MINOR CHANGE APPLICATION
MEGA COMMUNICATIONS
OF DAYTONA BEACH LICENSEE, LLC
WNUE-FM RADIO STATION
CH 251C2 - 98.1 MHZ - 50.0 KW
TITUSVILLE, FLORIDA
March 2008

EXHIBIT A

Compliance with §73.315(a) and §73.1125 Using Supplemental City Grade Analysis

The proposed transmitter location for WNUE-FM is located approximately 37.0 kilometers northwest of Titusville, Florida, and 39.0 kilometers from the WNUE-FM main studio located in Daytona Beach, Florida.[1] Using the Commission's standard method of predicting city grade coverage, as outlined in §73.313, the predicted 3.16 mV/m contour does not encompass the boundaries of Titusville, Florida and falls short of reaching the main studio in Daytona Beach. 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 proposed WNUE-FM antenna system is to be located on a new tower at geographic coordinates North Latitude 28° 51' 09.0" and West Longitude 81° 04' 03". The community of Titusville, Florida is located on bearings between 132° and 150° true from the proposed WNUE-FM site and the main studio is located between the bearing of 2° and 4°. We have analyzed the terrain in 1.0° increments from 2° through 4°, and in 2.0° increments between 132° and 150° to

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1) The main studio for WNUE-FM is located at 226 North Frederick Avenue, Daytona Beach, Florida. Geographic coordinates are North Latitude 29° 12' 16" and West Longitude 81° 02' 41.5".

determine the terrain variations on each of these radials. §73.313 of the rules notes the Commission's propagation curves are based on a 50.0 meter terrain variation (ΔH). Using the 30 second terrain database, on the three pertinent radials toward the main studio and ten pertinent radials toward the city, beginning 10.0 kilometers from the site out to a distance of 39.1 kilometers towards the studio, and out to a distance of 46.0 kilometers the farthest distance of the city boundary, the individual radial ΔH values never exceed 6.0 meters. Therefore, the terrain, along these pertinent radials, is determined to vary significantly from the 50.0 meter variation used in the Commission's field strength curve predictions.

We have determined the location of the 70 dBu contour, using the Point-to-Point, Version 2 [2], which is a variation of the irregular terrain model, using point-to-point calculation methodology, taking into consideration diffraction loss over knife edge and rounded obstacle obstructions. This model is a more representative prediction of field strength than the standard methodology.

On the pertinent bearings toward the main studio and the community of license, we tabulated the distance to the city grade contour, using both the FCC method (Exhibit A1) and supplemental method to demonstrate the differences in the distances to the contour. We find the supplemental depiction distances are greater (in excess of 10%) than the distances using the Commission's standard methodology (Exhibit A2). Based on the Staff's policy, we find the terrain on these radials varies widely and the differences to the contour distances, as determined

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2) This model was developed by the Commission's Office of Engineering and Technology. The program was implemented through the V-Soft Probe 3 computer software.

by the supplemental method, exceed the standard method by more than 10%.[3] Therefore, pursuant to §73.313(e), a supplemental method of depicting the city grade coverage is warranted. It is noted that at no point does the supplemental city grade distance extend beyond the predicted 60 dBu (50/50) protected contour of the proposed WNUE-FM using the FCC method.

Using the supplemental method calculations, we find the city grade contour in the direction towards the main studio in 1.0° increments between 2° and 4° degrees and in the direction of the community of license (Titusville, Florida) in 2° increments between 132° and 150° extends out 46.2 kilometers from the proposed site and encompasses 100.0% of the population and 99.8% of the land area within the boundary of the city of Titusville, as visually demonstrated in Exhibit A3. There are no terrain obstructions in the path between the proposed transmitter site and the main studio or the community of license of Titusville. Attached as Exhibits A4 through A8 are terrain profiles depicting the 3°, 132°, 138°, 144°, and 150° radials through the studio and city.[4]

A sample calculation was made, based on the 136° radial, between the site and the city to verify the location of the city grade contour, using a free space signal formula: 106.9 + power in dBk-20 log (distance in kilometers to point of interest). Based on the proposed WNUE-FM facility, the distance to the 70 dBu contour was calculated using the supplemental program and found to extend 49.4 kilometers. The 70 dBu contour, corrected to allow for a 5.0 dB clutter loss (75 dBu contour), is being sought.

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3) The variation of the terrain and distance to the supplemental contour complies with the supplemental policy outlined in a letter from the Mass Media Bureau to Mark Lipp, Esq. regarding KMAJ-FM, dated August 8, 2002.

4) The remaining studied radials are similar in variation and can be submitted at the staff's request.

106.9 + 10.41 dBk - 20log 49.4 = 90.0

Attenuation due to diffracted signal over terrain - 15.0 dB

Clutter Loss -5.0

Signal at point of interest 70.0 dBu

Based on the supplemental depiction, we find the WNUE-FM proposed facility delivers a 70 dBu signal to the main studio and to the community of Titusville. Therefore, the proposed WNUE-FM facility is in compliance with the rules regarding city grade coverage to the main studio and community of license.

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EXHIBIT A1

Tabulation of City Grade Contours in Arc Toward Main Studio and Titusville, Florida

Azi.	ΔH (39 km)	Location of 70 dBu FCC Method (F)	Location of 70 dBu P-to-P (P)	% Change	Method Used
002	6.0	31.5	49.4	+56.8	P
003	6.0	31.5	49.4	+56.8	P
004	6.0	31.5	49.3	+55.6	P

Azi.	ΔH (46 km)	Location of 70 dBu FCC Method (F)	Location of 70 dBu P-to-P (P)	% Change	Method Used
132	6.0	31.9	48.6	+52.4	P
134	6.0	31.9	49.1	+53.9	P
136	6.0	32.0	49.4	+54.4	P
138	6.0	32.1	49.2	+53.3	P
140	6.0	32.1	48.0	+49.5	P
142	6.0	32.1	47.0	+46.4	P
144	6.0	32.1	46.7	+45.5	P
146	6.0	32.1	49.4	+53.9	P
148	5.2	32.2	49.0	+52.2	P
150	0.0	32.2	50.0	+55.3	P

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EXHIBIT A2

Predicted contour:

N. Lat. = 28 51 09 - Tabulated City Grade and Protected Contour Data
W. Lng. = 81 04 03 - WNUE-FM Radio station - Titusville, Florida

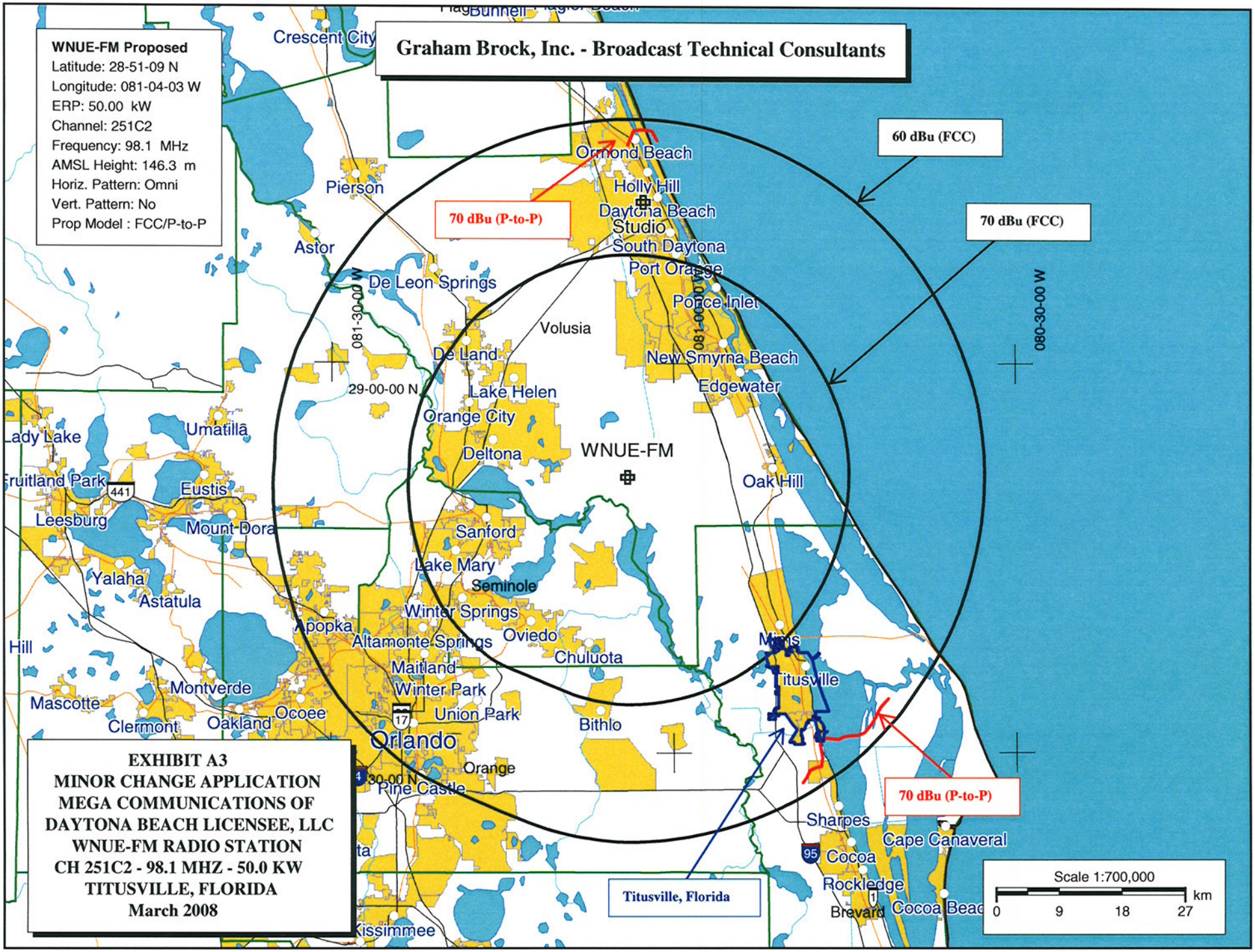
HAAT and Distance to Contour - FCC Method - NGDC 30 Second terrain database

Azi.	HAAT	ERP kW	dBk	Field	70-F5	60-F5
000	139.9	50.0000	16.99	1.000	31.49	50.82
045	140.3	50.0000	16.99	1.000	31.53	50.87
090	140.9	50.0000	16.99	1.000	31.60	50.95
135	144.0	50.0000	16.99	1.000	31.93	51.38
180	146.2	50.0000	16.99	1.000	32.19	51.69
225	146.0	50.0000	16.99	1.000	32.17	51.66
270	137.5	50.0000	16.99	1.000	31.23	50.48
315	139.2	50.0000	16.99	1.000	31.42	50.72

Ave El= 4.55 M HAAT= 141.75 M AMSL= 146.3 M

Additional Radials (Not Considered in Average):

002	140.0	50.0000	16.99	1.000	31.51	50.84
003	140.1	50.0000	16.99	1.000	31.52	50.85
004	140.2	50.0000	16.99	1.000	31.53	50.86
132	143.8	50.0000	16.99	1.000	31.91	51.35
134	143.8	50.0000	16.99	1.000	31.92	51.36
136	144.2	50.0000	16.99	1.000	31.97	51.42
138	145.0	50.0000	16.99	1.000	32.05	51.52
140	145.4	50.0000	16.99	1.000	32.10	51.58
142	145.7	50.0000	16.99	1.000	32.12	51.61
144	145.7	50.0000	16.99	1.000	32.12	51.61
146	145.5	50.0000	16.99	1.000	32.11	51.60
148	146.0	50.0000	16.99	1.000	32.16	51.66
150	146.2	50.0000	16.99	1.000	32.19	51.69


WNUE-FM Proposed
Latitude: 28-51-09 N
Longitude: 081-04-03 W
ERP: 50.00 kW
Channel: 251C2
Frequency: 98.1 MHz
AMSL Height: 146.3 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model : FCC/P-to-P
Graham Brock, Inc. - Broadcast Technical Consultants
60 dBu (FCC)
70 dBu (FCC)
70 dBu (P-to-P)
70 dBu (P-to-P)
WNUE-FM
Titusville, Florida
081-30-00 W
080-30-00 W
29-00-00 N
Crescent City
Pierson
Astor
De Leon Springs
Volusia
De Land
Lake Helen
Orange City
Deltona
Ormond Beach
Holly Hill
Daytona Beach
Studio
South Daytona
Port Orange
Ponce Inlet
New Smyrna Beach
Edgewater
Oak Hill
Umatilla
Eustis
Mount Dora
Leesburg
Yalaha
Astatula
Lady Lake
Fruitland Park
441
Sanford
Lake Mary
Seminole
Winter Springs
Oviedo
Chuluota
Altamonte Springs
Apopka
Maitland
Winter Park
Union Park
Orlando
Orange
Pine Castle
Bithlo
Titusville
Mims
Sharpes
Cape Canaveral
Cocoa
Rockledge
Brevard
Cocoa Beac
Montverde
Mascotte
Clermont
Oakland
Ocoee
Hill
17
95
1
Scale 1:700,000
0
9
18
27
km
EXHIBIT A3
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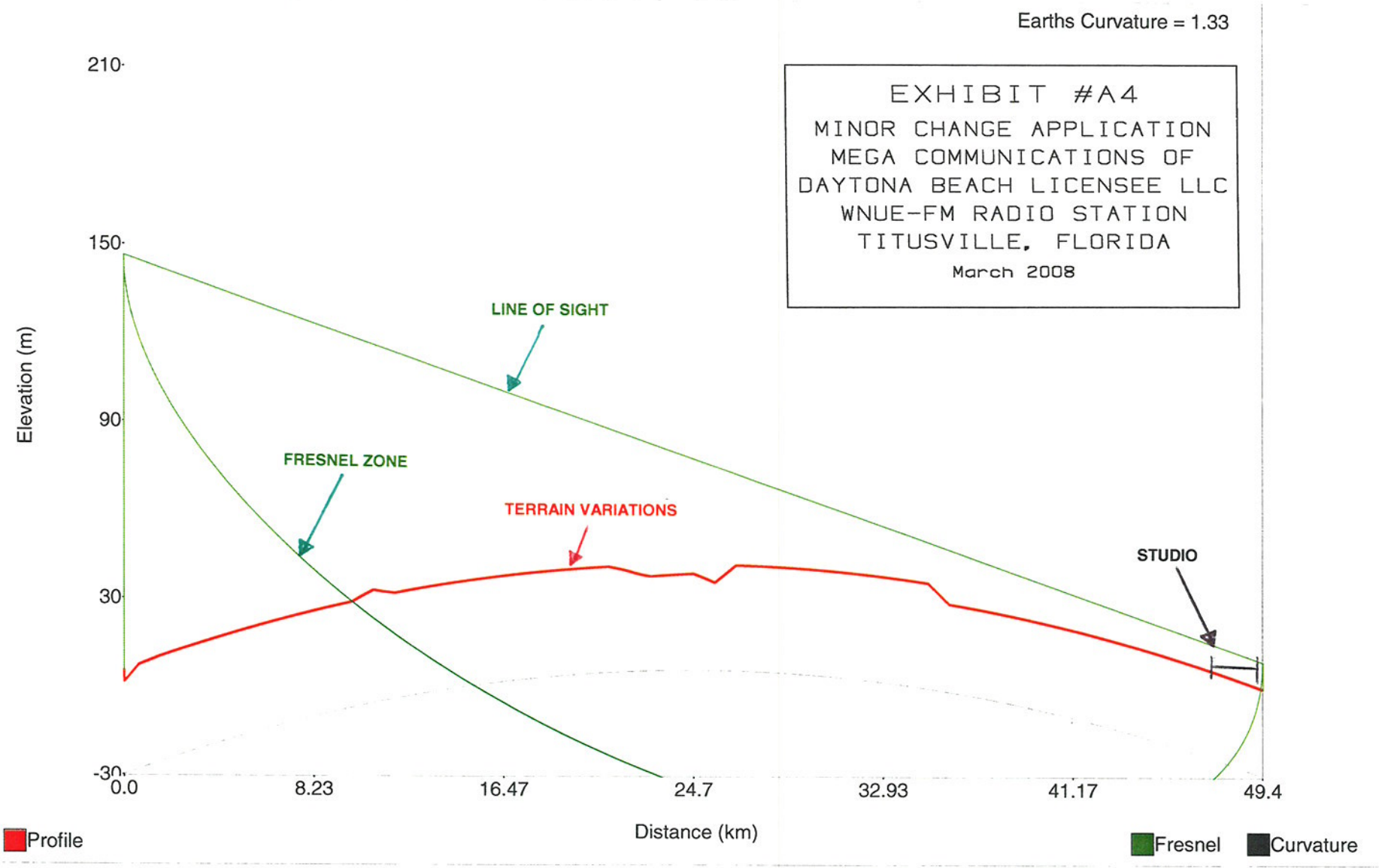
Terrain path profile - WNUE-FM radio station - 3° radial



Starting Latitude: 28-51-09 N
Starting Longitude: 081-04-03 W

End Latitude: 29-17-51.37 N
End Longitude: 081-02-27.21 W

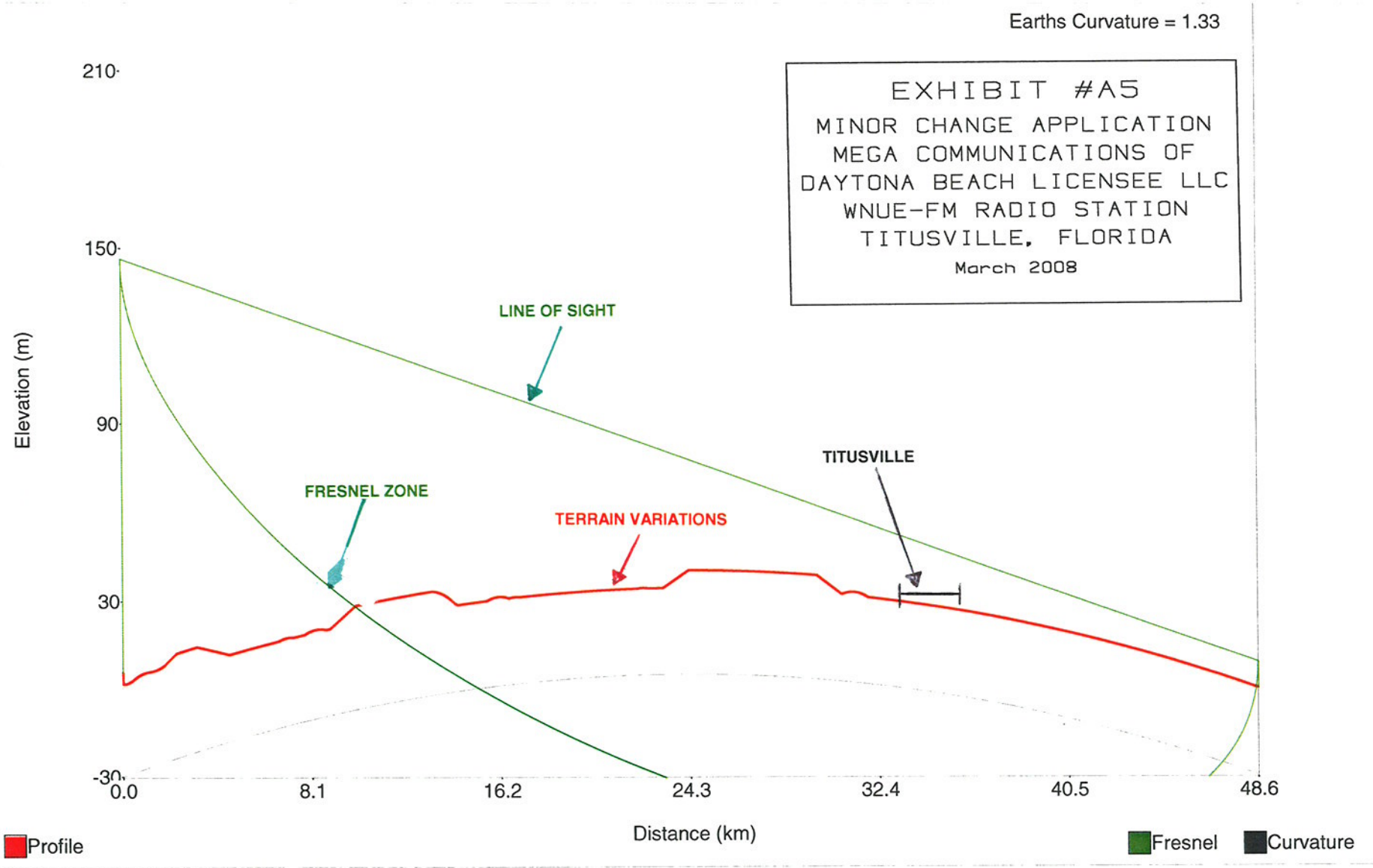
Distance: 49.4 km
Bearing: 3 deg

Transmitter Height (AG) = 140.8 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 5.5 m
Receiver Elevation = 0.0 m

Frequency = 98.1 MHz
Fresnel Zone: 0.6

Terrain path profile - WNUE-FM radio station - 132° radial



Starting Latitude: 28-51-09 N
Starting Longitude: 081-04-03 W

End Latitude: 28-33-30.84 N
End Longitude: 080-41-54.25 W

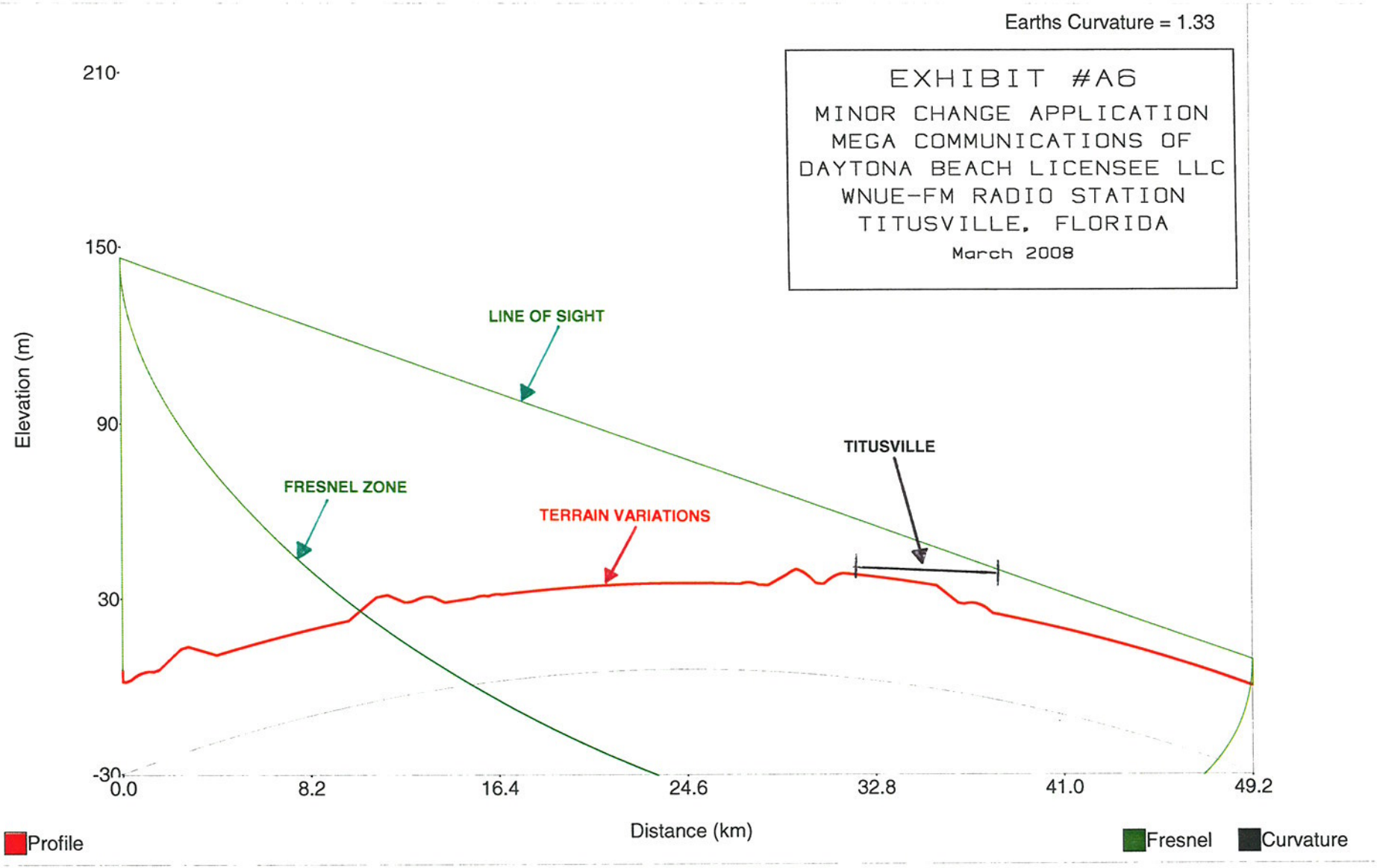
Distance: 48.6 km
Bearing: 132 deg

Transmitter Height (AG) = 140.8 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 5.5 m
Receiver Elevation = 0.0 m

Frequency = 98.1 MHz
Fresnel Zone: 0.6

Terrain path profile - WNUE-FM radio station - 138° radial



Starting Latitude: 28-51-09 N
Starting Longitude: 081-04-03 W

End Latitude: 28-31-19.81 N
End Longitude: 080-43-52.24 W

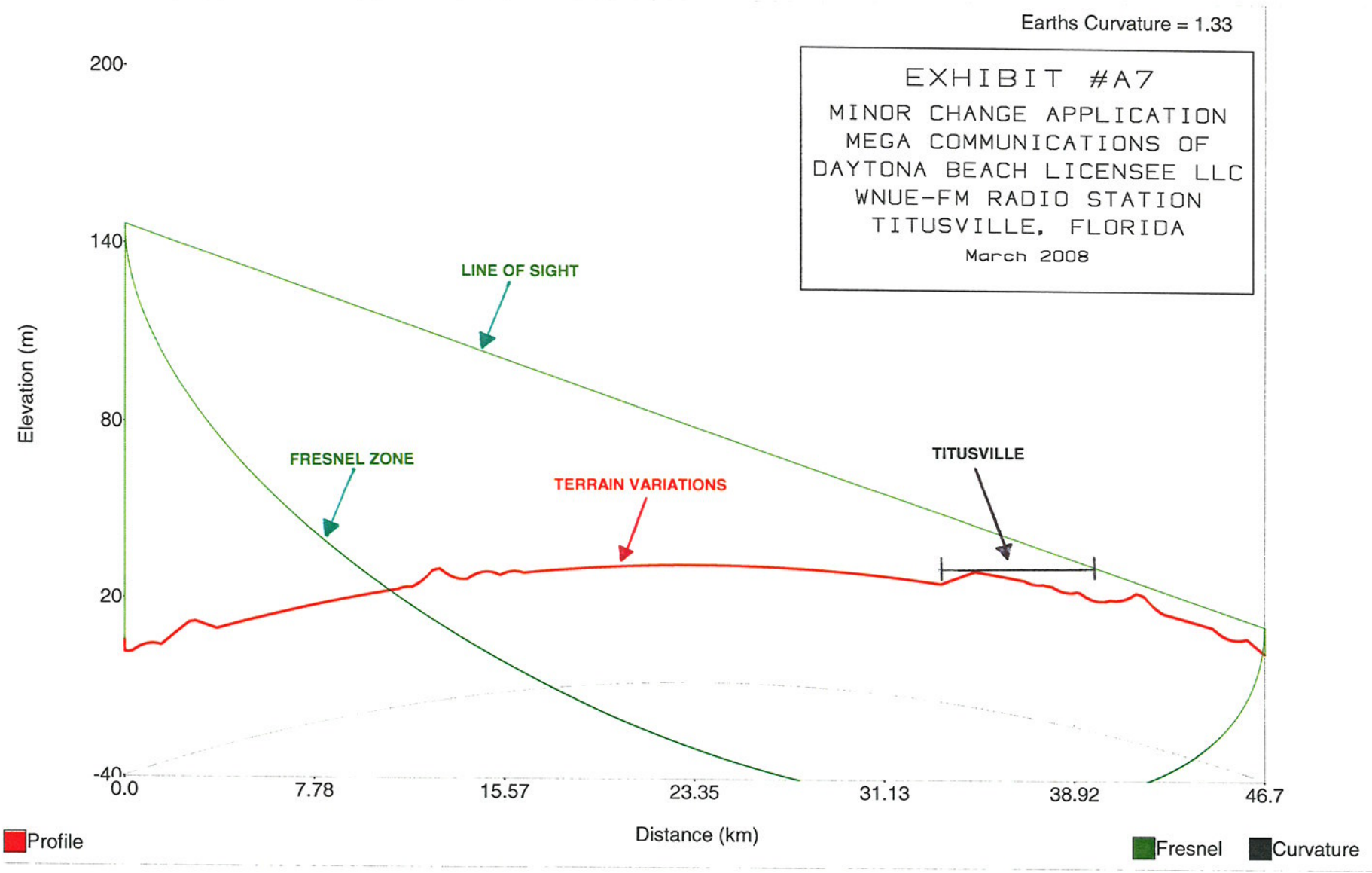
Distance: 49.2 km
Bearing: 138 deg

Transmitter Height (AG) = 140.8 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 5.5 m
Receiver Elevation = 0.0 m

Frequency = 98.1 MHz
Fresnel Zone: 0.6

Terrain path profile - WNUE-FM radio station - 144° radial



Starting Latitude: 28-51-09 N
Starting Longitude: 081-04-03 W

End Latitude: 28-30-40.69 N
End Longitude: 080-47-13.58 W

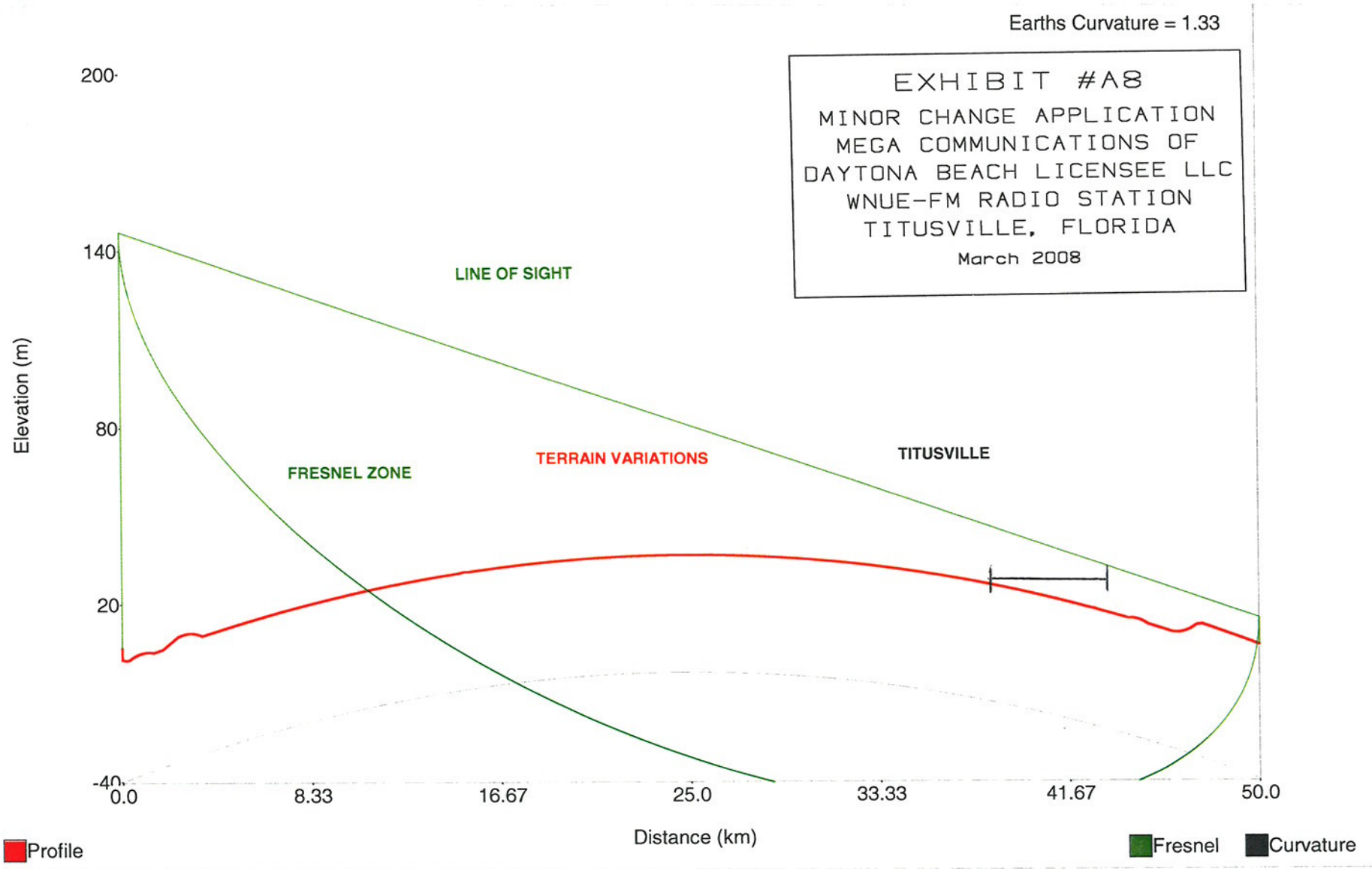
Distance: 46.7 km
Bearing: 144 deg

Transmitter Height (AG) = 140.8 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 5.5 m
Receiver Elevation = 2.8 m

Frequency = 98.1 MHz
Fresnel Zone: 0.6

Terrain path profile - WNUE-FM radio station - 150° radial



Starting Latitude: 28-51-09 N
Starting Longitude: 081-04-03 W

End Latitude: 28-27-41.56 N
End Longitude: 080-48-44.09 W

Distance: 50 km
Bearing: 150 deg

Transmitter Height (AG) = 140.8 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 5.5 m
Receiver Elevation = 6.0 m

Frequency = 98.1 MHz
Fresnel Zone: 0.6