

FEDERAL COMMUNICATIONS COMMISSION

CLASS OF STATION FM

STH

The following application is submitted for action by the Chief, Broadcast Bureau.

ST	FILE NUMBER	CALL	APPLICANT AND LOCATION	NATURE OF APPLICATION
NE	BPED -900621MA N/M	NEW 88.5MHZ	JOY PUBLIC BROADCASTING CORP. LINCOLN NE	CP FOR NEW EDUCATIONAL FM ON: FREQUENCY: 88.5 MHZ; ERP:0.0 (H) KW & 5.0 (V) KW H&V; HAAT: 95.7 METERS H&V 40 55 49 96 32 42

LICENSE EXPIRATION DATE _____

CHIEF, LICENSE DIVISION

RECOMMENDATION: GRANT() CONSTRUCTION DATES, START _____ END _____

CONTESTED () UNCONTESTED ()

APPROVED _____

FOR CHIEF, BROADCAST BUREAU

F.C.C.-WASHINGTON, D.C.

DUPLICATE

United States of America
Federal Communications Commission
Washington, D.C. 20554

Approved by OMB
3060-0034
Expires 9/30/87

FILED-881205NB

APPLICATION FOR CONSTRUCTION PERMIT FOR NONCOMMERCIAL EDUCATIONAL BROADCAST STATION (Carefully read instructions before filling out Form—RETURN ONLY FORM TO FCC)

For Commission Use Only
File No.

RECEIVED

DEC - 5 1988

Section I

General Information

1. Name of Applicant

Joy Public
Broadcasting Corp.

Street Address
Federal Communications Commission
Office of the Secretary

5 7 1 2 Massachusetts Ave

City
Bethesda

State
MD

ZIP Code
2 0 8 1 6

Telephone No.
(Include Area Code)
(301)

Send notices and communications to the following named person at the address below:

229-1645

Name

Street Address

City

State

ZIP Code

Telephone No.
(Include Area Code)

2. This application is for: AM FM TV

(a) Channel No. or Frequency: 203 (88.5)

(b) Community of license:

City State

Lincoln NI

(c) Check one of the following boxes:

- Application for new station
- Major Change in Existing station; call sign: _____
- Minor Change in Existing station; call sign: _____
- Modification of Construction Permit; File No. of CP: _____
- Amendment to Pending Application; Reference Number (ARN): _____

NOTE: It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

3. Is this application mutually exclusive with a renewal application?

YES NO

If Yes, State:

Call letters:

Community of license:

City

State

Name of Applicant Joy Public Broadcasting Corp.

1. Purpose of authorization applied for:

- Construct a new station
- Install Auxiliary system

- Change:
- Effective radiated power
 - Frequency
 - Antenna height above average terrain
 - Transmitter location
 - Studio location outside community of license
 - Other (Summarize briefly the nature of the changes proposed.)

2. Community of license: State Nebraska City or Town Lincoln

3. Facilities requested: Frequency 88.5 MHz Channel No. 203 Class (Check one below)

A B B1 D
 C C1 C2

4. Geographic coordinates of antenna (to nearest second)

North Latitude 40° 55' 49" West Longitude 96° 32' 42"

5. Effective radiated power:

<u>Polarization</u>	<u>Horizontal Plane</u>	<u>Maximum (Beam tilt only)</u>
Horizontal	<u>0.0</u> kW	<u>NA</u> kW
Vertical	<u>5.0</u> kW	<u>NA</u> kW

6. Height in meters of antenna radiation center:

	<u>Above Average terrain (HAAT)</u>	<u>Above Mean Sea Level</u>	<u>Above Ground</u>
Horizontal	<u>NA</u> meters	<u>NA</u> meters	<u>NA</u> meters
Vertical	<u>95.7</u> meters	<u>457.2</u> meters	<u>118.9</u> meters

7. Is a directional antenna being proposed? YES NO

If Yes, attach as Exhibit No. NA an engineering statement with all data specified in Section 73.316(d) of the Commission's Rules.

8. Transmitter location: State Nebraska County Lancaster

City or Town Waverly Street Address (or other identification) Northwest of Waverly, Ne. by .92 miles.

9. Overall height of complete structure above ground, including all appurtenances and lighting (if any, see Part 17). 128.0 meters

10. Attach as Exhibit No. E2 map(s) (Sectional Aeronautical charts or equivalent) of the area proposed to be served and shown thereon:

- (a) Proposed transmitter location and the radials along which the profile graphs have been prepared;
- (b) The 1mV/m predicted contour;
- (c) Area (sq. mi.) and population (latest census) within 1 mV/m contour;
- (d) Scale of miles or kilometers (kilometers if available).

11. Attach as Exhibit No. E2 a map (Sectional Aeronautical charts where obtainable) showing the present and proposed 1 mV/m (60 dbu) contours.

Enter the following from Exhibit above: Gain Area NA sq. mi. Loss Area NA sq. mi.

Percent change (gain area plus loss area as percentage of present area) NA %. If 50% or more this constitutes a major change. Indicate in question 2(e), Section I, accordingly.

12. If the main studio will not be within the boundaries of the principal community to be served, attach as Exhibit No. NA a justification pursuant to Section 73.1125(f) of the Commission's Rules.

13. Attach as Exhibit No. E1a, E1b map(s) (7.5 minute U.S. Geographic Survey topographic quadrangles if available) of the proposed antenna location showing the following information:

- (a) Proposed transmitter location accurately plotted with the latitude, the longitude lines clearly marked and showing a scale of statute kilometers.
- (b) Transmitter location and call letters of all AM broadcast stations within 2 miles of the proposed antenna location.

14. If there are any FM or TV stations within 200 feet of proposed antenna or non-broadcast radio stations (except amateur and citizens band), or established commercial and government receiving stations in the general vicinity which may be adversely affected by the proposed operation, attach as Exhibit No. NA the expected effect, a description of remedial steps that may be pursued if necessary, and a statement from the applicant accepting full responsibility for the elimination of any objectionable effect on existing stations.

15. Tabulation of Terrain Data. (Calculated in accordance with the procedure prescribed in Section 73.313 of the Commission's Rules utilizing 7.5 minute topographic maps, if available.)

Radial bearing (degrees true)	Height of antenna, radiation center above average elevation of radial (3-16 kilometers) Meters	Predicted Distance	
		To the 1 mV/m contour	Kilometers
0°	101.3	27.3	
45°	118.2	29.3	
90°	98.8	27.0	
135°	90.1	25.8	
180°	84.4	25.1	
225°	110.1	28.4	
270°	84.1	25.1	
315°	78.7	24.3	

Allocation Studies

(See Subpart C of Part 73 of the Commission's Rules and Regulations)

16. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico? Yes No
- If Yes, attach as Exhibit No. NA a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.
17. With regard to stations within 320 kilometers (199 miles) of the common border between the United States and Mexico, attach as Exhibit No. NA information required in 1/.
18. If the proposed operation is for a channel in the range from channel 201 through 220 (88.1 through 91.9 MHz), then with regard to stations more than 320 kilometers (199 miles) from the common border between the United States and Mexico or if this proposed operation is for a class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as Exhibit No. E3 a complete allocation study to establish the lack of prohibited overlap of contours involving these stations. The allocation study should include the following:
- The normally protected interference-free and the interfering contours for the proposed operation along all azimuths.
 - Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused.
 - Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received.
 - Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference.
 - Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities.
 - When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof.
 - A scale of miles and properly labeled longitude and latitude lines, shown across the entire (Exhibit(s)). Sufficient lines should be shown so that the location of the sites may be verified.
 - The name of the map(s) used in the exhibit(s).

1/ A showing that the proposed operation meets the minimum distance separation requirements. If any separations are proposed that are less than the applicable minimum separation requirements plus 15 kilometers, include these stations. Also include existing stations, proposed stations, and cities which appear in the Table of Assignments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna location.

19. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada? Yes No
 If Yes, attach as Exhibit No. NA a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under The Canada-United States FM Agreement of 1947.

20. With regard to station separated by 53 or 54 channels (10.6 or 10.8 MHz) attach as Exhibit No. E3 information required in 1/(separation requirements involving intermediate frequency [i.f.] interference).

21. Is the proposed operation on Channel 218, 219 or 220? Yes No
 If Yes, attach as Exhibit No. NA information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222, and 223.

22. Is the proposed station for a channel in the range from Channel 201 to 221 (88.1-91.9 MHz) and the proposed antenna location within the Grade B contour of a channel 6 television station or sufficiently near the Grade B contour that a question of interference to channel 6 may be raised? Yes No
 If Yes, attach as Exhibit No. E4 a map showing the Grade B contour of the television station and the proposed antenna location. Also include discussion of the possibility of interference to the Channel 6 station and the steps proposed to remedy any interference which may occur.

23. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1-107.9 MHz)? Yes No
 If Yes, attach as Exhibit No. NA information required in 1/ (Except for class D [secondary] proposals.)

24. If the proposed antenna location is in or near a populated area, attach Exhibit No. E5 a discussion of blanketing and the steps proposed to remedy any interference which may occur.

25. Environmental Statement, See Part I, Subpart 1 of the Commission's Rules.

Would a Commission grant of this application be a major action as defined by Section 1.1305 of the Commission's Rules? Yes No

If Yes, attach as Exhibit No. NA a narrative statement in accordance with Section 1.1311 of the Commission's Rules.
 The proposed transmitter site will use an existing tower.
 If No, explain briefly. The proposed facility complies with OST Bulletin no. 65.

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.

OCT. 10, 1988

Date

Richard L. Van Zandt

Name

Richard L. Van Zandt
 Signature (check appropriate box below)

2596 State Road 44

Address (include ZIP Code)

New Smyrna Beach, FL. 32069

(904) 427-9000

Telephone No. (include Area Code)

- Technical Director
- Technical Consultant
- Registered Professional Engineer
- Other (Specify)
- Chief Operator

Section V-G

Antenna and Site Information

Name of Applicant	Call Sign	Station Location
Joy Public Broadcasting Corp.	New	Lincoln, Nebraska

Purpose of Application (Put "X" in appropriate box) <input type="checkbox"/> New antenna construction <input checked="" type="checkbox"/> Alteration of existing antenna structure <input type="checkbox"/> Change in location	Facilities Requested 88.5 Mhz @ 5.0 Kw ERP, side-mounted FM antenna on existing tower.
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1. Location of Antenna:

State	County	City or Town
Nebraska	Lancaster	Waverly

Exact antenna location (*street address*). If outside city limits, give name of nearest town and distance and direction of antenna from town.
 Northwest of Waverly by .92 miles.

Geographical coordinates (*to nearest second*). For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	° ' "	West Longitude	° ' "
	40 55 49		96 32 42

2. Is the proposed site the same transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission? YES NO

If Yes, give call sign:

3. Has the FAA been notified of proposed construction? YES NO
 If Yes, give date and office where notice was filed. No change in height.

4. List all landing areas within 5 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.

Landing Area	Distance	Direction
(a) <u>Warbonnet</u>	<u>4.0 mi.</u>	<u>West</u>
(b) _____	_____	_____
(c) _____	_____	_____

5. Attach as Exhibit No. E6 a description of the antenna system, including whether tower(s) are self-supporting or guyed. If a directional antenna, give spacing and orientation of towers.

Tower		#1	#2	#3	#4	#5	#6
Overall height above ground (include obstruction lighting)	meters	128					
	feet	420					
Overall height above mean sea level (include obstruction lighting)	meters	466					
	feet	1530					

6. Attach as Exhibit No. E6 a vertical plan sketch for the proposed total structure (including supporting building, if any) giving heights above ground in feet and meters for all significant features. Clearly indicate existing portions, noting lighting, and distinguish between the skeletal or other main supporting structure and the antenna elements.

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.

Richard L. Van Zandt

Name

Richard L. Van Zandt

Signature (Check appropriate box below)

2596 State Road 44

Address (include ZIP Code)

New Smyrna Beach, Fl. 32069

(904) 427-9000

Telephone No. (Include Area Code)

Technical Director

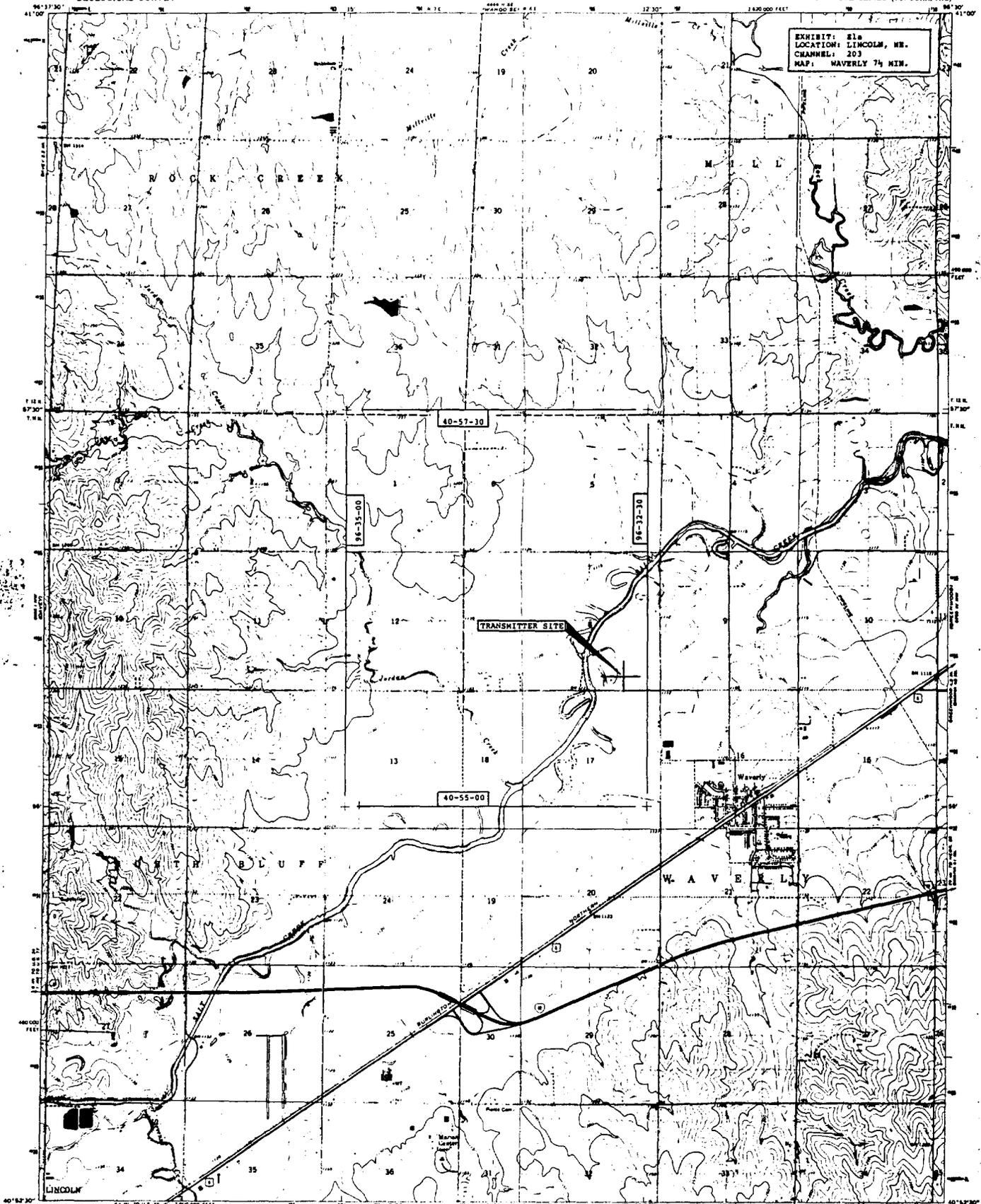
Registered Professional Engineer

Other (specify)

Technical Consultant

Chief Operator

EXHIBIT: 21a
LOCATION: LINCOLN, NE.
CHANNEL: 203
MAP: WAVERLY 7.5 MIN.



Mapped, edited and published by the Geological Survey
Control by USGS and USC&GS
Topography by photogrammetric methods from aerial
photographs taken 1961. First checked 1964.
Polyconic projection, 1927 North American datum,
10,000-foot grid based on Nebraska-Colorado system, south zone
6000-meter Universal Transverse Mercator grid data,
zone 14, shown in blue.
Fine red dashed lines indicate section lines and land lines where
generally visible on aerial photographs. Thin information is unshaded.
Boundaries shown in purple compiled from aerial photographs
taken 1972. This information not field checked.



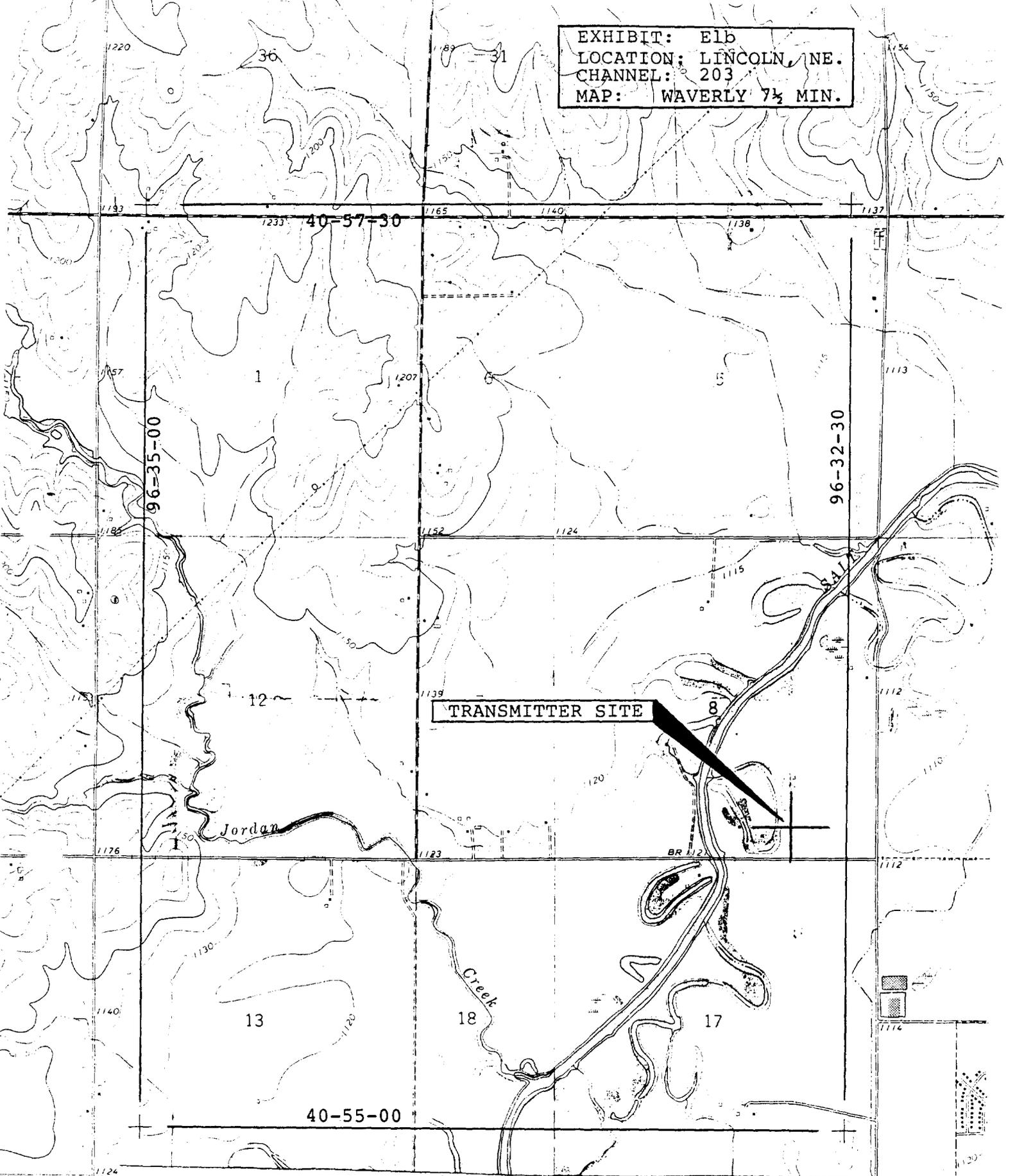
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D.C. 20542
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



ROAD CLASSIFICATION
Heavy-duty ————— Light-duty —————
Unimproved dirt
Interstate Route U.S. Route

WAVERLY, NEBR.
INDEXED BY USGS
PHOTOGRAPHED 1972
AND DATED 1964-SERIES 7.5

EXHIBIT: Elb
LOCATION: LINCOLN, NE.
CHANNEL: 203
MAP: WAVERLY 7½ MIN.



TRANSMITTER SITE

SCALE 1:24 000

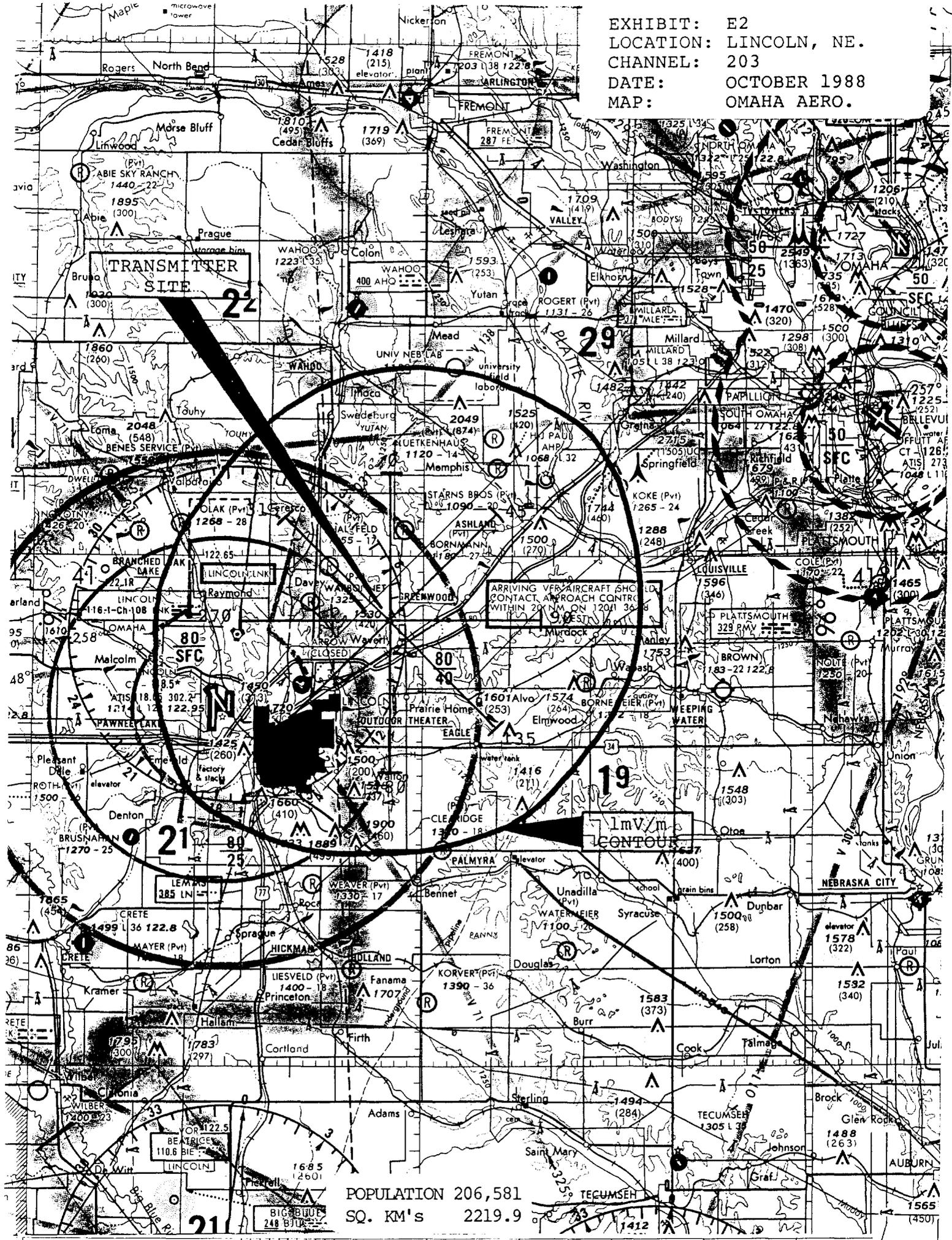


CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

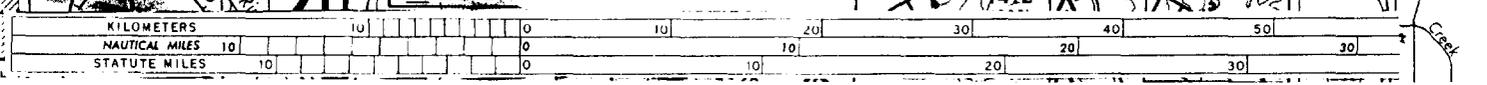
W. A

U F F

EXHIBIT: E2
 LOCATION: LINCOLN, NE.
 CHANNEL: 203
 DATE: OCTOBER 1988
 MAP: OMAHA AERO.



POPULATION 206,581
 SQ. KM's 2219.9



FM Interference study

Title: LINCOLN
 Channel 203C (88.5 MHz) ERP: 50 kW; EAH: 150 m
 Latitude: 40-49-00
 Longitude: 96-39-00

Call	Auth	Licensee name	Chan	ERP-kW	Latitude	Br-to	Dist.	Req.
City of License	St	FCC File no.	Freq	EAH-m	Longitude	-from	(km)	(km)
WOWT	LIC	CHRONICLE BCG OF OMAHA I	6	100	41-18-40	43.3	75.88	
OMAHA		NE	85.0	418	96-01-37	223.7		
Proposed F(50,10) 53.5 dBu = 79.05 km; WOWT F(50,50) 47 dBu = 113.2 km								
PRM		DELETION PROPOSED	6		39-01-42	184.5	199.2	
JUNCTION CITY		KS	85.0		96-49-54	4.4		
ALLOC		SITE RESTRICTION 26.8 MI	6		38-39-04	186.2	241.8	
JUNCTION CITY		KS	85.0		96-57-12	6.1		
NEW	APC	FAMILY STATIONS INC	*201A	1.12	41-18-45	43.4	76.20	58.69
OMAHA		NE BPED-840323CB	88.1	119	96-01-24	223.8	17.51	CLEAR
NET FOR RECON FILED 11/23/87; Cut-off 05/27/86 B 72								
Proposed F(50,10) 80 dBu = 19.69 km; NEW F(50,50) 60 dBu = 20.74 km								
Proposed F(50,50) 60 dBu = 52.17 km; NEW F(50,50) 80 dBu = 6.519 km								
KVCO	LIC	CLOUD COUNTY COMMUNITY C	*202A	.13	39-33-17	211.9	164.6	83.31
CONCORDIA		KS	88.3	23	97-39-48	31.2	81.25	CLEAR
Proposed F(50,10) 54 dBu = 77.27 km; KVCO F(50,50) 60 dBu = 6.048 km								
Proposed F(50,50) 60 dBu = 52.17 km; KVCO F(50,50) 54 dBu = 8.558 km								
KDCR	LIC	DORDT COLLEGE INC	*203C1	100	43-05-00	8.9	255.0	197.0
SIoux CENTER		IA	88.5	91	96-09-50	189.2	57.95	CLEAR
Proposed F(50,10) 40 dBu = 137.3 km; KDCR F(50,50) 60 dBu = 49.61 km								
Proposed F(50,50) 60 dBu = 52.17 km; KDCR F(50,10) 40 dBu = 144.8 km								
KIGC	LIC	WILLIAM PENN COLLEGE	*204D		41-18-37	79.4	340.9	80.45
OKALOOSA		IA	88.7		92-38-49	262.0	260.5	CLEAR
Proposed F(50,10) 54 dBu = 77.27 km; KIGC F(50,50) 60 dBu = 3.180 km								
Proposed F(50,50) 60 dBu = 52.17 km; KIGC F(50,50) 54 dBu = 4.499 km								
KWDM	LIC	W DES MOINES COMMUNITY S	*205D		41-35-25	89.5	257.8	52.17
WEST DES MOINES		IA	88.9		93-45-10	251.4	205.6	CLEAR
Proposed F(50,10) 80 dBu = 19.69 km; KWDM F(50,50) 60 dBu = 3.180 km								
Proposed F(50,50) 60 dBu = 52.17 km; KWDM F(50,50) 80 dBu = km								
KAUR	LIC	AUGUSTANA COLLEGE ASSN	*206A	.68	43-31-37	358.6	301.1	52.17
SIoux FALLS		SD BLED-870129KB	89.1	56	96-44-18	178.6	249.0	CLEAR
Proposed F(50,50) 100 dBu = 5.970 km; KAUR F(50,50) 60 dBu = 12.51 km								
Proposed F(50,50) 60 dBu = 52.17 km; KAUR F(50,50) 100 dBu = km								
PRM		PROPOSED RULE MAKING	256C2		37-48-47	182.4	333.8	40
EL DORADO		KS DOC-87-596	99.1		96-48-44	2.3	293.8	CLEAR
KUTT	LIC	SIEBERT COMM INC	257A	2.65	40-11-04	207.9	79.40	32
FAIRBURY		NE	99.3	98	97-05-15	27.6	47.40	CLEAR
Deletion proposed; Was KCIE 10/04/84								

EXHIBIT: E4
LOCATION: LINCOLN, NE.
CHANNEL: 203
DATE: OCTOBER 1988

EXHIBIT: E4

TV-6 INTERFERENCE:

The proposed station is located within the Grade B Contour of WOWT TV-6 in Omaha, Nebraska. FILE NO. BLCT2268. WOWT operates with an ERP of 100 Kw and a HAAT of 1370'. The proposed station's transmitter site is 60.7 km removed from WOWT.

In order to keep TV-6 interference to a minimum the applicant has:

- 1) selected a rural transmitter site,
- 2) selected Vertical only antenna polarization, &
- 3) selected the highest available EDFM frequency.

A detailed TV-6 interference study was conducted as per Section 73.525 (Docket 20735). Terrain data was calculated at 1° intervals for the entire interference area. This data was then used to accurately compute the EDFM & TV-6 contours and interfering contours. This information was then used to calculate the "Projected Interference Area". (156.7 sq. km.)

The "Projected Interference Population" was then calculated as per Section 73.525 (Docket 20735). The number of people within this area are as follows:

Mill Precinct	92
North Bluff Precinct	431
Waverly City	1726
R/O Waverly Precinct	<u>374</u>
Total Population	2623

Therefore, the proposed station complies with Section 73.525 regarding TV-6 interference. A census map plotting this "Projected Interference area" has not been included with the filing of this application but will be filed shortly hereafter as an amendment.

I certify that I represent the applicant as its technical consultant and that I have prepared the foregoing statement and that it is true to the best of my knowledge.


Richard L. Van Zandt

EXHIBIT: E5
LOCATION: LINCOLN, NE.
CHANNEL: 203
DATE: OCTOBER 1988

SECTION V-B (PAGE 4)

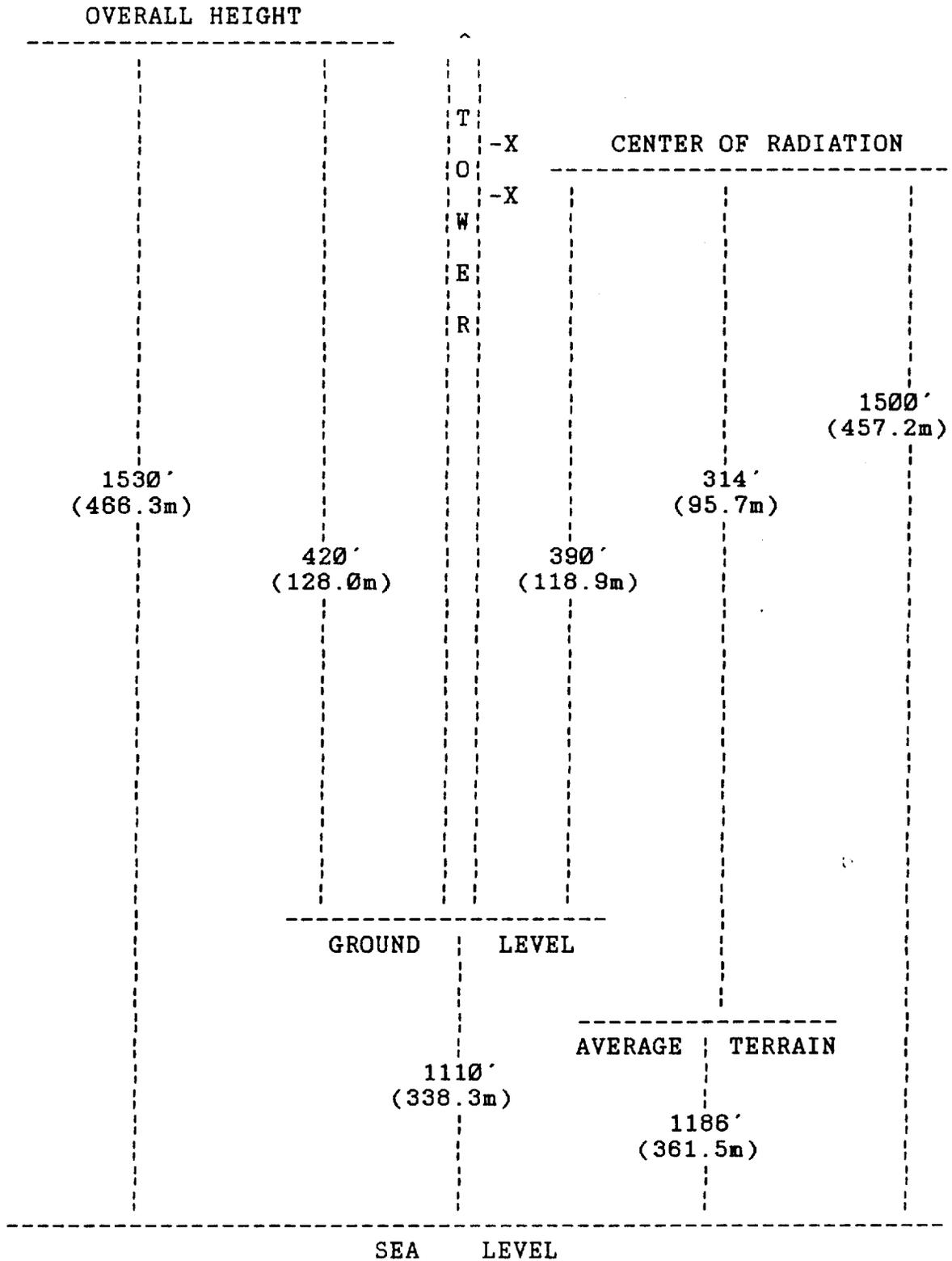
QUESTION #24

BLANKETING INTERFERENCE:

The proposed site is located 5.9 miles Northeast of the Lincoln, Nebraska, city limits. The transmitter site is not located in a highly populated area. Should blanketing occur the applicant's technical staff will lend itself to helping to resolve the problem. Solutions to blanketing range from re-orientating the receiving antenna to the installation of a commercially made trap filter such as the Jerrold RFT-300. With an effective radiated power of 5 Kw at this location very little blanketing is anticipated.

EXHIBIT: E6
LOCATION: LINCOLN, NE.
CHANNEL: 203
DATE: OCTOBER 1988

VERTICAL PLAN



1. Does the applicant propose to employ five or more fulltime employees? YES NO

If the answer is Yes, the applicant must include an EEO program called for in the separate 5 Point Model EEO Program [FCC Form 396 (A)].

Section VII

Certification

1. Has or will the applicant comply with the public notice requirement of Section 73.3580 of the Commission's Rules? YES NO

The APPLICANT hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an 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 exhibits are a material part hereof and are incorporated herein.

The APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination on any other application with which it may be in conflict.

In accordance with Section 1.65 of the Commission's Rules, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT.
U.S. CODE, TITLE 18, Section 1001.**

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.

Signed and dated this 23rd day of Nov, 1988

Lowell Bush Lowell Bush
Name of Applicant Signature

President
Title

**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 principal purpose for which the information will be used is to determine if the benefit requested is consistent with the public interest. The staff, consisting variously of attorneys, accountants, engineers, and application examiners, will use the information to determine whether the application should be granted, denied, dismissed, or designated for hearing. If all the information requested 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. Accordingly, every effort should be made to provide all necessary information. Your response is required to obtain the requested Permit.

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.