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July 9, 2012

Received & Inspected

JUL 10 2012

FCC Mail Room

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FOUNDED 1897

AUBREY L. BROOKS (1872-1958)  
W.H. HOLDERNESS (1904-1965)  
L.P. McLENDON (1890-1968)  
KENNETH M. BRIM (1898-1974)  
C.T. LEONARD, JR. (1929-1983)  
CLAUDE C. PIERCE (1913-1988)  
THORNTON H. BROOKS (1912-1988)  
G. NEIL DANIELS (1911-1997)  
HUBERT HUMPHREY (1928-2003)  
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GREENSBORO, N.C. 27401

WRITER'S DIRECT DIAL

Via Overnight Delivery

RECEIVED  
2012 JUL 12 A 10:10

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
9300 East Hampton Drive  
Capitol Heights, MD 20743

Attention: Audio Division

Re: WELS(AM) and WELS-FM, Kinston, NC  
Request for Prior Approval of Main Studio Location  
Supplemental Showing Methodology

Dear Ms. Dortch:

On behalf of Eastern Airwaves LLC, the proposed assignee of the above-referenced radio stations in FCC File No. BAL-20120618AAO, this letter shall serve as a request to obtain prior approval of a proposed new main studio location for the stations based on a supplemental coverage methodology.

Enclosed please find a Technical Statement demonstrating that using a supplemental city grade analysis, the proposed studio location is in compliance with Section 73.1125 of the Commission's rules. Eastern Airwaves LLC hereby respectfully requests the Audio Division's consideration of the enclosed Technical Statement and confirmation of concurrence with its conclusion.

Please contact the undersigned should any questions arise in connection with this matter.

Sincerely,

Coe W. Ramsey  
Counsel to Eastern Airwaves LLC

Enclosure

Ms. Marlene H. Dortch  
July 9, 2012  
Page 2

cc: Peter H. Doyle, FCC (via email)

Received & Inspected

JUN 10 2012

FCC Mail Room

**MAIN STUDIO COMPLIANCE REVIEW**  
**EASTERN AIRWAYS, LLC**  
**WELS/WELS-FM RADIO STATION**  
**KINSTON, NORTH CAROLINA**  
**June 2012**

**Technical Statement for Main Studio Compliance**  
**Using Supplemental City Grade Analysis**

This Technical Statement and attached exhibits were prepared on behalf of Eastern Airways, LLC ("EAL"), proposed assignee of WELS, 1010 kHz, and WELS-FM, Channel 275A, Kinston, North Carolina. EAL desires to relocate its main studio to a site outside the FCC predicted contour of either WELS or WELS-FM, which is an existing studio located at 2581 US Highway 70 West, Goldsboro, North Carolina. A review of other full service stations licensed to Kinston, North Carolina was undertaken. As indicated on Exhibit #1, no station licensed to Kinston delivers an FCC city grade contour over the proposed WELS/WELS-FM studio, nor does a 25 mile radius from Kinston reach the proposed main studio. Therefore, EAL herein submits a study which demonstrates that, using a supplemental city grade analysis, the proposed WELS/WELS-FM location is within the predicted Point-to-Point (Version #2) 70 dBu contour of station WKNS, Channel 212C2, Kinston, North Carolina, in compliance with §73.1125 of the rules.

The proposed WELS/WELS-FM studio location at 2581 US Highway 70 West, Goldsboro, North Carolina<sup>1</sup> is located approximately 21.8 kilometers on a bearing of 271.5° west of the licensed WKNS transmitter site (Exhibit #2). Using the Commission's standard method of

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1) North Latitude 35° 25' 18.7", West Longitude 78° 03' 19.3" (NAD 27).

predicting city grade coverage, as outlined in §73.313, the predicted 3.16 mV/m contour does not reach the proposed studio location by a very small margin. However, in this particular case, we find a supplemental method of depicting city grade coverage is appropriate, as noted in §73.313(e) of the Commission's rules.

The licensed WKNS facility is located on an existing tower at geographic coordinates North Latitude 35° 25' 01" and West Longitude 77° 48' 57" and operates with a maximum effective radiated power of 35.0 kilowatts (using a directional antenna) with a center of radiation 130.0 meters above mean sea level. The proposed studio is located on bearings between 270° and 273° True (with a direct bearing of 271.5°) from the authorized WKNS site. We have analyzed the terrain in 1.0° increments using the 3 second NGDC terrain database, including a direct bearing to the proposed WELS/WELS-FM studio at 271.5°.

We have determined the location of the 70 dBu contour, using the Point-to-Point (Version 2), developed by the Commission's Office of Engineering Technology, which is a variation of the irregular terrain model, using point-to-point calculation methodology, and taking into consideration diffraction loss over knife edge and rounded obstacle obstructions. The program was implemented in the V-Soft Probe 3 computer model. Further, reductions of calculated signal strength are also made to account for foliage and buildings (Clutter Loss).<sup>2</sup> This model is a more representative prediction of field strength than the FCC standard methodology.

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2) Clutter loss is built into the computer code for the Point-to-Point Model.

On the pertinent bearings toward the proposed WELS/WELS-FM main studio, we tabulated the distance to the city grade contour, using the FCC method (Exhibit #3) and supplemental method to demonstrate the differences in the distances to the contour. We found the supplemental depiction distance towards the proposed WELS/WELS-FM main studio extends 31.2 kilometers, in excess of 10% farther than the distances using the Commission's standard methodology (Exhibit #4). Based on the Staff's policy, as the supplemental method exceeds the standard method by more than 10%, the supplemental showing is acceptable.<sup>3</sup> Therefore, pursuant to §73.313(e), a supplemental method of depicting the city grade coverage is warranted. It is noted that where the signal, on the reviewed radials, extends beyond the 60 dBu FCC protected contour, the signal is truncated. Using the supplemental method calculations, we find the city grade contour in the direction of the proposed WELS/WELS-FM main studio extends out well beyond the studio location (Exhibit #5).

A sample calculation was made, based on the 271.5° radial between the site and the studio, to verify the location of the city grade contour, using a free space signal formula:  $106.9 + \text{power in dBk} - 20 \log(\text{distance in kilometers to point of interest})$ . Based on the licensed WKNS facility, the distance to the 70 dBu contour was calculated using the Point-to-Point (Version 2) program and was found to extend 31.4 kilometers. Based on the proposed facility, the 70 dBu contour, corrected to allow for a 5.0 dB clutter loss (75 dBu contour), was being sought.

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3) A demonstration of terrain varying widely based on a Delta H review is not submitted. Pursuant to the Memorandum Opinion and Notice of Apparent Liability for Forfeiture, in the matter of Skytower Communications - 94.3, LLC, licensee of WULF (FM), Hardinsburg, Kentucky, Facility I.D. No. 25799, DA-10-1760, adopted September 16, 2010, released September 17, 2010, only a demonstration that the distance to the supplement contour exceeds the FCC method by 10% is necessary to show the terrain varies widely.

$$106.9 + 13.50 \text{ dBk} - 20\log 31.4 = 90.5$$

**Attenuation due to diffracted signal over terrain - 14.5 dB**

**Clutter Loss -5.0**

**Signal at point of interest 70.0 dBu**

Based on the supplemental depiction, we find the proposed WELS/WELS-FM main studio located at 2581 US Highway 70 West, Goldsboro, North Carolina is compliant with §73.1125 of the rules.

**Graham Brock, Inc. - Broadcast Technical Consultants**

**WELS-FM**  
 BLH-19901204KF  
 Latitude: 35-17-03 N  
 Longitude: 077-39-53 W  
 ERP: 3.00 kW  
 Channel: 275A  
 Frequency: 102.9 MHz  
 AMSL Height: 114.0 m  
 Horiz. Pattern: Omni  
 Prop Model: FCC

**WKNS**  
 BLED-19980604KD  
 Latitude: 35-25-01 N  
 Longitude: 077-48-57 W  
 ERP: 35.00 kW  
 Channel: 212C2  
 Frequency: 90.3 MHz  
 AMSL Height: 130.0 m  
 Horiz. Pattern: Directional  
 Prop Model: FCC

**WRNS-FM**  
 BLH-20000531AED  
 Latitude: 35-06-15 N  
 Longitude: 077-20-12 W  
 ERP: 100.00 kW  
 Channel: 236C  
 Frequency: 95.1 MHz  
 AMSL Height: 472.0 m  
 Horiz. Pattern: Omni  
 Prop Model: FCC

**EXHIBIT #1**  
**MAIN STUDIO REVIEW**  
**SUPPLEMENTAL CITY GRADE**  
**GOLDSBORO, NC STUDIO**  
**WKNS RADIO STATION**  
**WELS/WELS-FM RADIO**  
**KINSTON, NORTH CAROLINA**  
 June 2012

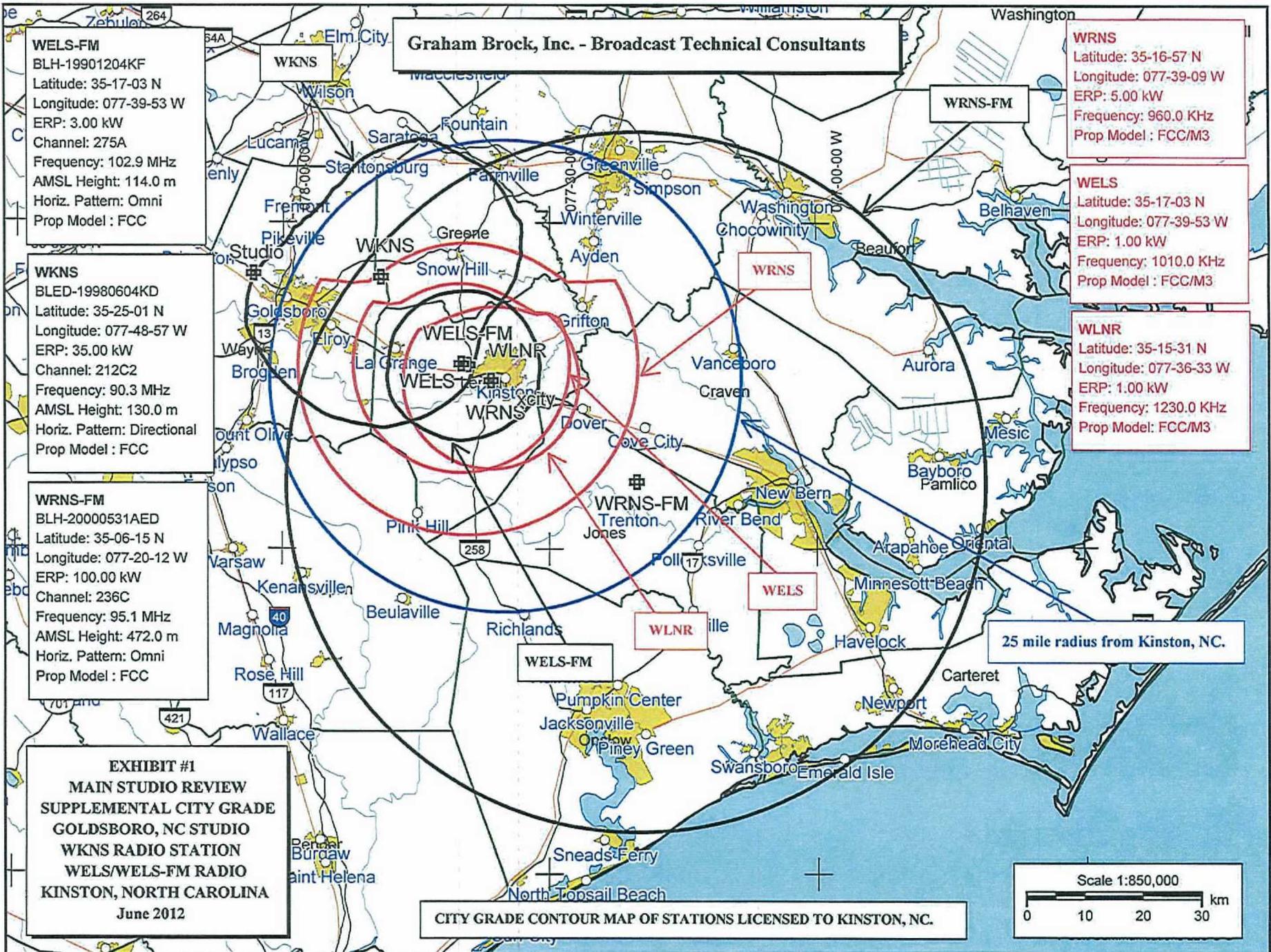
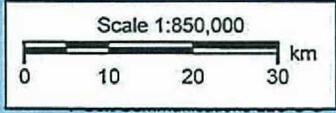
**WRNS**  
 Latitude: 35-16-57 N  
 Longitude: 077-39-09 W  
 ERP: 5.00 kW  
 Frequency: 960.0 KHz  
 Prop Model: FCC/M3

**WELS**  
 Latitude: 35-17-03 N  
 Longitude: 077-39-53 W  
 ERP: 1.00 kW  
 Frequency: 1010.0 KHz  
 Prop Model: FCC/M3

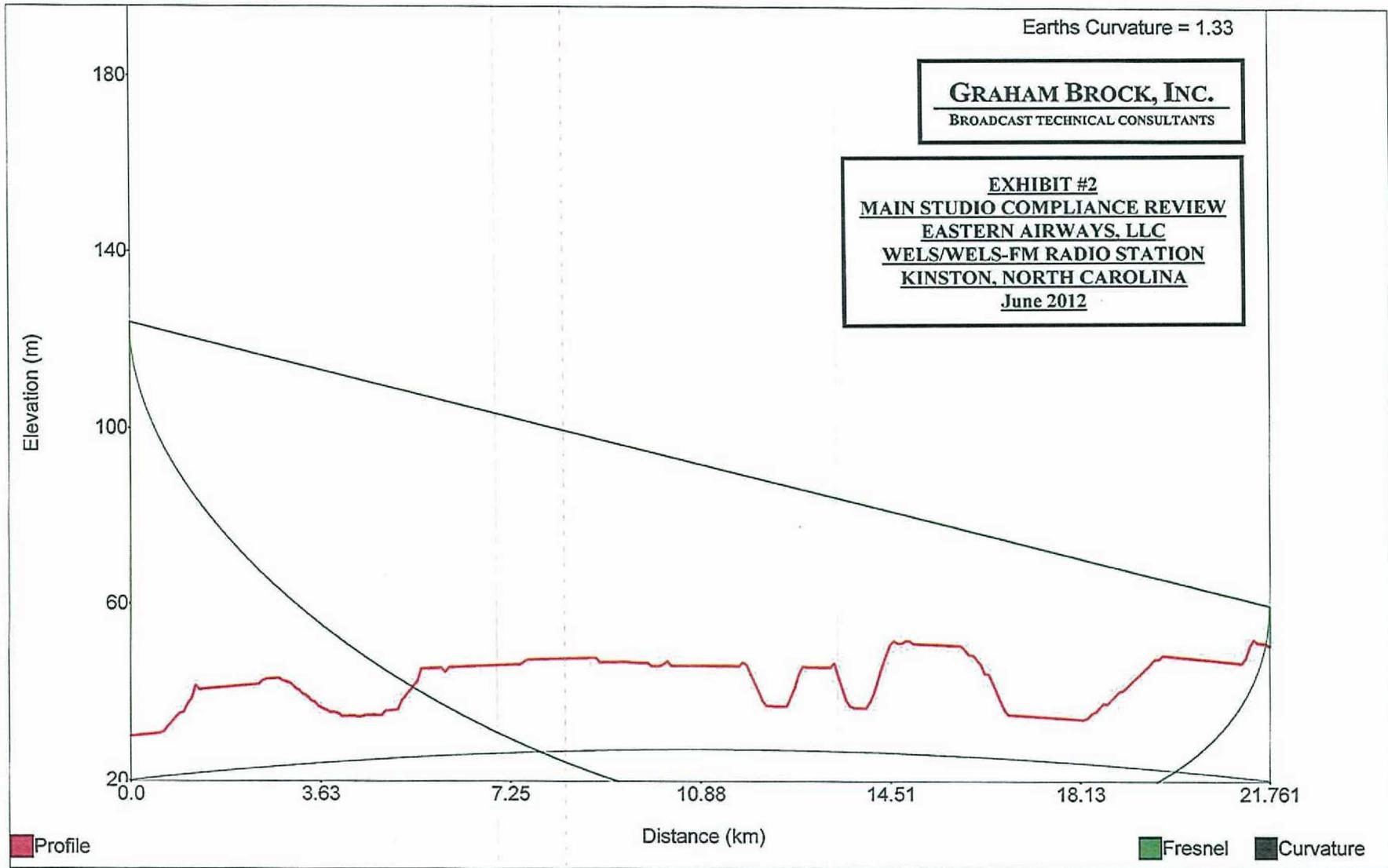
**WLNR**  
 Latitude: 35-15-31 N  
 Longitude: 077-36-33 W  
 ERP: 1.00 kW  
 Frequency: 1230.0 KHz  
 Prop Model: FCC/M3

25 mile radius from Kinston, NC.

CITY GRADE CONTOUR MAP OF STATIONS LICENSED TO KINSTON, NC.



# Terrain profile from WKNS site to WELS/WELS-FM studio



Starting Latitude: 35-25-01 N  
Starting Longitude: 077-48-57 W

End Latitude: 35-25-18.70 N  
End Longitude: 078-03-19.30 W

Distance: 21.761227232 km  
Bearing: 271.506 deg

Transmitter Height (AG) = 94.0 m  
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 30.0 m  
Receiver Elevation = 50.6 m

Frequency = 90.3 MHz  
Fresnel Zone: 0.6

**MAIN STUDIO COMPLIANCE REVIEW**  
**EASTERN AIRWAYS, LLC**  
**WELS/WELS-FM RADIO STATION**  
**KINSTON, NORTH CAROLINA**  
**June 2012**

**EXHIBIT #3**

Predicted contour:

N. Lat. = 35 25 01.0 - Tabulated FCC Service Contour Data  
W. Lng. = 77 48 57.0 - WKNS Radio station - Kinston, North Carolina  
(for WELS/WELS-FM main studio)

HAAT and Distance to Contour - USGS 03 Second terrain database

Azi.	AV EL	HAAT	ERP kW	dBk	Field	70-F5	60-F5
000	29.1	100.9	17.8929	12.53	0.715	21.59	36.58
045	27.3	102.7	35.0000	15.44	1.000	25.39	42.24
090	32.3	97.7	24.6960	13.93	0.840	22.91	38.60
135	30.5	99.5	20.4829	13.11	0.765	22.14	37.42
180	26.4	103.6	35.0000	15.44	1.000	25.50	42.39
225	35.3	94.7	35.0000	15.44	1.000	24.43	40.87
270	37.6	92.4	22.4000	13.50	0.800	21.78	36.89
315	34.4	95.6	6.1740	7.91	0.420	15.86	27.87

AMSL<sub>≅</sub> 130 M

Additional Radials (Not Considered in Average):

270	37.6	92.4	22.4000	13.50	0.800	21.78	36.89
271	38.0	92.0	21.5404	13.33	0.785	21.54	36.52
271.5	38.1	91.9	21.1169	13.25	0.777	21.42	36.34
272	38.1	91.9	20.6976	13.16	0.769	21.32	36.18
273	38.7	91.3	19.8717	12.98	0.753	21.04	35.76

**MAIN STUDIO COMPLIANCE REVIEW**  
**EASTERN AIRWAYS, LLC**  
**WELS/WELS-FM RADIO STATION**  
**KINSTON, NORTH CAROLINA**  
**June 2012**

**EXHIBIT #4**  
**Tabulation of City Grade Contours in Arc**  
**Toward Proposed WELS/WELS-FM**

Azi.	FCC Method (F)	Location of 70 dBu Point-to-Point (P)	% Change	Method Used
270	21.8	34.7	+59.2	P
271	21.5	31.3	+45.6	P
271.5	21.4	31.2	+45.8	P
272	21.3	31.1	+46.0	P
273	21.0	32.2	+53.3	P

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03 second US terrain database

**WELS/WELS-FM Proposed Main Studio**  
 2581 US Highway 70 West  
 Goldsboro, North Carolina  
 Latitude: 35-25-18.70 N  
 Longitude: 078-03-19.30 W  
 Prop Model : None

**Graham Brock, Inc. - Broadcast Technical Consultants**

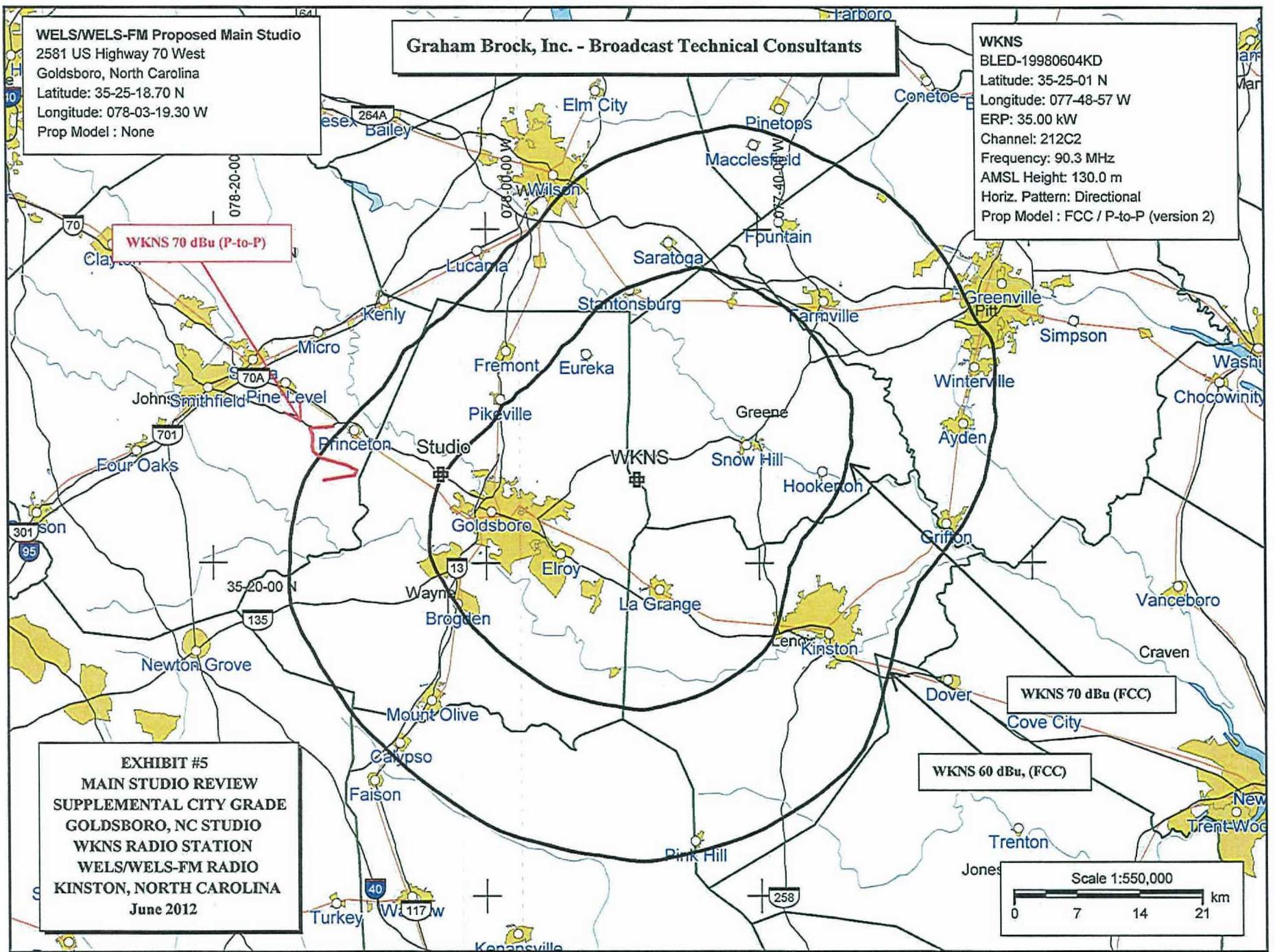
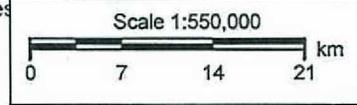
**WKNS**  
 BLED-19980604KD  
 Latitude: 35-25-01 N  
 Longitude: 077-48-57 W  
 ERP: 35.00 kW  
 Channel: 212C2  
 Frequency: 90.3 MHz  
 AMSL Height: 130.0 m  
 Horiz. Pattern: Directional  
 Prop Model : FCC / P-to-P (version 2)

**WKNS 70 dBu (P-to-P)**

**WKNS 70 dBu (FCC)**

**WKNS 60 dBu, (FCC)**

**EXHIBIT #5**  
**MAIN STUDIO REVIEW**  
**SUPPLEMENTAL CITY GRADE**  
**GOLDSBORO, NC STUDIO**  
**WKNS RADIO STATION**  
**WELS/WELS-FM RADIO**  
**KINSTON, NORTH CAROLINA**  
 June 2012



**AFFIDAVIT AND QUALIFICATIONS OF CONSULTANT**

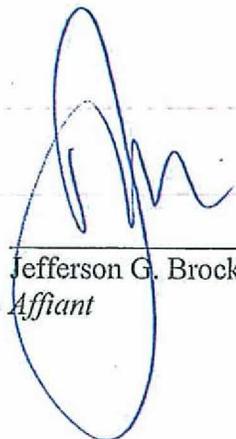
*State of Georgia )*  
*St. Simons Island ) ss:*  
*County of Glynn )*

**JEFFERSON G. BROCK**, being duly sworn, deposes and says that he is an officer of Graham Brock, Inc. Graham Brock has been engaged by Eastern Airways, 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 29th day of June 2012.*



Jefferson G. Brock  
*Affiant*

*Sworn to and subscribed before me  
this the 29th day of June 2012*



Notary Public, State of Georgia  
*My Commission Expires: March 14, 2015*