

erected for this purpose. A full scale copy of a portion of a U.S. Geological Survey 7.5' topographic map "West Burlington, IA" showing the exact location of the site is attached as Exhibit E-2. A vertical plan sketch of the tower with all pertinent values rounded to the nearest meter is attached as Exhibit E-3.

The proposed facility will be equipped with emergency generating facilities at both the transmitter site and studio. In the event of a power failure, Giannettino will be able to provide continuing service to the listening audience.

Neighboring Broadcast and Non-Broadcast Facilities

Based on information supplied by the applicant in conjunction with known data sources, it is stated here that this site has been selected so as to maximize the coverage of the community while minimizing the potential for interference to the general populace and conforming to all pertinent distance separation requirements.

No receiver induced intermodulation interference, in concert with any neighboring broadcast or non-broadcast facilities within ten kilometers, is anticipated as a result of Giannettino's proposal. In the unlikely event that it does occur, Giannettino will bear the responsibility, as set forth by the FCC Rules, to resolve those instances of intermodulation interference which are attributable to this operation.

Giannettino will comply with all FCC Rules and Regulations to satisfy complaints regarding blanketing interference. However, there are no known receiving stations within the blanketing contour.

Elevation and Contour Data

The predicted 70 and 60 dBu signal strength contours are shown on the attached Exhibit E-4. The height of the radiation center above average terrain and the computed distances to the 70 and 60 dBu signal strength contours are tabulated for the eight principal radials in Section V-B of FCC Form 301.

The base map for Exhibit E-4 consists of copies of the U.S. Geological Survey 1:250,000 topographic quadrangle series maps "Burlington, IA" and "Davenport, IA." The 1:250,000 scale maps were used in order to illustrate the proposed coverage of Burlington at an optimum scale for the area served by a Class C3 facility. Exhibit E-4 complies with Item 16 of FCC Form 301 Section V-B in showing original printed latitude and longitude markings. Supplemental labels are also provided for convenience.

U.S. Geological Survey 3 Arc Second Digital Elevation Model ("D.E.M.") data files were used to determine the average elevation of the terrain within the distance range of 3.0 to 16.0 kilometers from the proposed transmitter site for a total of 24 directions, starting at True North and proceeding clockwise in 15 degree increments. The normal complement of eight (8) of those radials was used to determine the average terrain elevation. The remaining 16 radials were used only to allow greater resolution in the location of the signal strength contours. Both the data file and the manner in which it was used are in accordance with the FCC Rules.

Population and Area Data

The number of persons residing within the predicted 60 dBu signal strength contour of the proposed facility is approximately 98,770. In order to make that determination, the predicted distances to the 1.0 mV/m (60 dBu) contour were used in conjunction with the 1990 U.S. Census database "Census of Housing and Population, 1990, P.L. 94-171 CD-ROM." This source provides census block level population data for each Minor Civil Division with clearly defined geographic reference coordinates. All census blocks located within the 1 mV/m (60 dBu) contour were summed to establish the total. Census blocks are the smallest census unit and are often identical to the census "collection units." No more accurate, current, and authoritative population data is known to be available.

The land area contained within the predicted 60 dBu contour, approximately 4,821 square kilometers, was also computed on the

basis of the aforementioned distances to the 60 dBu (1.0 mV/m) contour.

3.16 mV/m Coverage of Burlington

Exhibit E-4 illustrates the 3.16 mV/m contour as it encompasses all of the city of Burlington. Giannettino has obtained a map of the city of Burlington from the city's Chamber of Commerce which illustrates the current incorporated boundaries for Burlington. This information has been transferred to Exhibit E-4.

Environmental Processing

The proposed operation would not have a significant environmental effect, as it is defined by Section 1.1307 of the FCC Rules. Based on information obtained by the applicant, it is stated here that the site is not in any designated wilderness area or wildlife preserve, or area whose designation as one is pending. To the best of Giannettino's knowledge, the instant proposal will not affect any threatened or endangered species or cause damage to their habitats. Its existence will not affect any districts, sites, buildings, structures, or objects listed in the National Register of Historic Places or known to be eligible for such listing. The site is not known to be located in the vicinity of any Indian religious sites. There will be no significant change in the surface features of the site, nor is it located in a floodplain. Giannettino does not anticipate that the FAA will require high intensity white lighting necessary to conspicuously mark the tower as an obstruction to aviators, but the site is not located in a residential neighborhood. In the event that high intensity white lighting is required, Giannettino will take any actions necessary to comply with the Commission's Environmental Processing Regulations (§§1.1301 et seq.). In sum, a grant of the proposed facility would have no known adverse environmental effect.

Compliance With Section 1.1307(b)

Guidelines for Exposure to Radiofrequency Energy

This proposal would not have a significant environmental effect because of hazardous levels of non-ionizing Radiofrequency

radiation exposure to workers and the general public. Radiofrequency radiation is discussed in "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation (OST Bulletin No. 65, FCC, October, 1985)." While OST Bulletin 65 provides worst case guidelines in table form for various types of broadcast facilities (Appendices B, C, and D), it also establishes formulas to predict the power density at the base of a tower.

Section 4.1 of ANSI C95.1-1982 establishes a protection guide for radiofrequency radiation. The guide provides limits measured in terms of plane wave power density for set ranges of frequencies. Using this guide, the limit of acceptable, safe power density for FM facilities is 1.0 mW/cm².

John M. Giannettino Ch. 276C3

Pages 7 - 9 of OST Bulletin 65 (Section II - Prediction Methods) discuss the development of a formula which may be used to predict the power density for FM Broadcast stations. Giannettino is proposing herein to operate a circularly polarized 4 bay FM antenna approximately 85 meters above ground level at an effective radiated power of 25.0 kW. The total ERP for calculation purposes is the sum of the vertical and horizontal planes of radiation or 50.0 kW. Downwards radiation will be suppressed to less than 0.35 of the relative field between -60 and -90 degrees. A copy of a typical vertical plane elevation pattern supplied by a manufacturer, Shively Labs, is attached hereto as Exhibit E-5.

The basic formula is: $S = \frac{0.64 \times F^2 \times \text{EIRP}}{\pi \times R^2}$

S = Power density (mW/cm²) at the base of the tower

0.64 = [(1.6)²/4] Ground Reflection Factor

F = Maximum Vertical Plane Relative Field (between -60° to -90°)

EIRP = Equivalent Isotropic Radiated Power (milliWatts)

EIRP = ERP x 1.64 (Where 1.64 = gain of half-wave Dipole
Relative to Isotropic Radiator)

R = Dx to center of radiation in cm.

For Giannettino, the final form is :

$$S = \frac{0.64 \times 1.64 \times 0.35^2 \times (50,000,000 \text{ mW})}{\pi \times (8,500)^2} \quad S = 0.0283 \text{ mW/cm}^2$$

Thus, the proposed operation would, in the worst case, result in a ground level field intensity of less than three percent of the 1.0 mW/cm² limitation set forth in the FCC Guidelines.

With OST Bulletin 65 as a guide to ANSI C95.1-1982, there is nothing to suggest that the implementation of Ch. 276C3, as proposed herein, would create a significant environmental effect because of Radiofrequency Radiation exposure hazards. In sum, a grant of the proposed facility would have no known adverse environmental effect.

Aeronautical Considerations

The Central Regional Office of the Federal Aviation Administration ("FAA") has been notified of the instant Giannettino proposal. A copy of the Notification sent to the FAA is attached as Exhibit E-6. A copy of the "Determination of No Hazard" will be forwarded to the Commission as soon as it is received.

Certification

Under penalty of perjury, I do hereby state that the foregoing is true and correct to the best of my knowledge and belief.



Richard L. Biby,
Registered Professional Engineer
District of Columbia Reg. No. 5710E
Commonwealth of Virginia Reg. No. 014018

Exhibit E-1

FM Allocations Table

Application for a New FM Station

Ch. 276C3 103.1 MHz 100m AAT 25 kW

John M. Giannettino

Burlington, Iowa

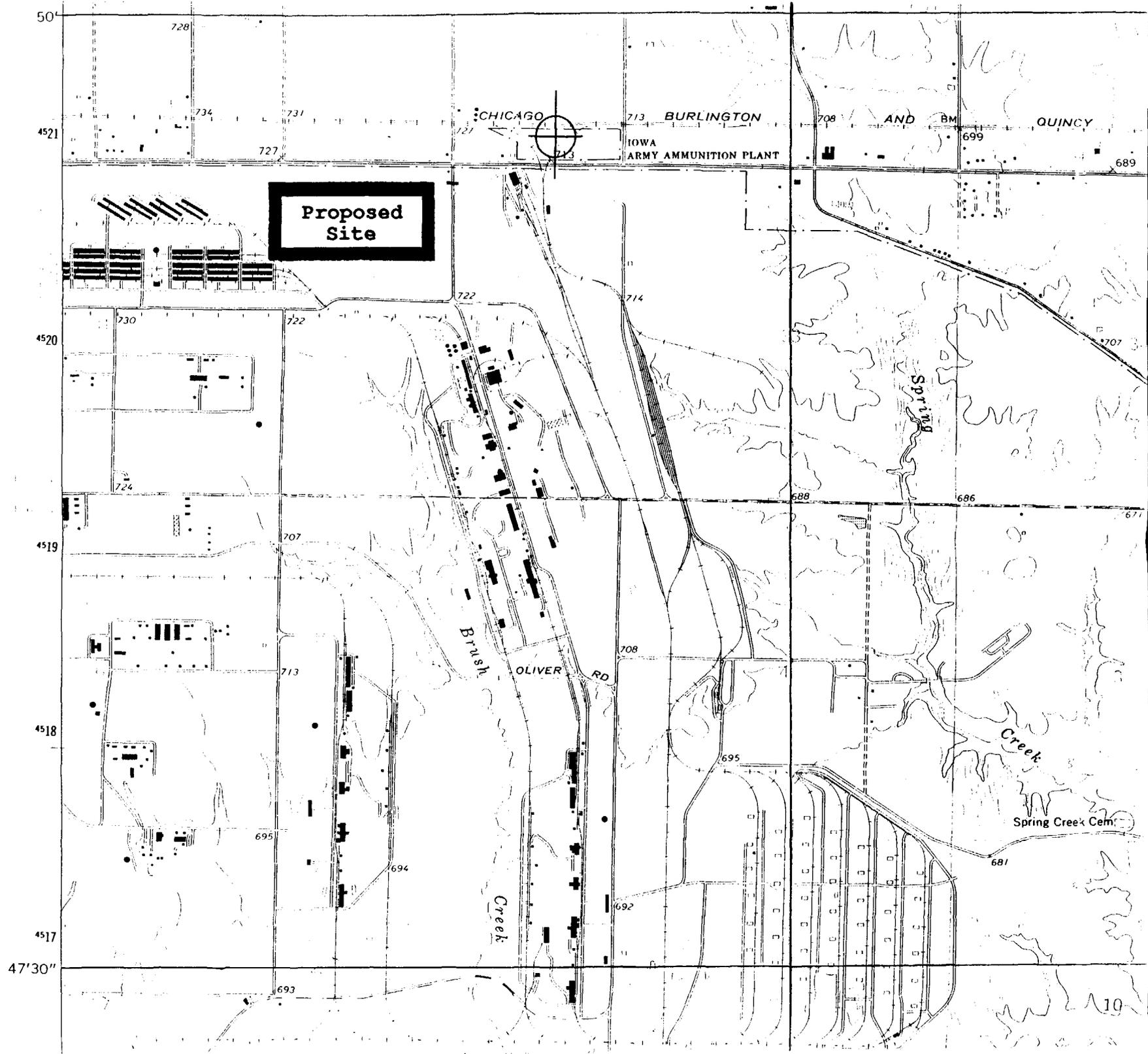
Call	Location	Channel & Class	Separation (km)	Required (km)
WJEQ(CP)	Macomb, IL (Applic. for License filed	274B1 FCC File No. BPH-881011IL)	62.4	50
KQCR	Cedar Rapids, IA	275C1	144.7	144
WJEQ(Lic)	Macomb, IL (To Channel 274B1 Per D87-355	276A FCC File No. BLH-830214AM)	62.4	142*
KDMG(Lic)	Pella, IA (To Channel 277C Per D87-365	277C1 FCC File No. BLH-850718KL)	191.3	144*
KDMG(CP)	Pella, IA (FCC File No. BPH-881021IC)	277C	191.3	176*
Used(KDMG)	Pella, IA (FCC Reference point - 41° 24' 36"	277C	156.3 92° 55' 00")	176*
KUUL	Davenport, IA	279C	101.4	96

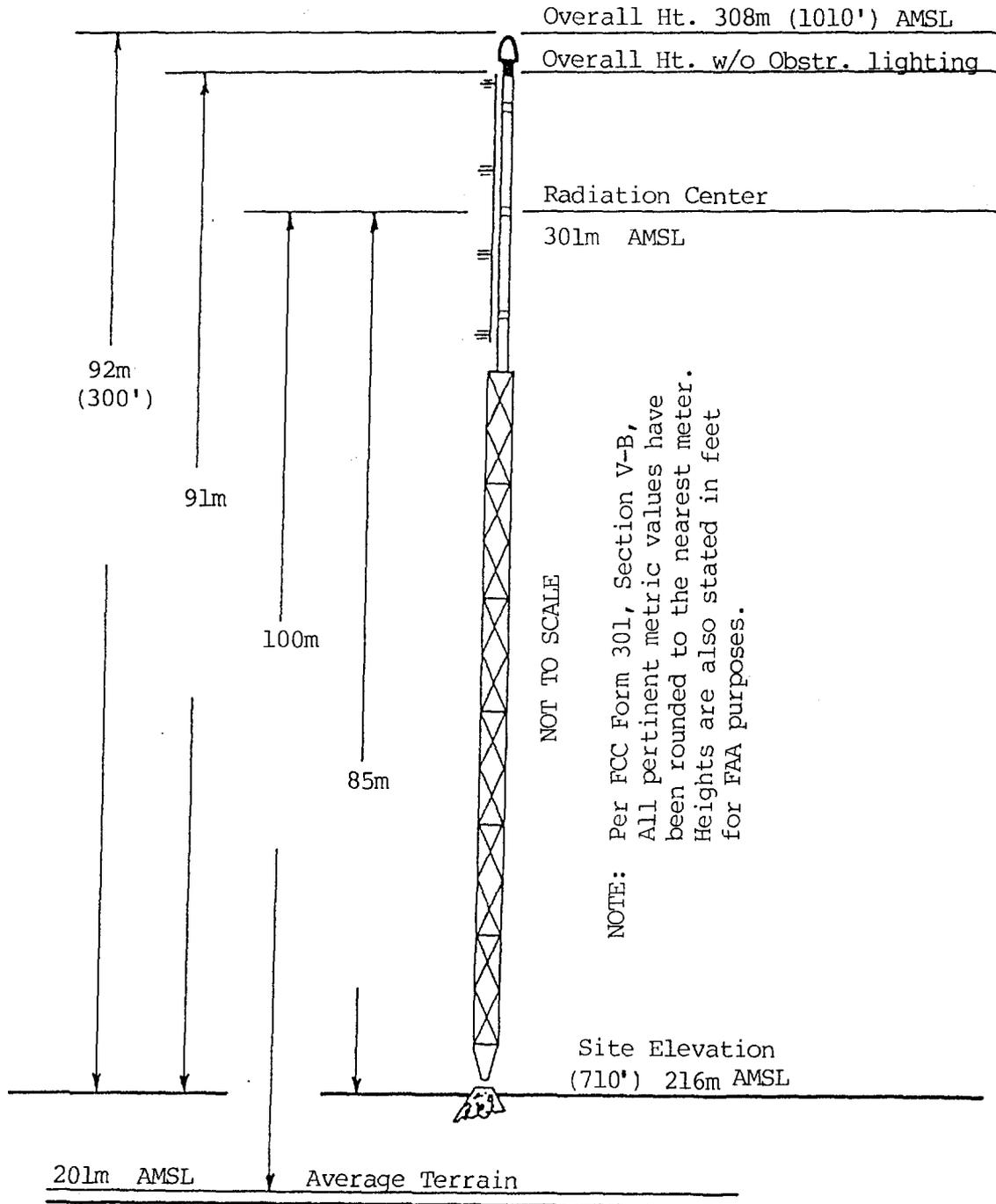
* - See Exhibit E - "Channel Utilization" for discussion of short-spacing and request for waiver of §73.207

Note: Stations exceeding distance separation requirements by more than 50 km are not listed above.

Prepared By
Communications Engineering Services, P.C.
Falls Church, Virginia

Richard L. Biby
July, 1991





Latitude: 40° 49' 41"
Longitude: 91° 13' 19"

Exhibit E-3
Antenna Sketch
Application for a New FM Station
Ch. 276C3 103.1 MHz 100m AAT 25 kW
John M. Giannettino
Burlington, Iowa

Prepared By Richard L. Biby
Communications Engineering Services, P.C.
Falls Church, Virginia July, 1991

**Exhibit E-4
Predicted Contours
Application for a New FM Station
Ch. 276C3 103.1 MHz 100m AAT 25 kW
John M. Giannettino
Burlington, Iowa**

Prepared By Richard L. Biby
Communications Engineering Services, P.C.
Falls Church, Virginia July, 1991

**Original Latitude and
Longitude Markings**

**Proposed
Site**

270°

315°

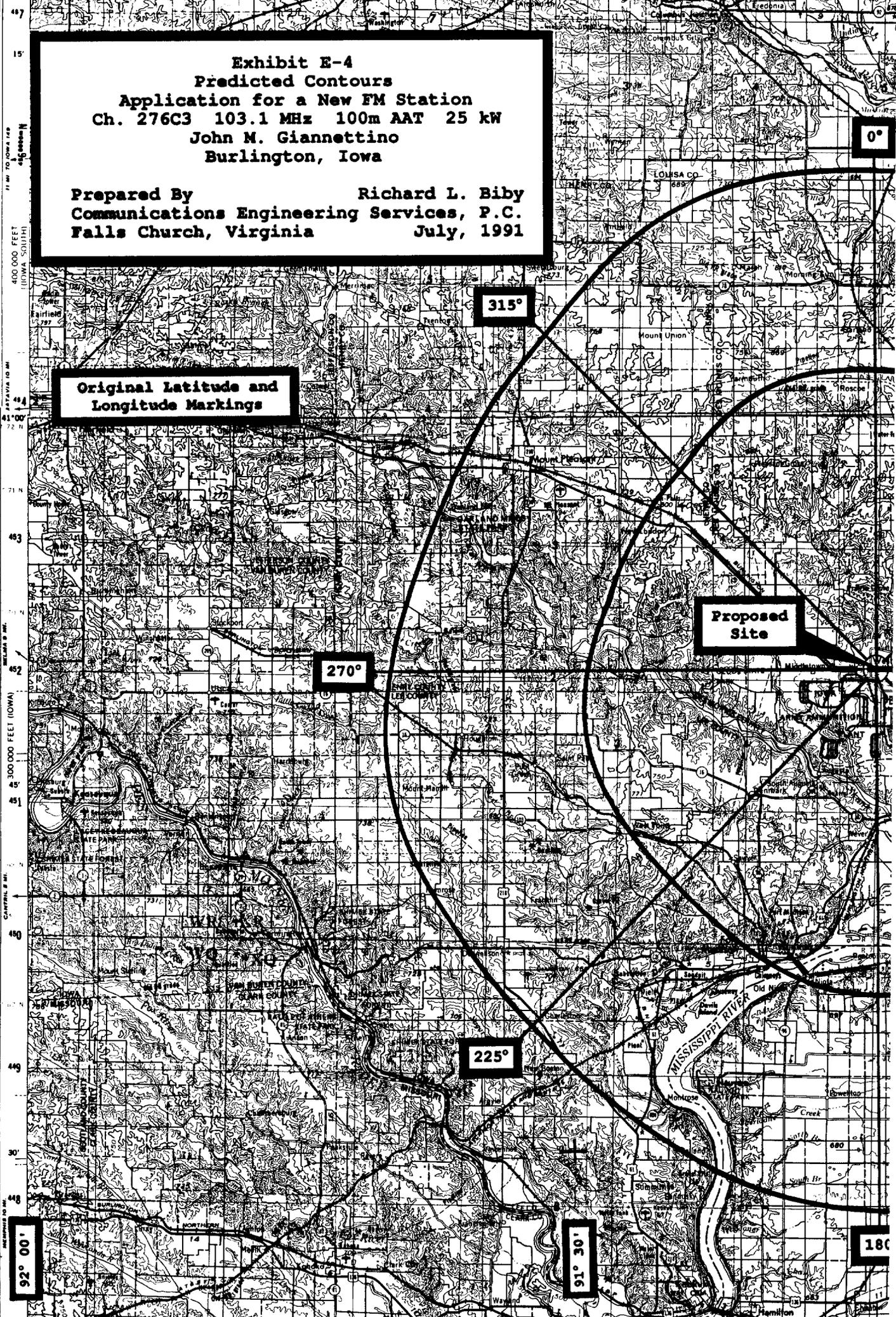
225°

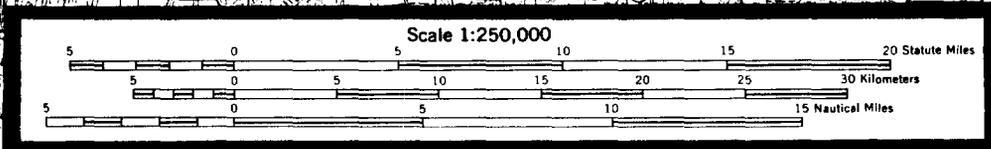
0°

92° 00'

91° 30'

180°

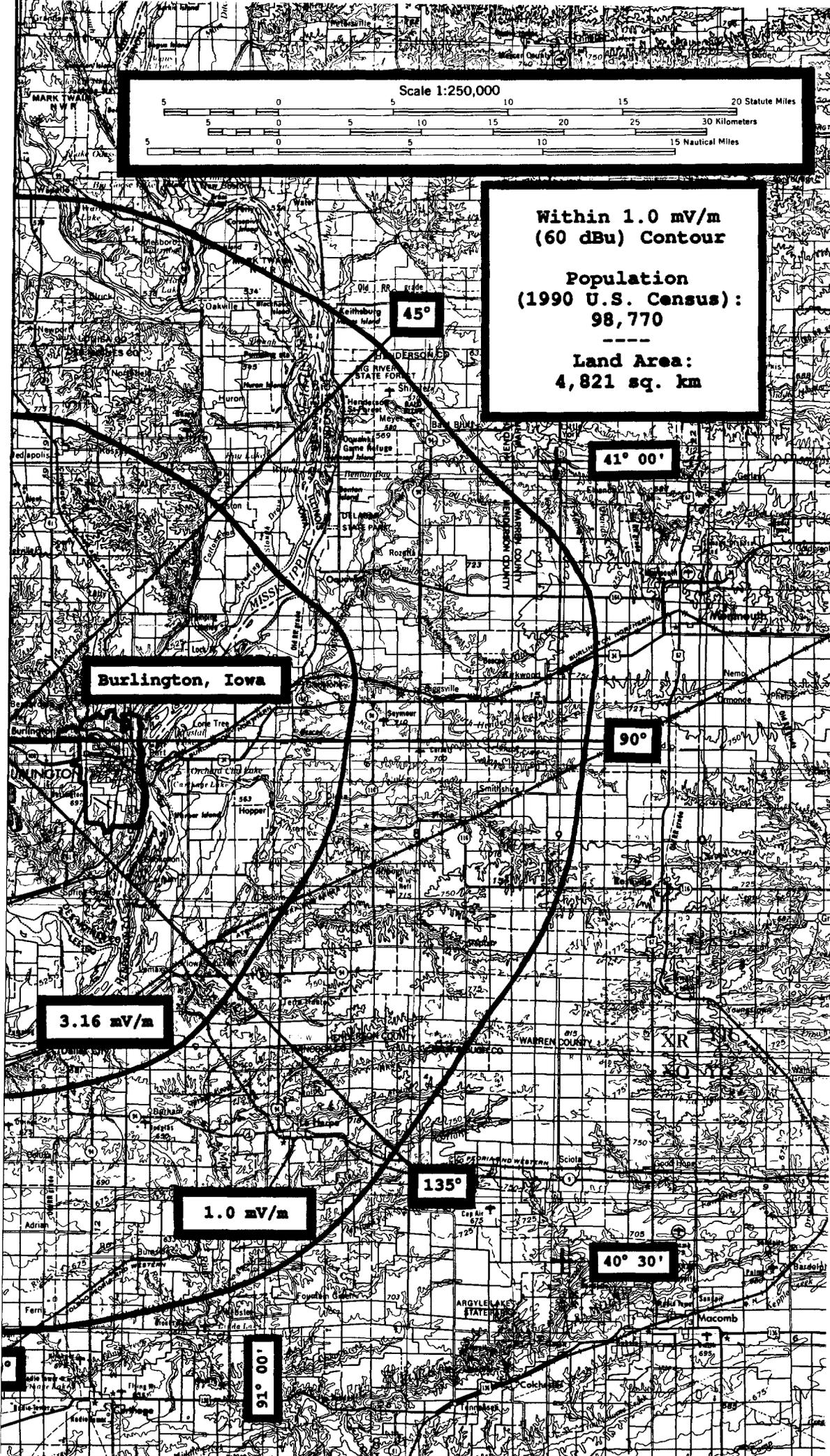




Within 1.0 mV/m
(60 dBu) Contour

Population
(1990 U.S. Census):
98,770

Land Area:
4,821 sq. km



Burlington, Iowa

45°

41° 00'

90°

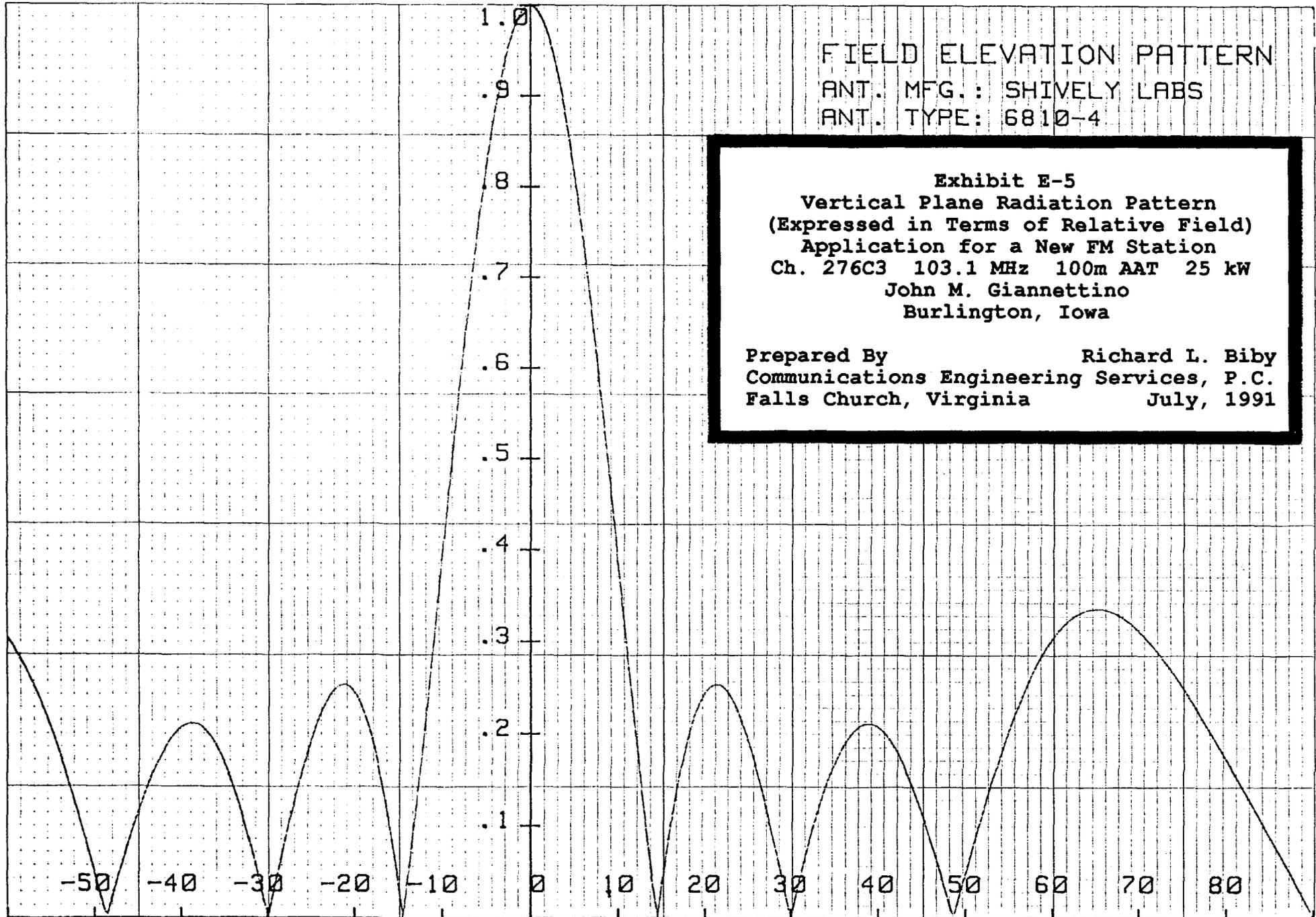
3.16 mV/m

1.0 mV/m

135°

40° 30'

91° 00'



FIELD ELEVATION PATTERN
ANT. MFG.: SHIVELY LABS
ANT. TYPE: 6810-4

Exhibit E-5
Vertical Plane Radiation Pattern
(Expressed in Terms of Relative Field)
Application for a New FM Station
Ch. 276C3 103.1 MHz 100m AAT 25 kW
John M. Giannettino
Burlington, Iowa

Prepared By **Richard L. Biby**
Communications Engineering Services, P.C.
Falls Church, Virginia July, 1991

**Exhibit E-6
Notification to FAA**

DO NOT REMOVE CARBONS

Form Approved OMB No. 2120-0001

<p align="center">NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION</p>	Aeronautical Study Number
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1. Nature of Proposal			From FCC Grant	2. Complete Description of Structure	
A. Type <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Alteration	B. Class <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary (Duration _____ months)	C. Work Schedule Dates Beginning <u>60 days</u> End <u>6 months</u>		A. Include effective radiated power and assigned frequency of all existing, proposed or modified AM, FM, or TV broadcast stations utilizing this structure. B. Include size and configuration of power transmission lines and their supporting towers in the vicinity of FAA facilities and public airports. C. Include information showing site orientation, dimensions, and construction materials of the proposed structure.	

3A. Name and address of individual, company, corporation, etc. proposing the construction or alteration. (Number, Street, City, State and Zip Code)

() _____
 area code Telephone Number

John M. Giannettino
 P. O. Box 946
 Burlington, IA 52601

New tower to support a new
 4 bay omni directional antenna
 Max ERP 25 kW - 103.1 MHz

B. Name, address and telephone number of proponent's representative if different than 3 above.

Richard L. Biby, P. E.
 Communications Engineering Services, P. C.
 6105-G Arlington Blvd.
 Falls Church, VA 22044 (703) 534-7880

(if more space is required, continue on a separate sheet.)

4. Location of Structure

A. Coordinates (To nearest second) 40° 49' 41" Latitude 91° 13' 19" Longitude	B. Nearest City or Town, and State Burlington, IA (1) Distance to 4B 5.0 Miles (2) Direction to 4B East	C. Name of nearest airport, heliport, flightpark, or seaplane base Burlington Muni (1) Distance from structure to nearest point of nearest runway 4.5 mi (2) Direction from structure to airport N 120° E
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5. Height and Elevation (Complete to the nearest foot)

A. Elevation of site above mean sea level	710'
B. Height of Structure including all appurtenances and lighting (if any) above ground, or water if so situated	300'
C. Overall height above mean sea level (A + B)	1010'

D. Description of location of site with respect to highways, streets, airports, prominent terrain features, existing structures, etc. Attach a U.S. Geological Survey quadrangle map or equivalent showing the relationship of construction site to nearest airport(s). (if more space is required, continue on a separate sheet of paper and attach to this notice.)

Approximately 120 meters North of Route 34, 10.7 km West of the Rte 34 Bridge over the Mississippi River, in Downtown Burlington, Des Moines County, IA
 (See attached map and tower sketch)

Notice is required by Part 77 of the Federal Aviation Regulations (14 C.F.R. Part 77) pursuant to Section 1101 of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1101). Persons who knowingly and willingly violate the Notice requirements of Part 77 are subject to a fine (criminal penalty) of not more than \$500 for the first offense and not more than \$2,000 for subsequent offenses, pursuant to Section 902(a) of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1472(a)).

I HEREBY CERTIFY that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to obstruction mark and/or light the structure in accordance with established marking & lighting standards if necessary.

Date August 7, 1991	Typed Name/Title of Person Filing Notice Richard L. Biby, P. E.	Signature
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FOR FAA USE ONLY FAA will either return this form or issue a separate acknowledgement.

<p>The Proposal:</p> <input type="checkbox"/> Does not require a notice to FAA. <input type="checkbox"/> Is not identified as an obstruction under any standard of FAR, Part 77, Subpart C, and would not be a hazard to air navigation. <input type="checkbox"/> Is identified as an obstruction under the standards of FAR, Part 77, Subpart C, but would not be a hazard to air navigation. <input type="checkbox"/> Should be obstruction <input type="checkbox"/> marked, <input type="checkbox"/> lighted per FAA Advisory Circular 70/7460-1, Chapter(s) _____ <input type="checkbox"/> Obstruction marking and lighting are not necessary.	<p>Supplemental Notice of Construction FAA Form 7460-2 is required any time the project is abandoned, or</p> <input type="checkbox"/> At least 48 hours before the start of construction. <input type="checkbox"/> Within five days after the construction reaches its greatest height. <p>This determination expires on _____ unless: (a) extended, revised or terminated by the issuing office; (b) the construction is subject to the licensing authority of the Federal Communications Commission and an application for a construction permit is made to the FCC on or before the above expiration date. In such case the determination expires on the date prescribed by the FCC for completion of construction, or on the date the FCC denies the application.</p> <p>NOTE: Request for extension of the effective period of this determination must be postmarked or delivered to the issuing office at least 15 days prior to the expiration date.</p> <p>If the structure is subject to the licensing authority of the FCC, a copy of this determination will be sent to that Agency.</p>
<p>Remarks:</p>	

Issued In	Signature	Date
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