Guidelines for Validating Computer-Generated Noise Contour Maps

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Environmental Noise

U.S. Army Center for Health Promotion

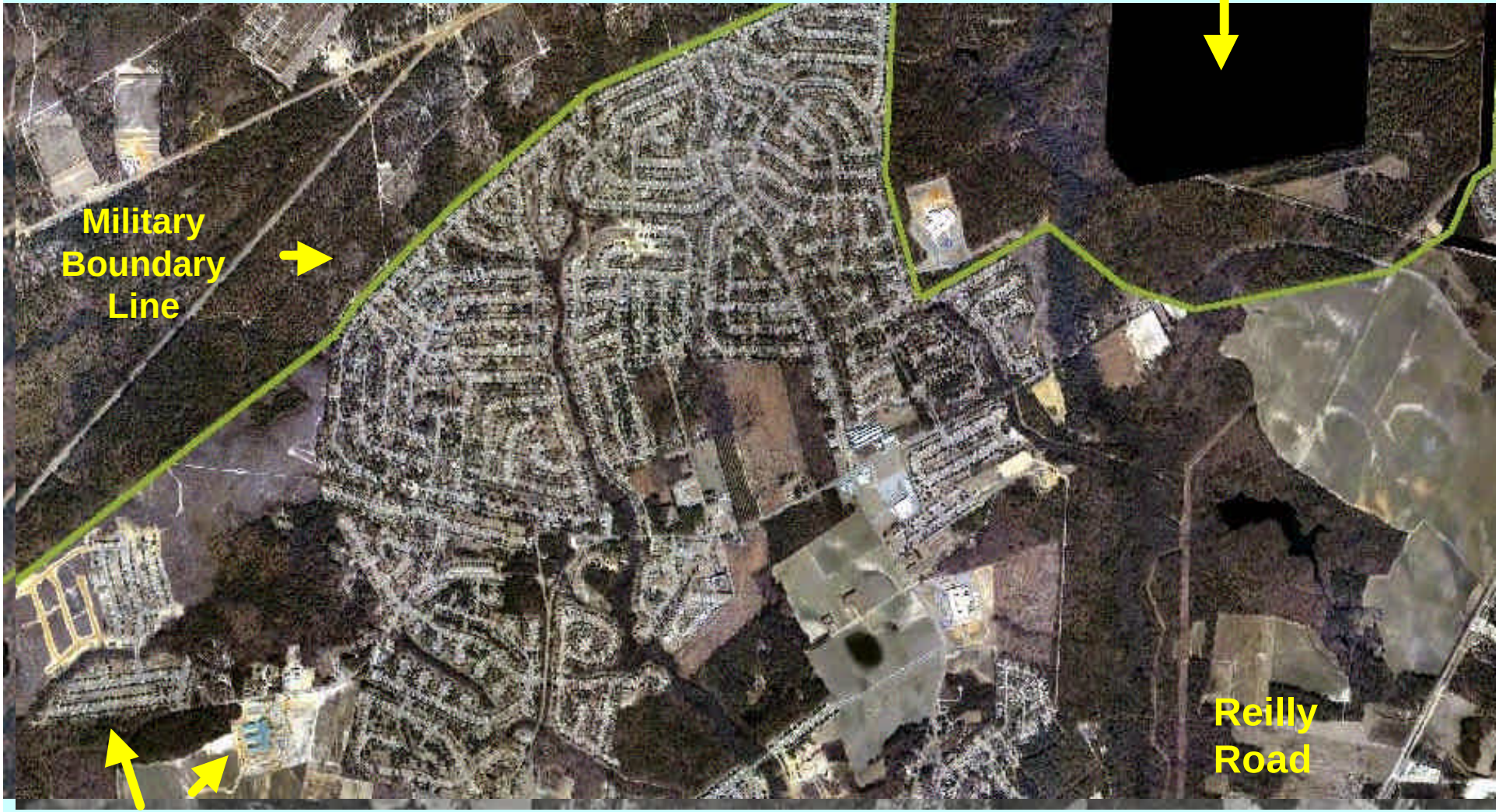
And Preventive Medicine

Investment

- Very Busy Army Heliport
- Simmons is Home to 203 Aircraft Valued at more than $1.4 Billion.
- Invested More than $60 Million Building 5 New Hangars and Expanding Ramp Space in Late 1980s and Early 1990s.

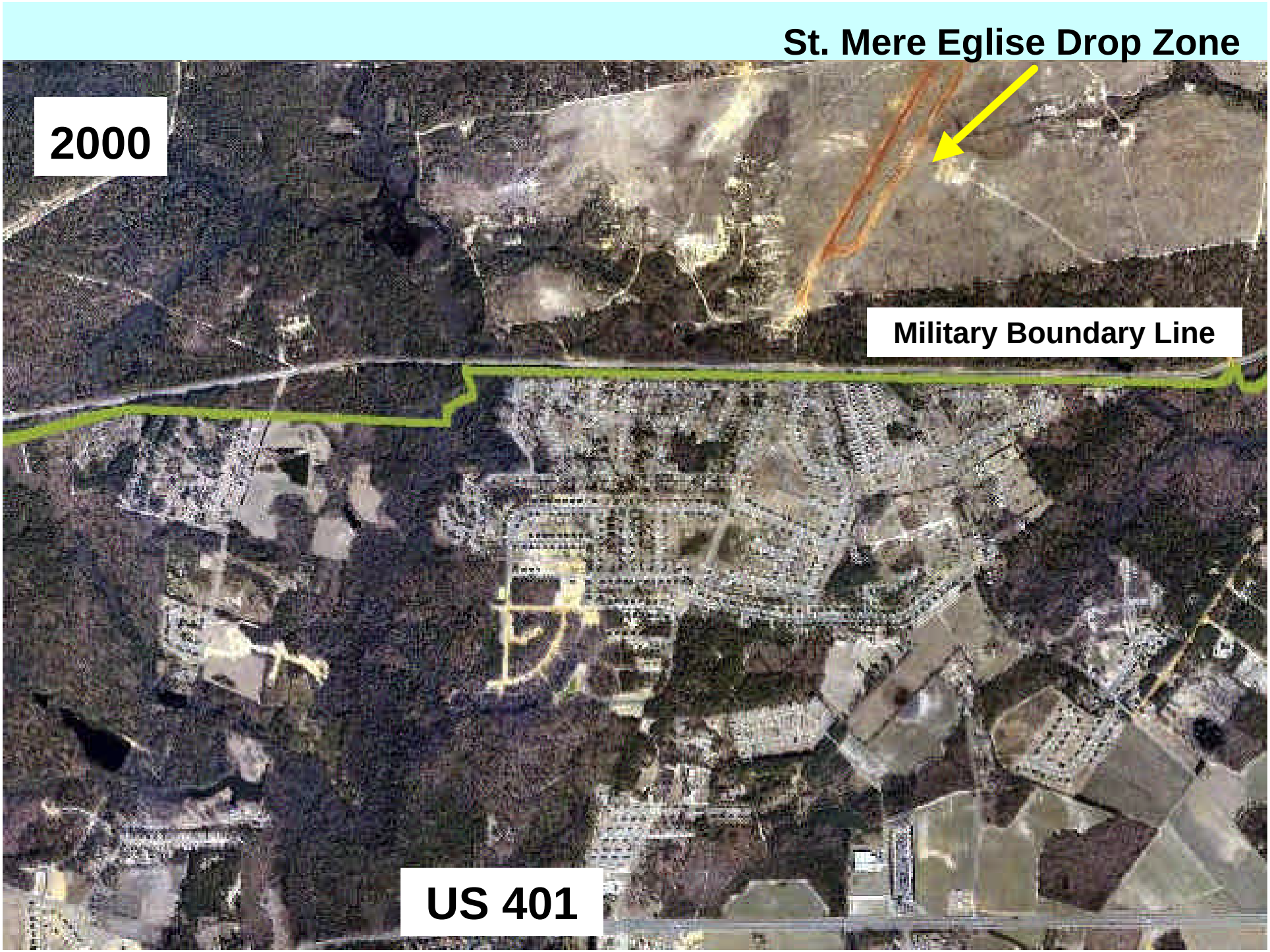
We Want To Protect Simmons Army Airfield. . .

2000

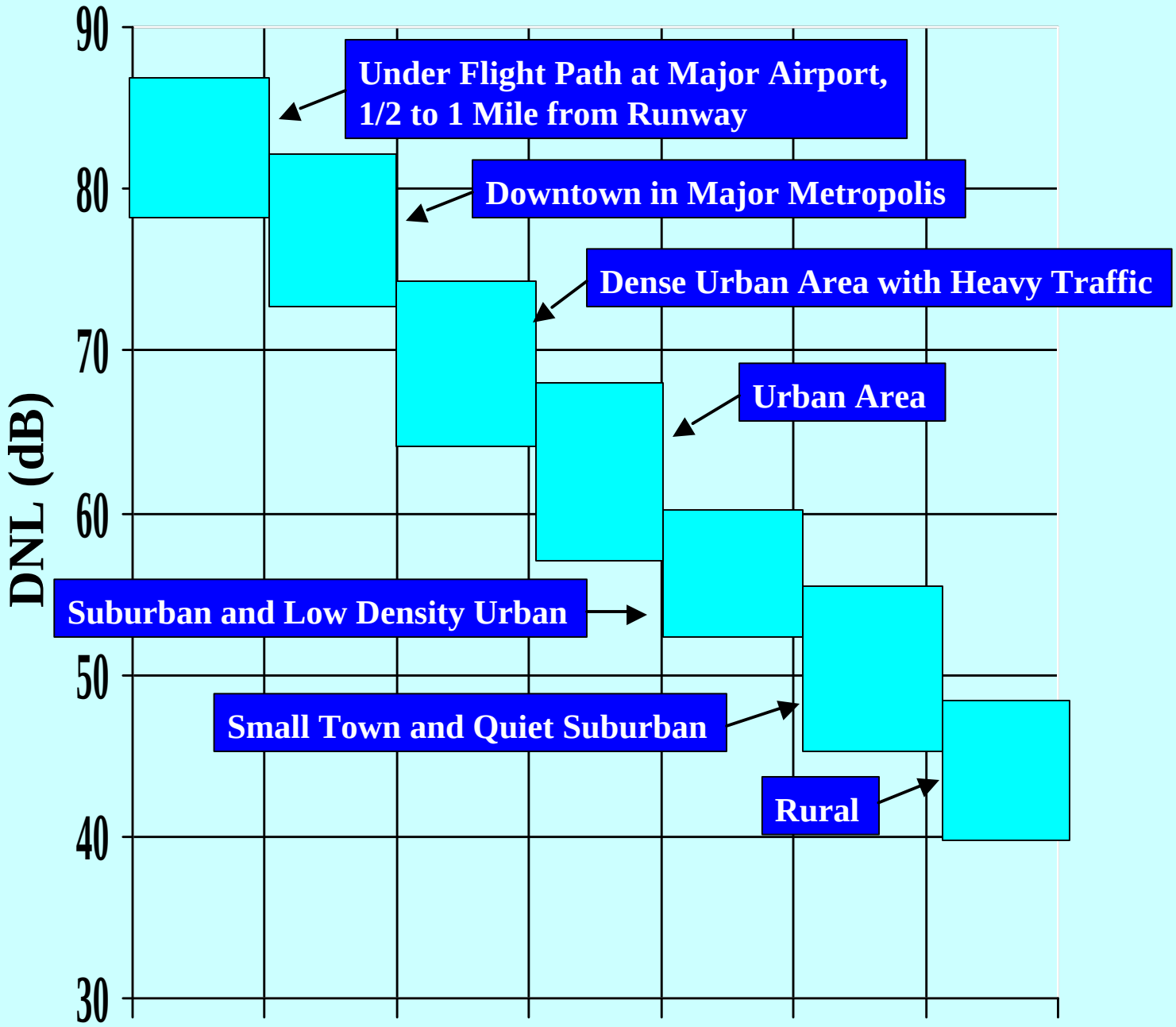


New elementary school

and residential development


St. Mere Eglise Drop Zone
2000
Military Boundary Line
US 401

Typical Range of Outdoor Community Noise Exposure Levels



Source: DoD 1978

Computer Models ……

- Primary means of assessment
- More practical
- Less expensive
- Direct measurement of proposed actions
- Can explore alternatives

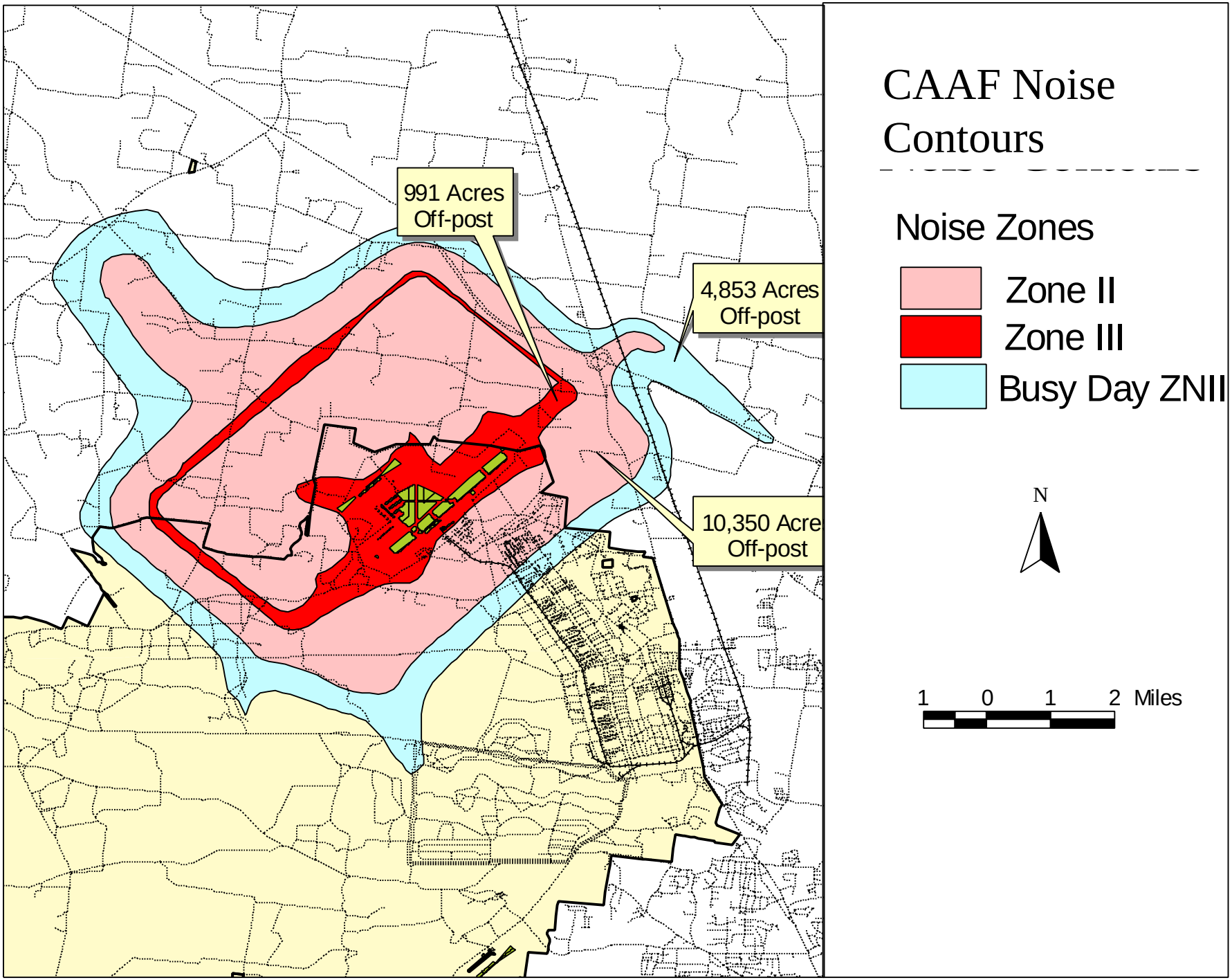
MODELS

FHA - Traffic Noise Model

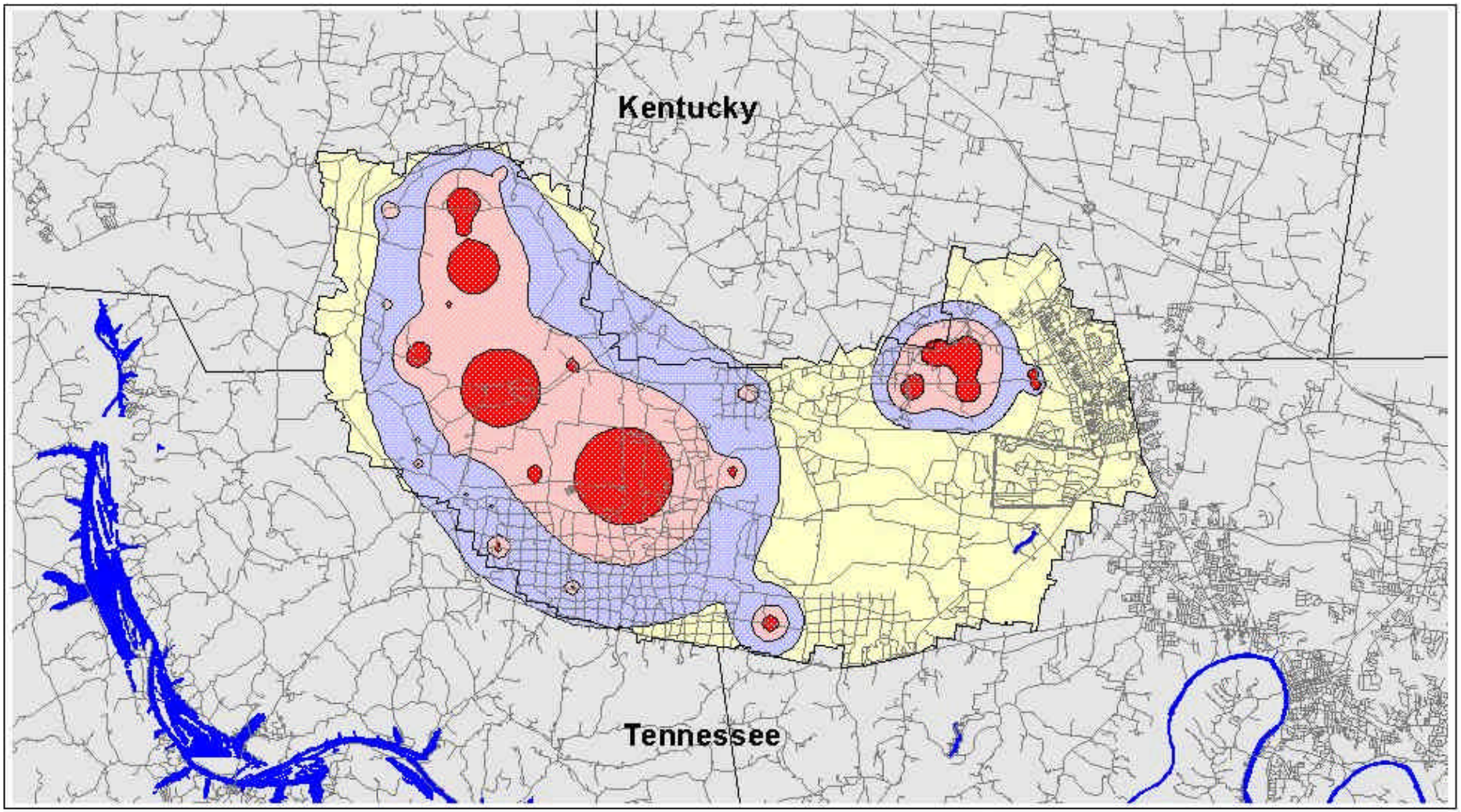
FAA – Integrated Noise Model

DoD –

- **BNOISE 2**
- **NOISEMAP**
- **SARNAM**
- **ROUTEMAP**
- **Mr_NMAP**


991 Acres
Off-post
4,853 Acres
Off-post
10,350 Acre
Off-post
CAAF Noise
Contours
Noise Zones
Zone II
Zone III
Busy Day ZNII
N
1 0 1 2 Miles

Fort Campbell - Blast Noise Contours



Blast Noise Contours (CDNL)

- 57-62 (Buffer)
- 62-70 (Zone II)
- >70 (Zone III)
- Fort Campbell Boundary

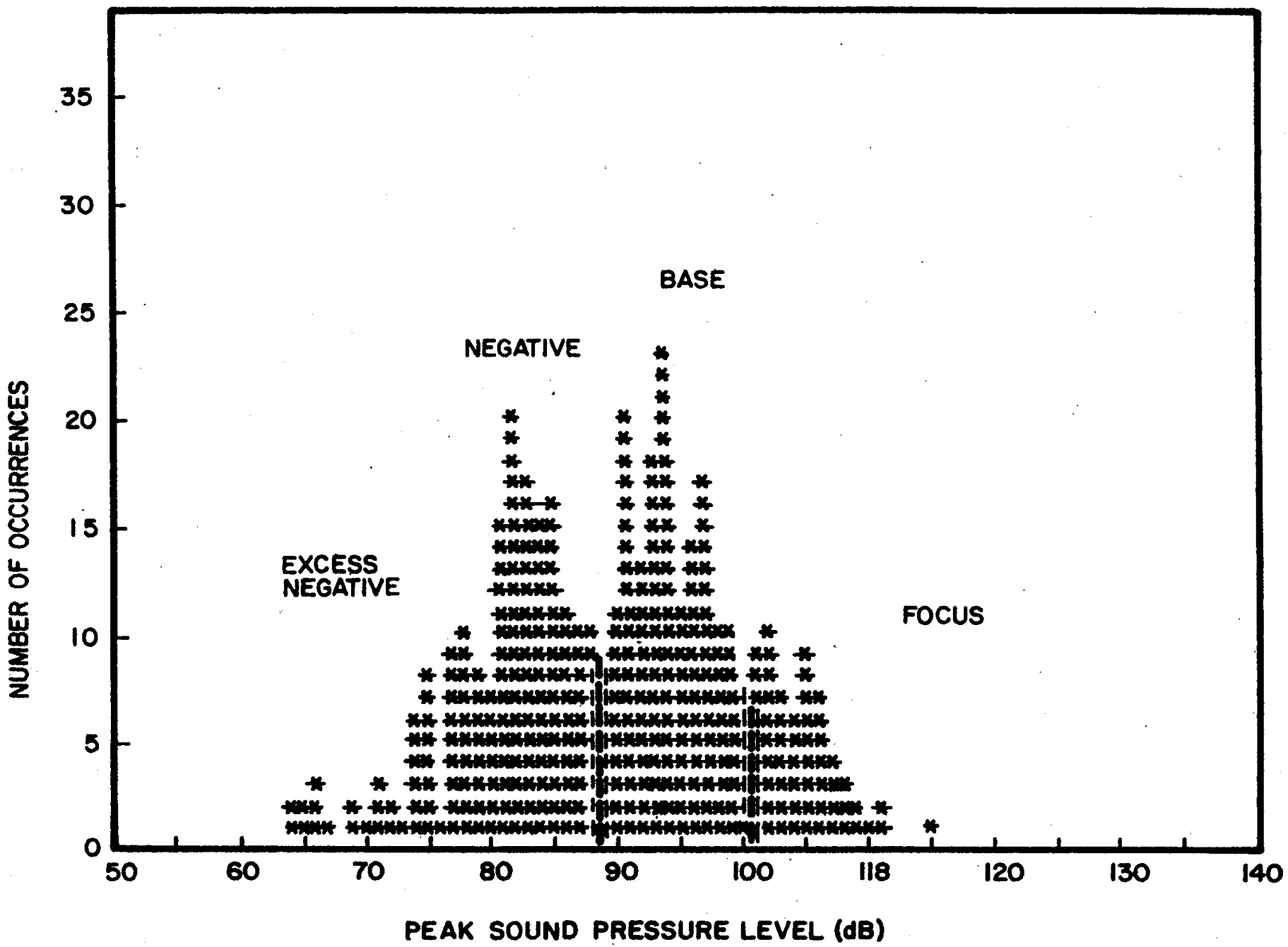
N
W E
S

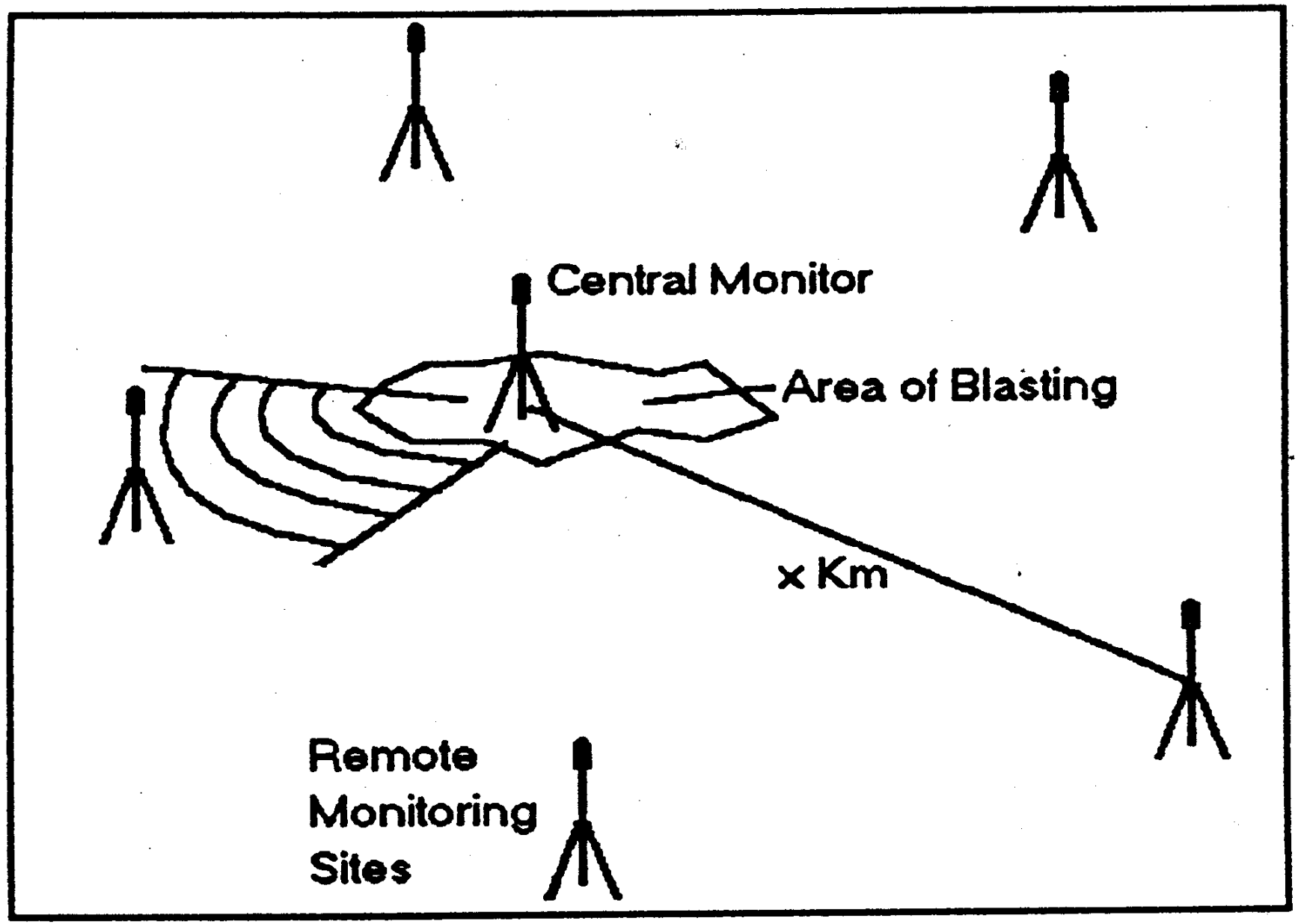
2 0 2 4 Miles

U.S. ARMY CENTER FOR HEALTH
PROMOTION AND PREVENTATIVE MEDICINE
ENVIRONMENTAL NOISE PROGRAM
12 OCTOBER 1999

DNL Values for Traffic Noise

Day of the Week	Site		
	Bldg 310	Bldg 316	Bldg 501
Thursday	76 dB	74 dB	75 dB
Friday	78 dB	75 dB	75 dB
Saturday	78 dB	72 dB	73 dB
Sunday	71 dB	73 dB	75 dB


35
30
25
20
15
10
5
0
NUMBER OF OCCURRENCES
BASE
NEGATIVE
EXCESS
NEGATIVE
FOCUS
50
60
70
80
90
100
118
120
130
140
PEAK SOUND PRESSURE LEVEL (dB)


Central Monitor
Area of Blasting
x Km
Remote
Monitoring
Sites

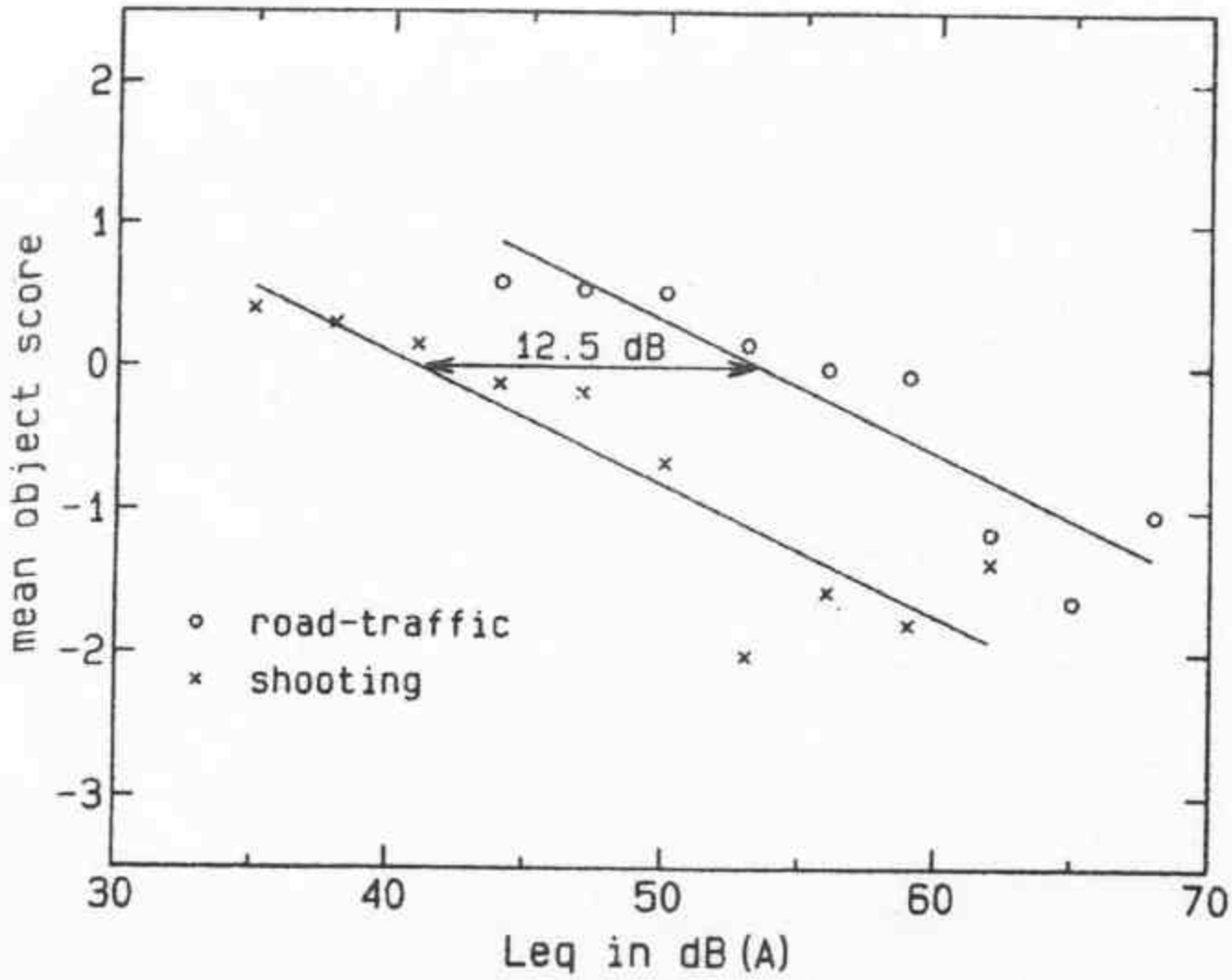


FIG. 3. Separate relations between A-weighted L_{eq} and mean object score for shooting and road-traffic sounds.

QUESTIONS?