

ENGINEERING STATEMENT
IN SUPPORT OF AN APPLICATION
FOR CONSTRUCTION PERMIT
WQJZ(FM), OCEAN PINES, MARYLAND
CHANNEL 246A (97.1 MHz) 1.4 KW 142 METERS
JUNE 2004

KHANNA & GULL, Inc. - Consulting Engineers
RADIO-TELEVISION-WIRELESS

This engineering statement has been prepared on behalf of Delmarva Broadcasting Company (“DBC”), licensee of FM radio station WQJZ(FM), Ocean Pines, Maryland and is in support of a minor change application to relocate the antenna site.

At present WQJZ(FM) operates on Channel 246A (97.1 MHz) with 4.6 kW effective radiated power (ERP) and 114 meters antenna height above average terrain (HAAT) using a directional antenna. It is proposed to relocate the antenna site approximately 7.3 kilometers west from the current licensed site. The antenna radiation center would be located at 150 meters above mean sea level with corresponding HAAT of 142 meters. The effective radiated power of WQJZ(FM) would be adjusted to 1.4 kW with a non-directional operation. DBC requests processing of the application according to Section 73.215 of the Commission’s rules.

Antenna Site

The proposed WQJZ(FM) antenna site is located at the following geographic coordinates (NAD-27): N 38° 22’ 24”, W 75° 15’ 31”.

Antenna Structure Registration

Since the FM antenna would be side-mounted on a new tower 500 feet above ground level, a FAA form 7460-1 has been filed with that agency. The tower structure will be registered once a determination of no hazard to air navigation is received from the FAA.

Antenna Height and Elevation Data

Ground Elevation of the Site Above Mean Sea Level:	3 meters
Overall Tower Height Above Ground Level:	152.4 meters
Height of Radiation Center Above Ground:	147 meters

Height of Radiation Center Above Mean Sea Level: 150 meters

Height of Radiation Center Above Average terrain: 142 meters

Antenna and Power Data

Effective Radiated Power: 1.4 kW (H) 1.4 kW (V)

Maximum Effective Radiated Power: 1.4 kW (H) 1.4 kW (V)

FM Antenna: Non-Directional

FM Channel Allotment

Station WQJZ(FM) has been allotted Channel 246A under Section 73.202 of the Commission's rules. WQJZ(FM) is not seeking any change in the station's operating frequency and will continue to operate on Channel 246A at the proposed antenna site.

Community Coverage

The attached map indicates the predicted City Grade contour (3.16 mV/m) from the proposed WQJZ(FM) site would cover the entire principal community of Ocean Pines, Maryland. The WQJZ(FM) predicted contours have been computed according to Section 73.313 of the Commission's rules and are based on the computerized 3-second terrain database.

Main Studio Location

There will be no change in the main studio location of station WQJZ(FM).

FM Allocation Situation

The attached Table I shows the distances from the proposed WQJZ(FM) site to the existing authorized and proposed FM stations operating on pertinent adjacent channels and 53/54 channel removed from Channel 246A. Tables I indicates the

proposed WQJZ(FM) site meets the minimum distance requirements to all FM stations according to Section 73.207 of the Commission's rules with the exception of co-channel station WASH, Washington, DC and first adjacent channel station WBAY, Crisfield, Maryland. Both of these stations are 73.215 authorizations with respect to WQJZ. WQJZ(FM) proposes to utilize equivalent contour protection under Section 73.215 of the Commission's Rules with respect to WASH and WBAY's licensed and construction permit facilities (BPH20040218AAD).

Environmental Statement

As stated above the proposed WQJZ(FM) antenna site would be located approximately 7.3 km from the existing tower. Since the proposed WQJZ(FM) operation would be from a new tower, the environmental concerns listed in Section 1.1307(a) of the Commission's rules have been addressed. According to the applicant, the proposed site is not located near any known wilderness area, wildlife preserve or Indian religious site. The proposed FM facilities will not affect or jeopardize the continued existence of any threatened or endangered species or their critical habitats.

The proposed FM facilities are not located in a flood plain area.

It is proposed to construct a radio tower and a building to house the transmitter and associated equipment at the site. After the construction, the area surrounding the site will be restored, as close as possible, to its original condition. Therefore, the construction of the proposed FM facility does not involve significant changes in the surface features of the site.

It is not proposed to equip the tower with high intensity white lights unless required by the FAA. However, the site is not located near any residential neighborhood.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 2.8 kW (H+V) and a radiation center of 147 meters above ground level, the proposed WQJZ(FM) operation would have a maximum of 1.1 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$) RF field at 2 meters above the base of tower assuming an antenna field factor of 0.5 in the downward direction. The Commission's guidelines for the FM band are 1,000 $\mu\text{W}/\text{cm}^2$ for the occupational/controlled and 200 $\mu\text{W}/\text{cm}^2$ for the general population/uncontrolled environment.

The above analysis indicates that members of the public and personnel working around the WQJZ(FM) tower would not be exposed to RF fields exceeding the Commission's guidelines. With respect to work performed on the tower, station WQJZ(FM), in coordination with other stations, will establish procedures to ensure that workers are not exposed to RF fields above the Commission's guidelines, by reducing or turning off the power, as appropriate.

For the reasons stated above, it is believed this proposal complies with Section 1.1307(a) and (b) of the Commission's Rules; therefore, under Section 1.1306, it is categorically excluded from environmental processing.

Under penalty of perjury the undersigned states that the foregoing statement has been prepared by him and that the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts, he believes them to be true.

21 June 2004

Robert W. Guill
Technical Consultant

TABLE I
FM ALLOCATION SITUATION
FOR THE PROPOSED OPERATION OF
WQJZ(FM), OCEAN PINES, MARYLAND
CHANNEL 246A 1.4 KW 142 METERS
JUNE 2004

<u>CHANNEL</u>	<u>CALL</u>	<u>CITY/ STATE</u>	<u>GEOGRAPHIC COORDINATES</u>	<u>DISTANCE</u>	
				<u>ACTUAL</u> km	<u>REQUIRED</u> km
246A	WQJZ, Ocean Pines, MD		N 38-22-24 W 75-15-31	--	--
246B*	WASH, Washington, DC		N 38-57-01 W 75-15-30	171	178
245A*	WBEY, Crisfield, MD (Lic.)		N 37-58-31 W 75-49-46	66.8	72
245A*	WBEY, Crisfield, MD (CP)		N 38-01-45 W 75-45-05	57.7	72
244L1	App. Rehoboth, DE		N 38-37-50 W 75-05-51	31.8	29
247B	WIXM, Millville, NJ		N 39-19-15 W 74-46-17	113.4	113
248A	WICO, Salisbury, MD		N 38-21-39 W 75-37-00	31.3	31
249B	None within 100 km			--	69
243B	None within 100 km			--	69
299B	None within 50 km			--	15
300B	None within 50 km			--	15

*73.215 Authorization

TABLE II
COMPUTED CONTOUR DATA
FOR THE PROPOSED OPERATION OF
WQJZ(FM), OCEAN PINES, MARYLAND
JUNE 2004

<u>Azimuth</u> Degrees, True	<u>Average Elevation*</u> <u>Between 3-16 km</u> meters	<u>Center of Radiation</u> <u>Above Average Elevation</u> meters	<u>Computed F(50,50)</u> <u>Distance to Contour</u>	
			<u>3.16 mV/m</u> km	<u>1.0 mV/m</u> km
0	12	138	13.1	23.5
45	5	145	13.4	24.0
90	3	147	13.5	24.2
135	5	145	13.4	24.0
180	8	142	13.3	23.8
225	6	144	13.4	23.9
270	12	138	13.0	23.5
315	10	140	13.1	23.6
74**	3	147	13.5	24.2

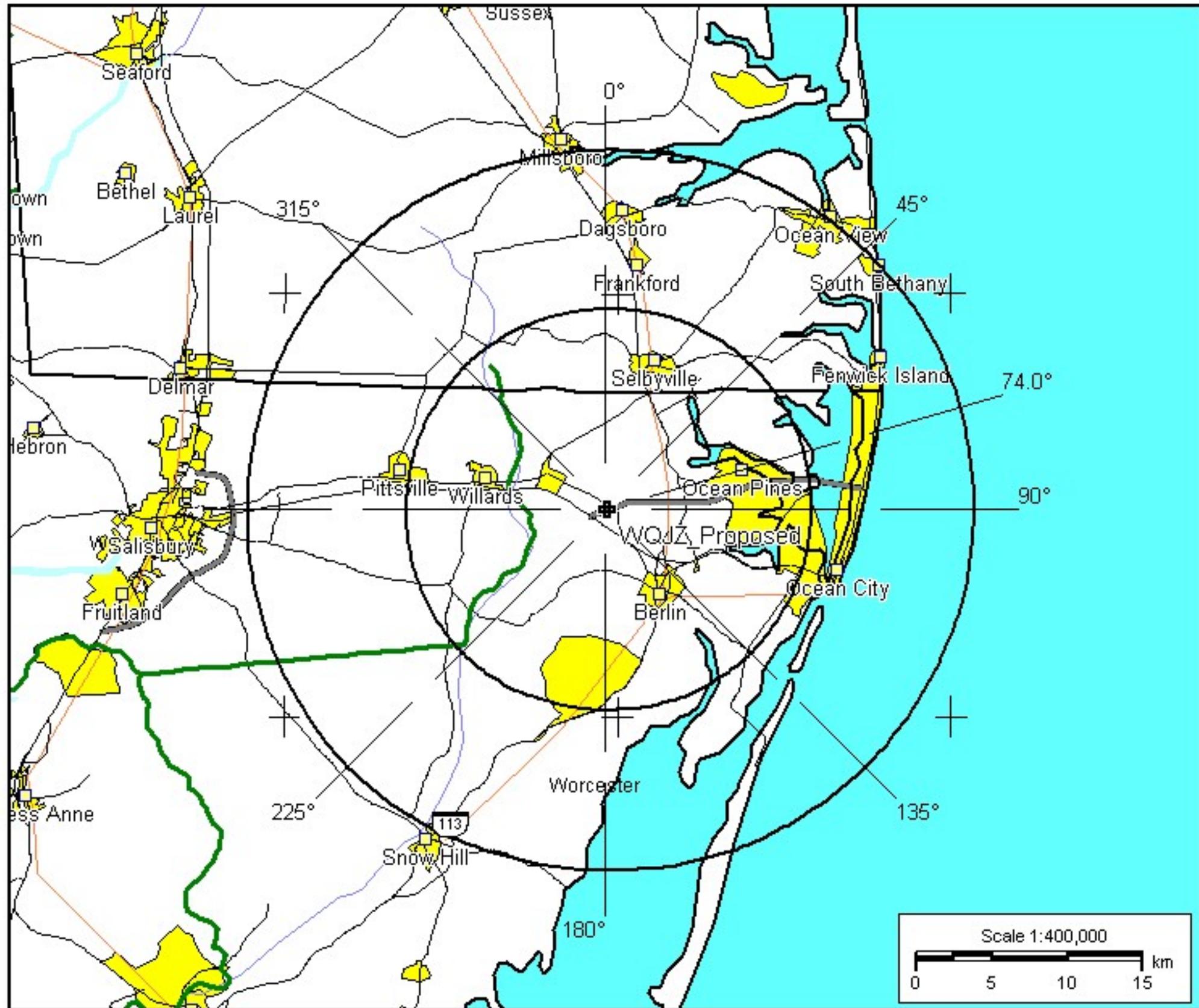
Channel 246A (97.1 MHz)
 Effective Radiated Power 1.4 kW
 Ground Elevation of the Site 3 meters AMSL
 Center of Radiation 150 meters AMSL
 Antenna Height Above Average Terrain 142 meters
 N 38-22-24
 W 75-15-31

* Based on 3 second computerized terrain data

** Radial through Ocean Pines, MD

WQJZ_Proposed

Latitude: 38-22-24 N
Longitude: 075-15-31 W
ERP: 1.40 kW
EIRP: 2.296 kW
Channel: 246
Frequency: 97.1 MHz
AMSL Height: 150.0 m
Elevation: 3.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None



Computed Contours For The Proposed FM Operation Of WQJZ, Ocean Pines, MD

June 2004

WQJZ

BLH19950315KF
 Latitude: 38-22-52 N
 Longitude: 075-10-32 W
 ERP: 4.60 kW
 EIRP: 7.544 kW
 Channel: 246
 Frequency: 97.1 MHz
 AMSL Height: 117.0 m
 Elevation: 6.0 m
 Horiz. Pattern: Directional
 Vert. Pattern: No
 Prop Model: None

WQJZ_Proposed

Latitude: 38-22-24 N
 Longitude: 075-15-31 W
 ERP: 1.40 kW
 EIRP: 2.296 kW
 Channel: 246
 Frequency: 97.1 MHz
 AMSL Height: 150.0 m
 Elevation: 3.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: None

WASH

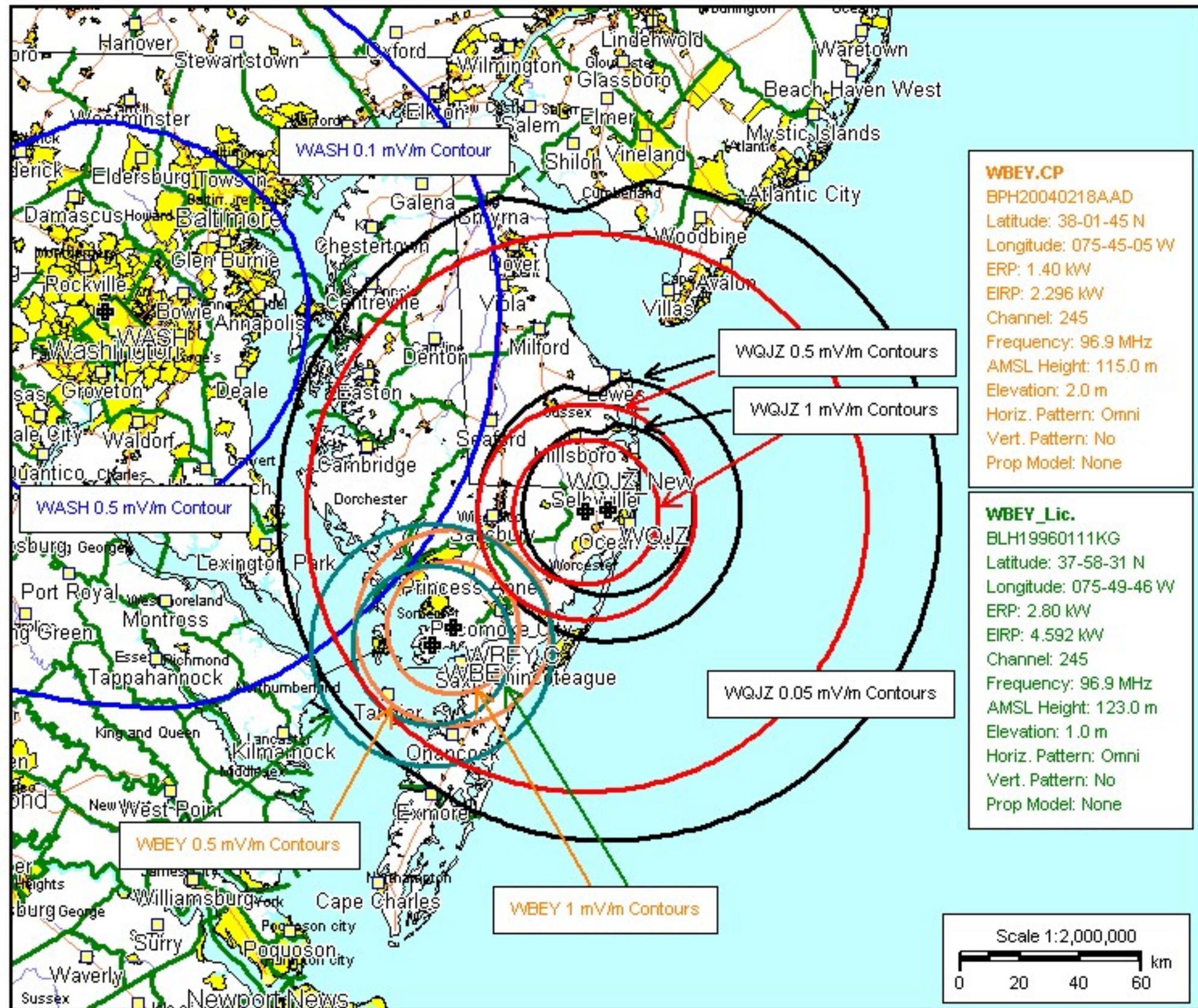
BLH20030326AHB
 Latitude: 38-57-01 N
 Longitude: 077-04-47 W
 ERP: 17.50 kW
 EIRP: 28.70 kW
 Channel: 246
 Frequency: 97.1 MHz
 AMSL Height: 315.0 m
 Elevation: 125.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: None

WBEY.CP

BPH20040218AAD
 Latitude: 38-01-45 N
 Longitude: 075-45-05 W
 ERP: 1.40 kW
 EIRP: 2.296 kW
 Channel: 245
 Frequency: 96.9 MHz
 AMSL Height: 115.0 m
 Elevation: 2.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: None

WBEY_Lic.

BLH19960111KG
 Latitude: 37-58-31 N
 Longitude: 075-49-46 W
 ERP: 2.80 kW
 EIRP: 4.592 kW
 Channel: 245
 Frequency: 96.9 MHz
 AMSL Height: 123.0 m
 Elevation: 1.0 m
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: None



Allocation Map for WQJZ(FM) from Licensed and Proposed Sites Showing Protected and Interfering Contours

JUNE 2004