MINOR CHANGE APPLICATION
TAMA RADIO LICENSES
OF JACKSONVILLE, FL, INC.
WJSJ (FM) RADIO STATION
CH 287A - 105.3 MHZ - 5.4 KW
YULEE, FLORIDA
March 2006

EXHIBIT A

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

The proposed tower site for WJSJ is located approximately 23.0 kilometers from the center of Yulee, Florida. From the proposed WJSJ facility, the predicted 3.16 mV/m contour, using the Commission's standard method of predicting city grade coverage as outlined in §73.313, does not encompass the community of Yulee. However, in this particular case, we find that a supplemental method of depicting city grade coverage, as noted in §73.313(e) of the Commission's rules, is appropriate. We have analyzed the terrain in 5.0° increments from 344° to 4° to determine the terrain variations on each of these radials. §73.313 of the rules notes that the Commission's propagation curves are based on a 50.0 meter terrain variation (ΔH). Using the 30 second terrain database, on the five pertinent radials toward the community of Yulee, Florida, beginning 10.0 kilometers out from the site to a distance of 28.0 kilometers, the individual radial ΔH values never exceed 6.0 meters. As such, the terrain along the pertinent radials varies from the 50.0 meter variation used in the Commission's field strength curves.

The proposed WJSJ antenna system is to be located north of Jacksonville, Florida, at geographic coordinates North Latitude 30° 25' 54" and West Longitude 81° 33' 14". The

community of Yulee, Florida, is located on bearings between 344° and 4° true from the proposed WJSJ site. By running individual radials in 5° increments from the WJSJ site through the community we determined the location of the city grade contour, based on the standard utilization of the Commission's 50/50 curves (see Exhibit A1). We have alternatively determined the location of the 70 dBu contour, using the Diffcomb program (Version 7B), which is a variation of the irregular terrain model, taking into consideration diffraction loss over knife edge and rounded obstacle obstructions. Further, reductions of calculated signal strength are also made to account for foliage and buildings (Clutter Loss).[3] This model is a more representative prediction of field strength than the standard methodology, under certain terrain conditions.

On the pertinent bearings toward the community of Yulee, Florida, we tabulated the distance to the city grade contour using both the FCC method and supplemental method to demonstrate the differences to the contour and found that the supplemental depiction distances are in excess of 10% higher than the distances using the Commission's standard methodology (see Exhibit A2). Based on the Staff's policy, we find that the terrain on these pertinent radials varies widely from the 3.0 kilometers to the 16.0 kilometer average (as detailed above) and the differences to the contour distances, as determined by the supplemental method, exceed the standard method by more than 10%. Therefore, pursuant to §73.313(e), a supplemental method of depicting the city grade coverage is acceptable. It is noted that at no point does the supplemental city grade distance extend beyond the predicted 60 dBu (50/50) protected contour.[4]

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3) To insure coverage of the proposed community, the Diffcomb model was set at 28.5 kilometers as the point of interest.

4) The Diffcomb contour did not extended beyond the predicted 60 dBu contour.

Using the supplemental method calculations, we find that the city grade contour in the direction of Yulee, Florida, in 5° increments between 344° and 4°, extends at least 26.0 kilometers, with some extending 28.0 kilometers from the site, on the pertinent radials into and beyond the community of Yulee, Florida.[5] As visually demonstrated on Exhibit A3, the predicted 70 dBu signal, as calculated using the Diffcomb model, shows Yulee, Florida, within the predicted city grade contour.[6] There are no terrain obstructions in the path between the proposed transmitter site and the community. Attached as Exhibits A4 through A8 are the terrain profiles of the 344°, 349°, 354°, 359° and 4° radials.

A sample calculation was made based on the 354° radial between the site and the community to verify the location of the city grade using a free space signal formula: 106.9 + power in dBk-20 log (distance in kilometers to point of interest). Based on the proposed WJSJ facility, the distance to the 70 dBu contour was calculated using the Diffcomb program (Version 7B) and found to extend 28.0 kilometers. The 70 dBu contour, corrected to allow for a 5.0 dB clutter loss (the 75 dBu contour), is being sought.

106.9 + 7.32 dBk - 20log 28.0 = 85.3

Attenuation due to diffracted signal over terrain - 10.3 dB

Clutter Loss -5.0

Signal at point of interests 70.0 dBu

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5) The city grade, using the Point-to-Point model, do not all extend beyond the community.

6) Using a computer planimeter, it has been determined that 7,399 persons in 54.68 square kilometers receive a city grade signal from the proposed WJSJ facility. This represents 88.2% of the population (based on a total of 8,392 persons) and 91.8% of the area within the census boundary of Yulee.

Therefore, based on the supplemental depiction, we find the community of Yulee, Florida to be within the city grade contour of the proposed WJSJ facility and is in compliance with the Commission's rules.[7]

7) Since the coverage is in excess of 80% of persons and land area, the proposed facility complies with the Commission's rules.

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EXHIBIT A1

Predicted contour:

N. Lat. = 30 25 54 - Tabulated City grade and Service Contour Data
W. Lng. = 81 33 14 - WJSJ Radio Station - Yulee, Florida

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

Azi.	HAAT	ERP kW	dBk	Field	70-F5	60-F5
000	105.7	5.4000	7.32	1.000	16.21	28.36
045	106.8	5.4000	7.32	1.000	16.30	28.48
090	107.6	5.4000	7.32	1.000	16.38	28.59
135	105.3	5.4000	7.32	1.000	16.17	28.30
180	99.8	5.4000	7.32	1.000	15.67	27.61
225	106.4	5.4000	7.32	1.000	16.27	28.44
270	106.8	5.4000	7.32	1.000	16.30	28.48
315	103.0	5.4000	7.32	1.000	15.95	28.01

Ave El= 2.77 M HAAT= 105.16 M AMSL= 107.93 M

Additional Radials (Not Considered in Average):

344	104.0	5.4000	7.32	1.000	16.05	28.14
349	105.1	5.4000	7.32	1.000	16.15	28.28
354	105.4	5.4000	7.32	1.000	16.17	28.31
359	105.7	5.4000	7.32	1.000	16.21	28.35
004	104.8	5.4000	7.32	1.000	16.13	28.25

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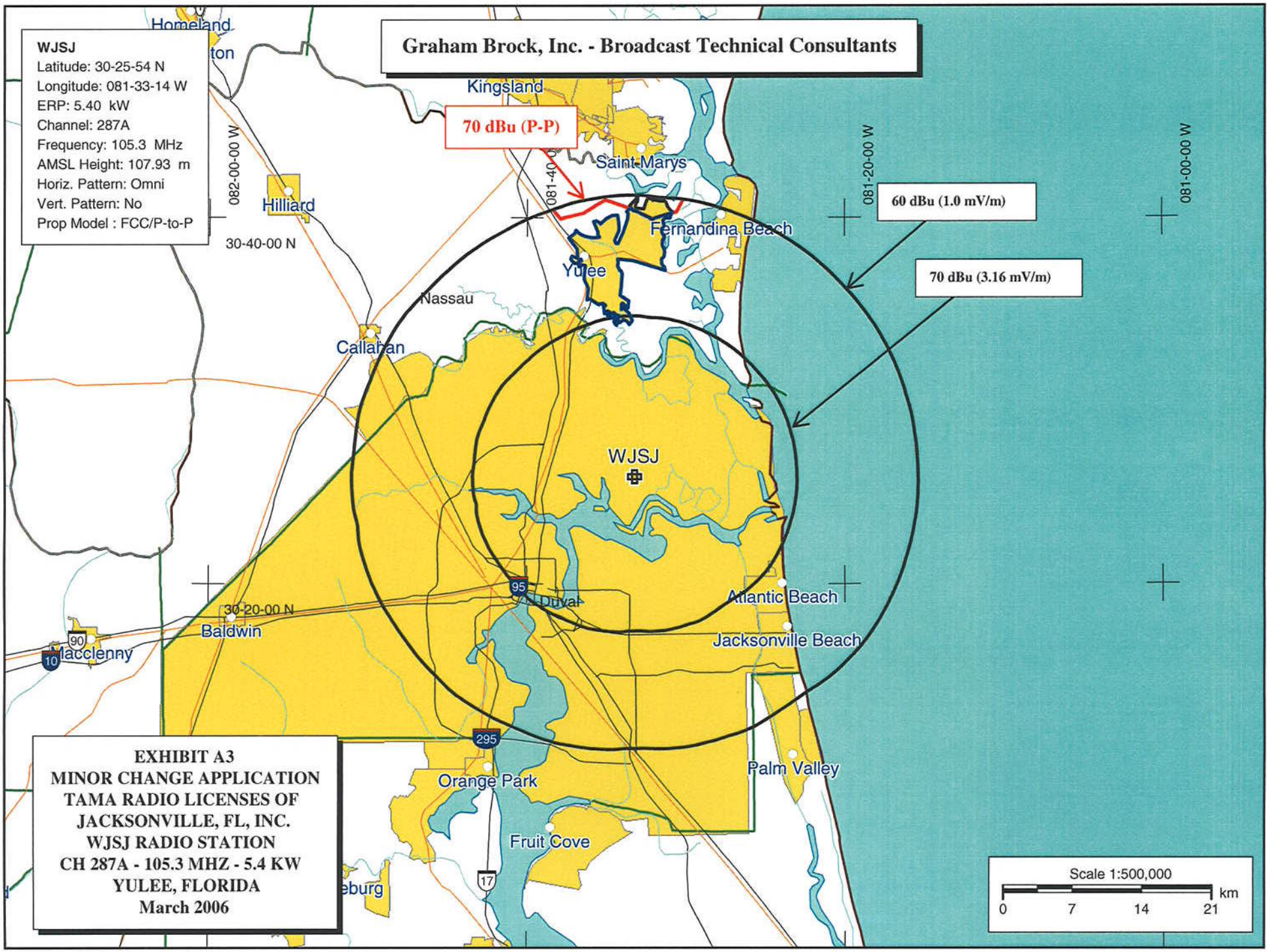
EXHIBIT A2

Tabulation of City Grade Contours in Arc Towards Yulee, Florida

Radial (Bearing)	Delta h meters	Location of 70 dBu FCC Method (F)	Diffcomb(D)	% of Chg	Method Used
344°	6.0	16.1	27.0	+ 67.7	D
349°	6.0	16.2	27.0	+ 66.7	D
354°	6.0	16.2	28.0	+ 72.8	D
359°	6.0	16.2	27.0	+ 66.7	D
4°	6.0	16.1	26.0	+ 61.5	D


WJSJ
Latitude: 30-25-54 N
Longitude: 081-33-14 W
ERP: 5.40 kW
Channel: 287A
Frequency: 105.3 MHz
AMSL Height: 107.93 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model : FCC/P-to-P
Graham Brock, Inc. - Broadcast Technical Consultants
70 dBu (P-P)
60 dBu (1.0 mV/m)
70 dBu (3.16 mV/m)
WJSJ
Homeland
Kingsland
Saint Marys
Hilliard
Fernandina Beach
Yulee
Nassau
Callahan
Baldwin
Jacksonville
Atlantic Beach
Jacksonville Beach
Palm Valley
Orange Park
Fruit Cove
Duval
082-00-00 W
081-40-00 W
081-20-00 W
081-00-00 W
30-40-00 N
30-20-00 N
95
90
10
295
17
EXHIBIT A3
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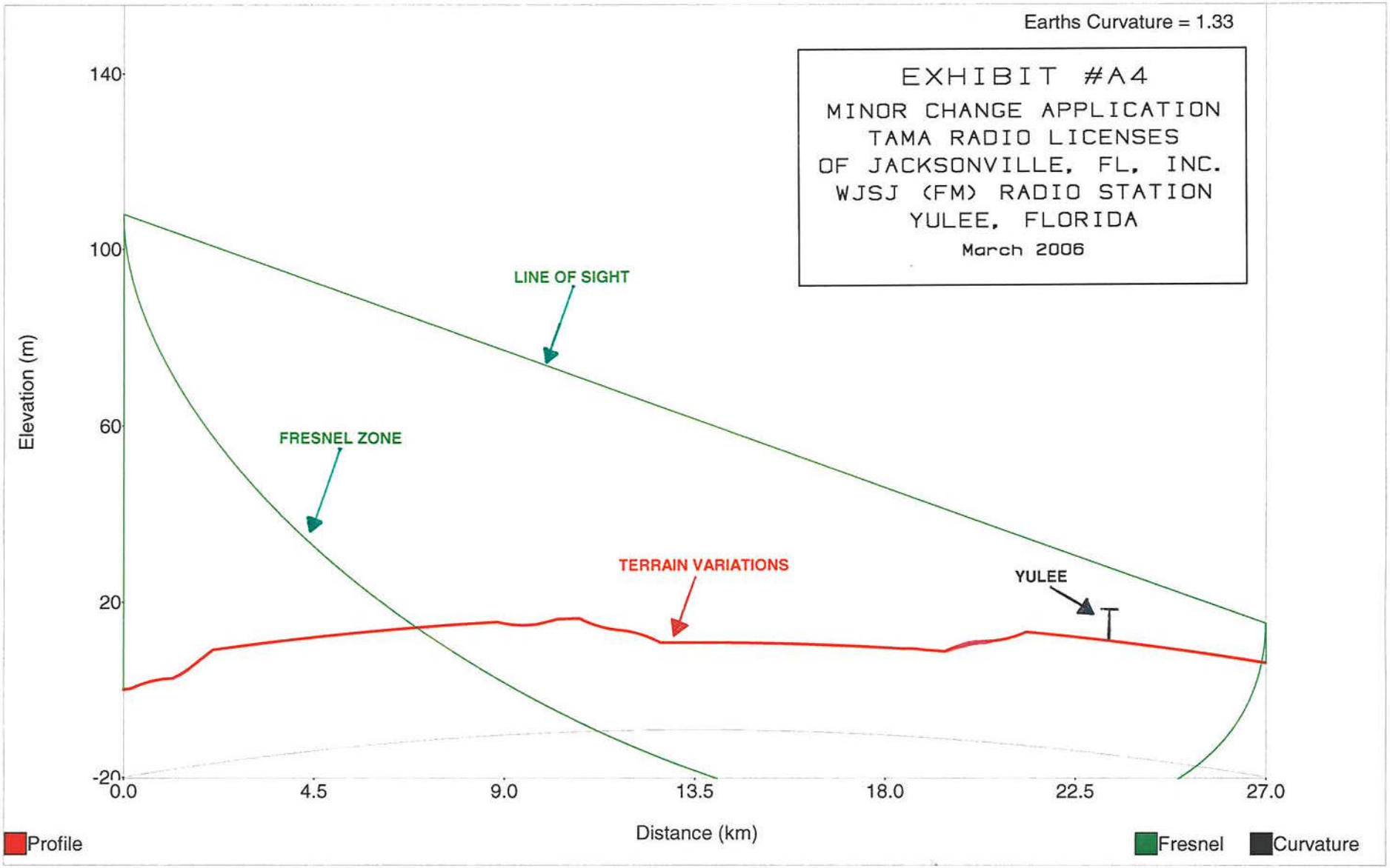
Scale 1:500,000
km
0
7
14
21

WJSJ Terrain profile - 344° radial



Starting Latitude: 30-25-54 N
Starting Longitude: 081-33-14 W

End Latitude: 30-39-56.75 N
End Longitude: 081-37-53.55 W

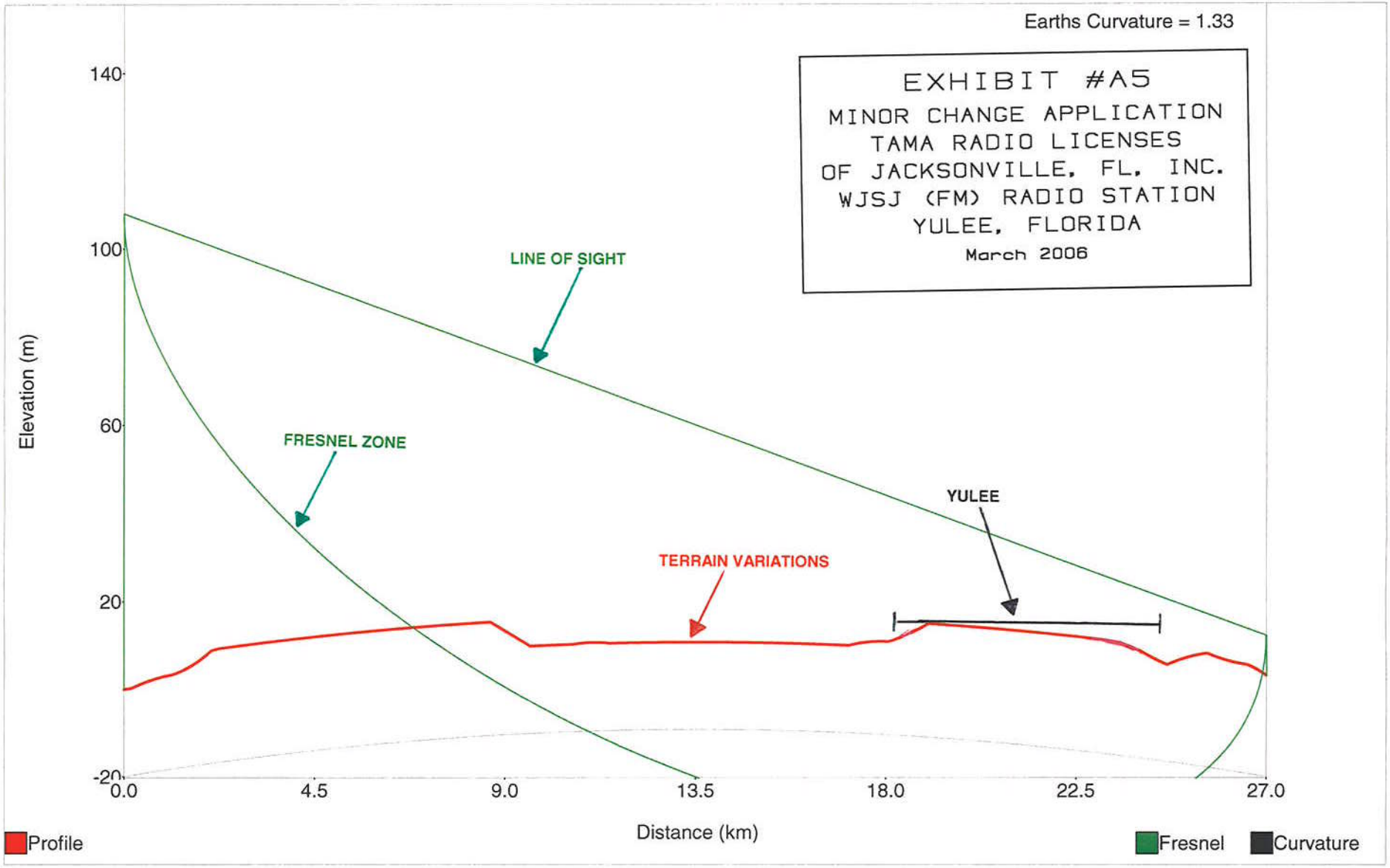
Distance: 27 km
Bearing: 344 deg

Transmitter Height (AG) = 107.9 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 0.0 m
Receiver Elevation = 6.0 m

Frequency = 105.3 MHz
Fresnel Zone: 0.6

WJSJ Terrain profile - 349° radial



Starting Latitude: 30-25-54 N
Starting Longitude: 081-33-14 W

End Latitude: 30-40-14.65 N
End Longitude: 081-36-27.53 W

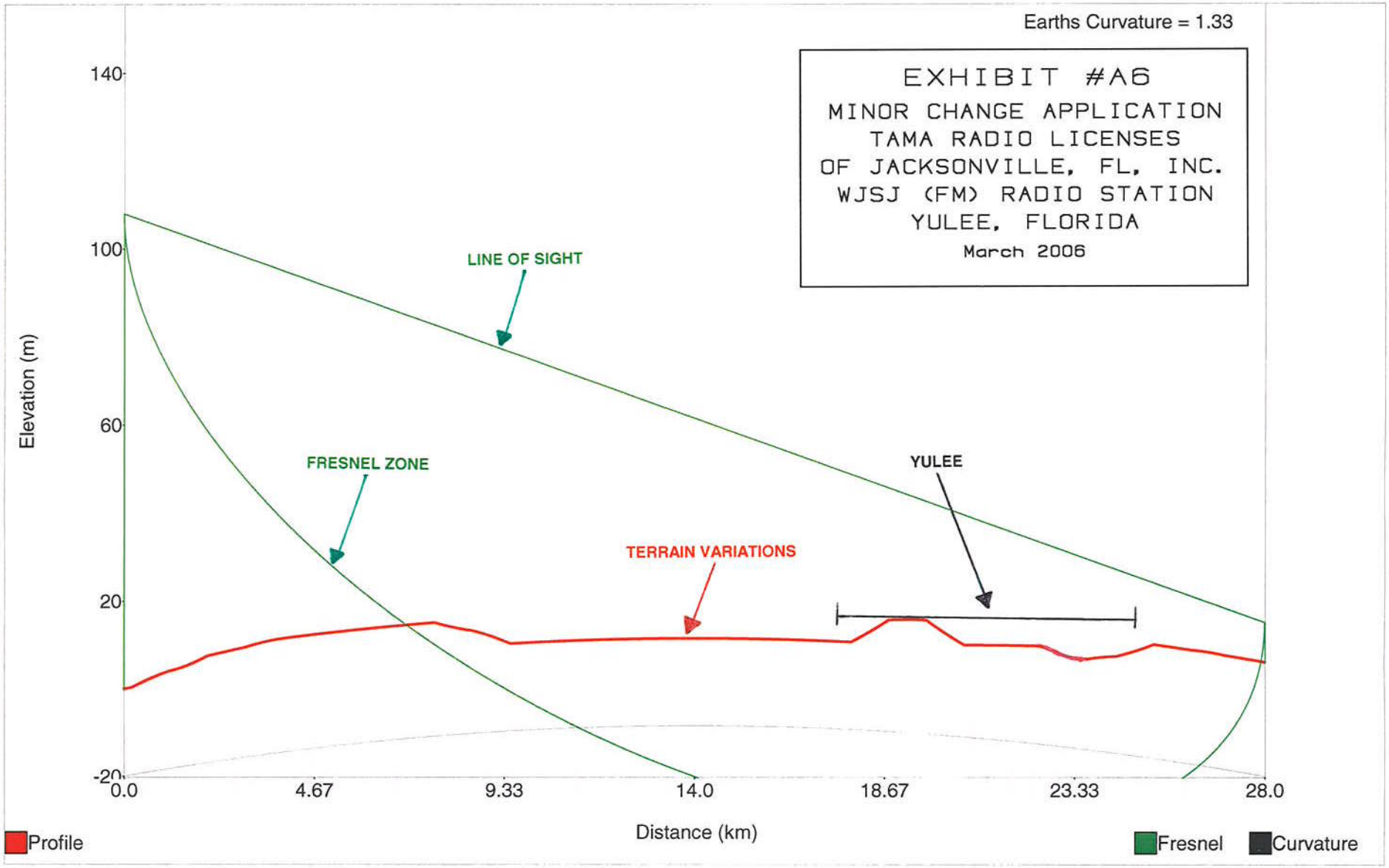
Distance: 27 km
Bearing: 349 deg

Transmitter Height (AG) = 107.9 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 0.0 m
Receiver Elevation = 3.1 m

Frequency = 105.3 MHz
Fresnel Zone: 0.6

WJSJ Terrain profile - 354° radial



Starting Latitude: 30-25-54 N
Starting Longitude: 081-33-14 W

End Latitude: 30-40-58.28 N
End Longitude: 081-35-03.96 W

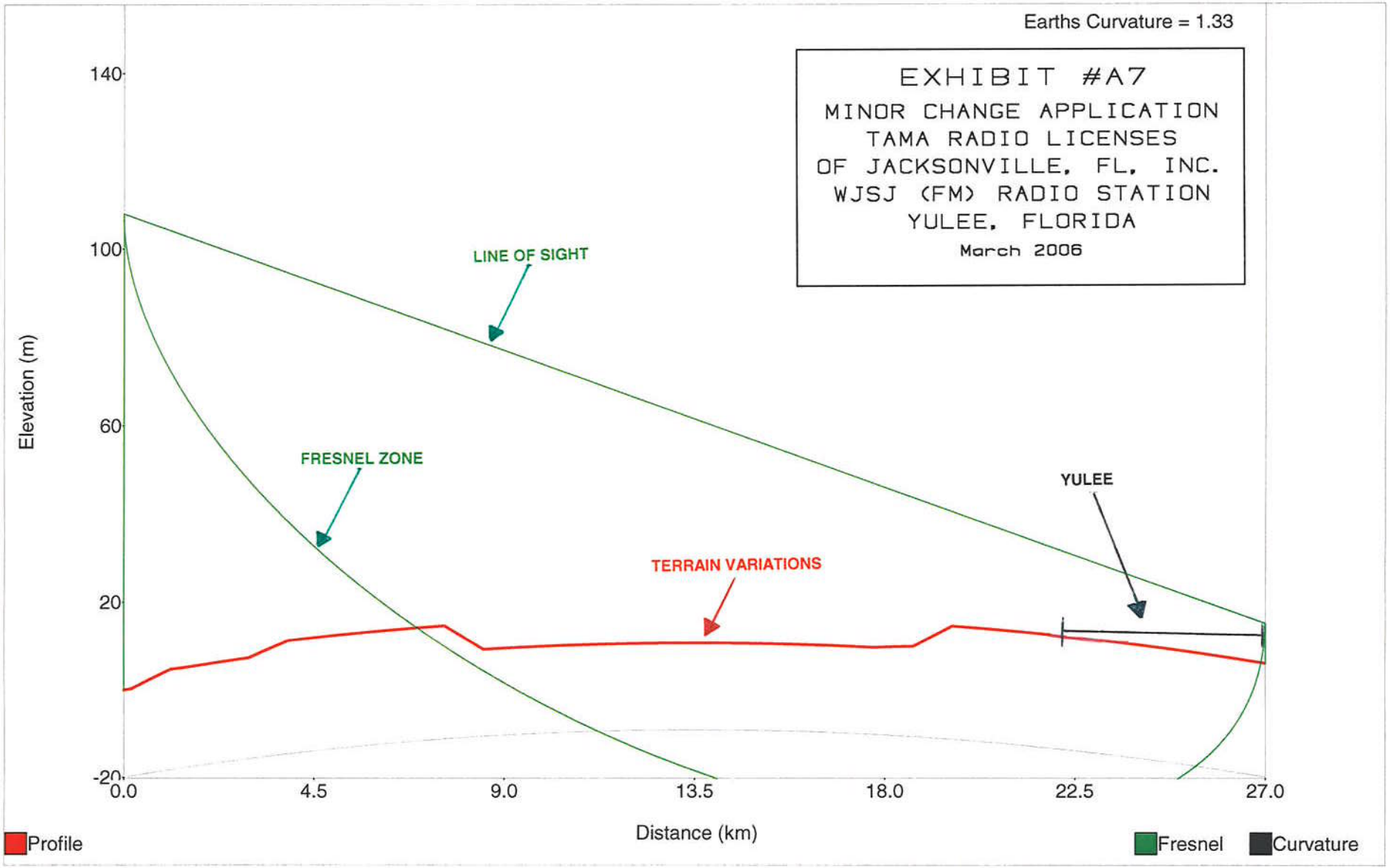
Distance: 28 km
Bearing: 354 deg

Transmitter Height (AG) = 107.9 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 0.0 m
Receiver Elevation = 6.0 m

Frequency = 105.3 MHz
Fresnel Zone: 0.6

WJSJ Terrain profile - 359° radial



Starting Latitude: 30-25-54 N
Starting Longitude: 081-33-14 W

End Latitude: 30-40-30.66 N
End Longitude: 081-33-31.70 W

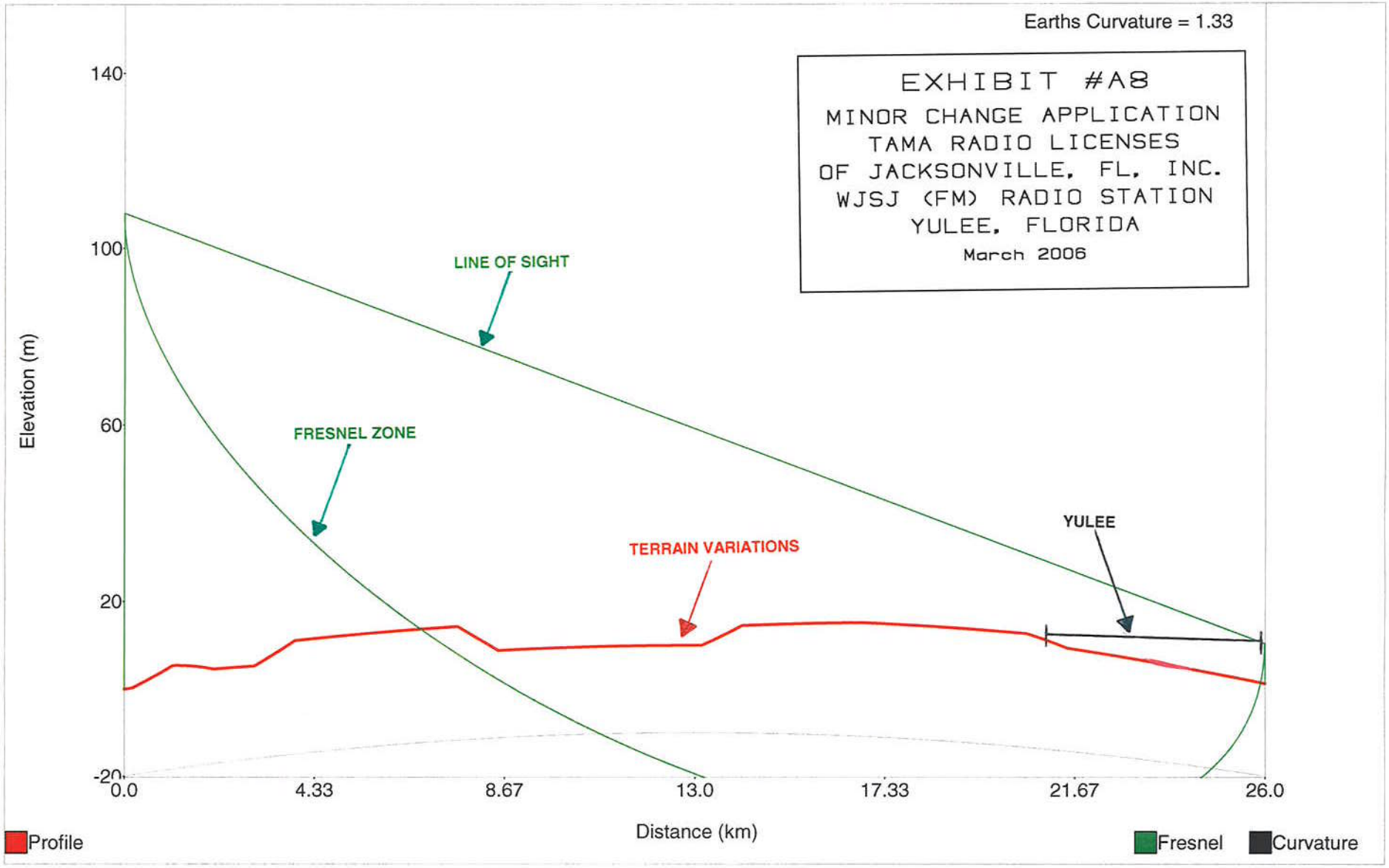
Distance: 27 km
Bearing: 359 deg

Transmitter Height (AG) = 107.9 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 0.0 m
Receiver Elevation = 6.0 m

Frequency = 105.3 MHz
Fresnel Zone: 0.6

WJSJ Terrain profile - 4° radial



Starting Latitude: 30-25-54 N
Starting Longitude: 081-33-14 W

End Latitude: 30-39-56.26 N
End Longitude: 081-32-05.87 W

Distance: 26 km
Bearing: 4 deg

Transmitter Height (AG) = 107.9 m
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 0.0 m
Receiver Elevation = 1.2 m

Frequency = 105.3 MHz
Fresnel Zone: 0.6