. Michael Patton

George Michael Patton

EXHIBIT #8
APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

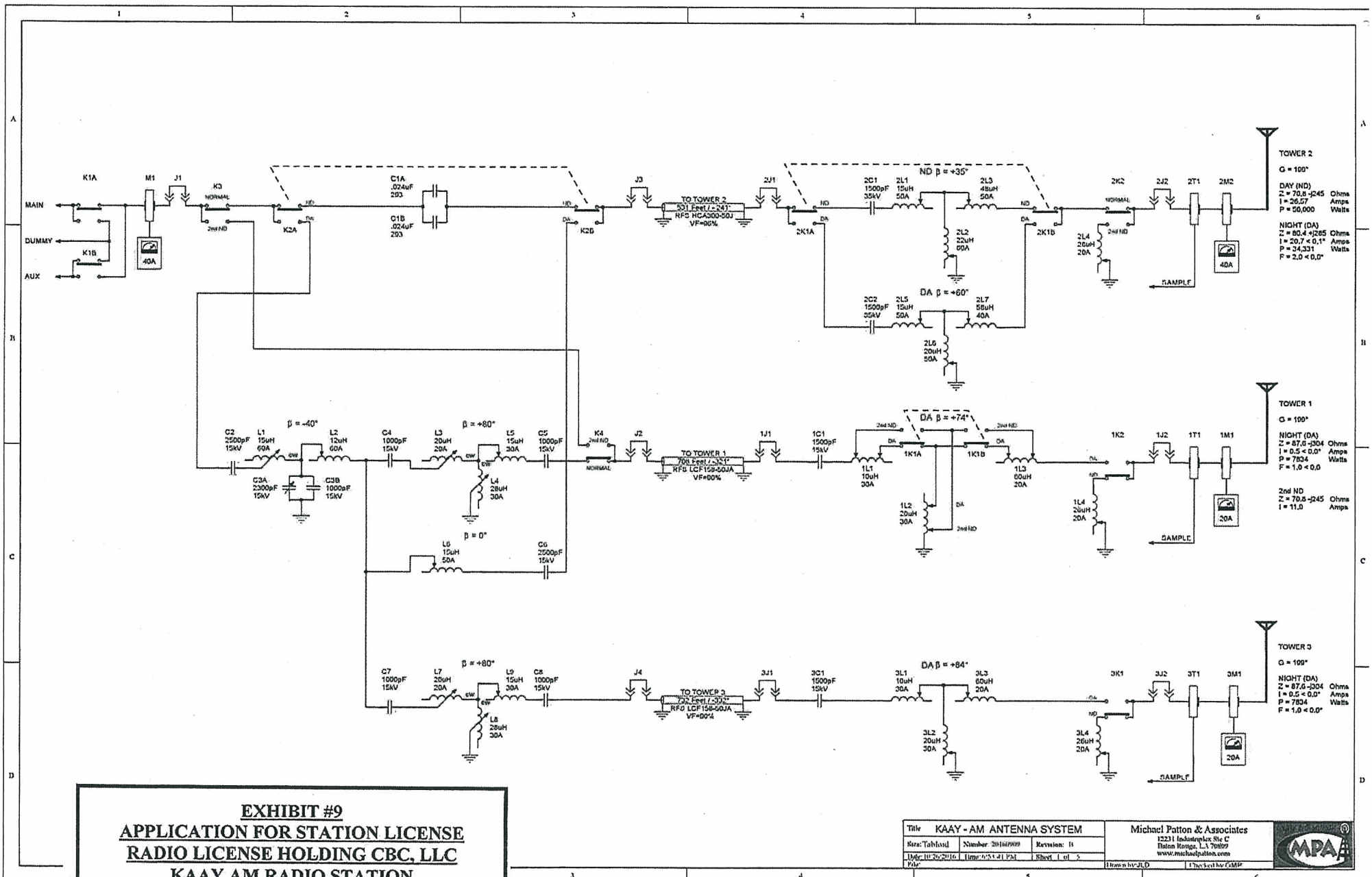

EXHIBIT #9
APPLICATION FOR STATION LICENSE
RADIO LICENSE HOLDING CBC, LLC
KAAY AM RADIO STATION
1090 kHz - 50.0 kW - DAN
LITTLE ROCK, ARKANSAS
APRIL 2018

AFFIDAVIT AND QUALIFICATIONS OF CONSULTANT

State of Georgia)
St. Simons Island) ss:
County of Glynn)

R. STUART GRAHAM, being duly sworn, deposes and says that he is an officer of Graham Brock, Inc. Graham Brock has been engaged by Radio License Holdings CBC, LLC to prepare the attached Technical Exhibit.

His qualifications are a matter of record before the Federal Communications Commission. He has been active in Broadcast Engineering since 1979.

The attached report was either prepared by him or under his direction and all material and exhibits attached hereto are believed to be true and correct.

This the 6th day of April, 2018.

R. Stuart Graham
Affiant

Sworn to and subscribed before me
this the 6th day of April 2018

Notary Public, State of Georgia
My Commission Expires: March 12, 2019