

UNDERSTANDING AIRCRAFT NOISE

Aircraft noise can be expressed in many ways. We could discuss dB, dBA, PNL, EPNL, SEL, SENEL, CNEL, and Ldn. But all this sounds like a foreign language which we have insufficient time to learn. For the purpose of this publication, we will discuss aircraft noise in terms of single event noise level (SENEL) and cumulative noise exposure level (Ldn).

In measuring noise, sound level meters are "weighted" because the human ear does not respond equally to the different frequencies of noise. Sound

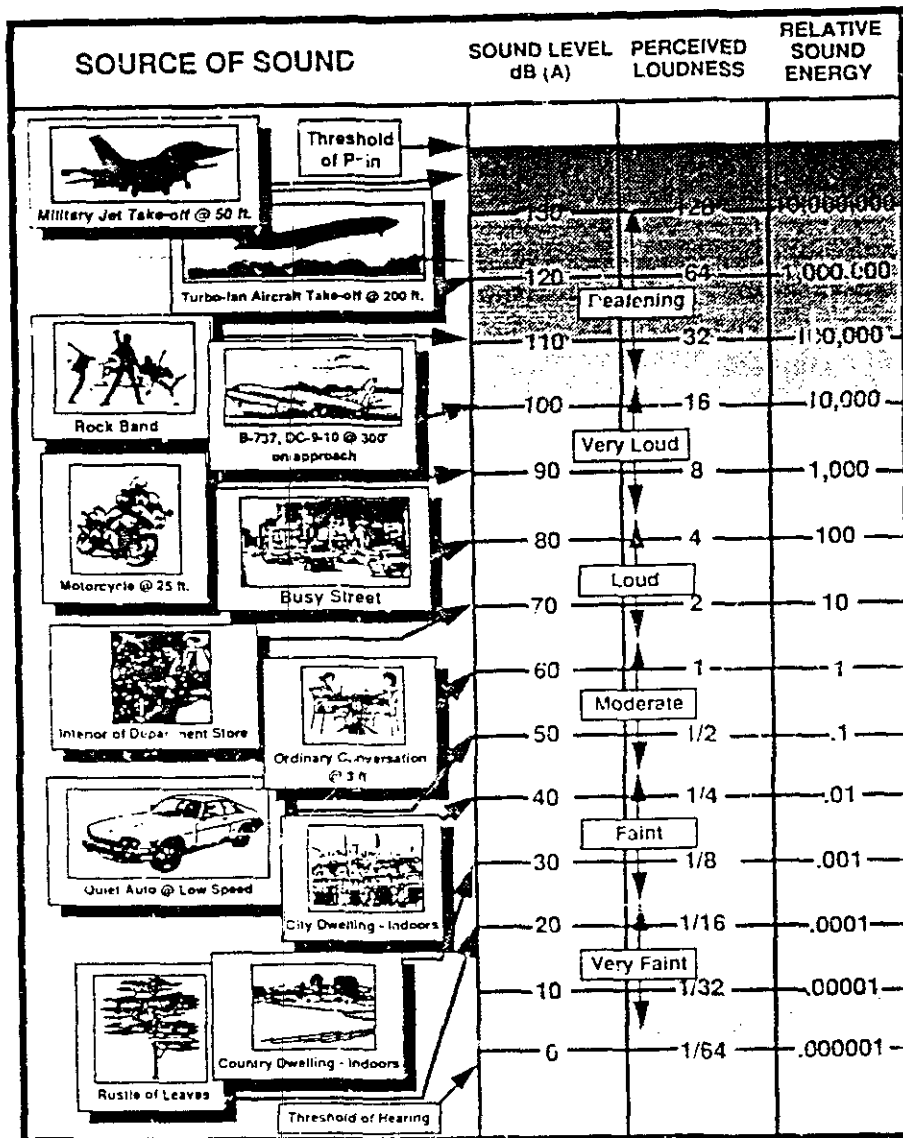
level meters can have an A, B, or C weighting network. The A-scale most frequently used in aircraft noise measurements and is expressed as "dBA."

Technology has allowed us to quantify the human ear's response to noise, both single event and cumulative exposure. However, an individual's perception of the noise, whatever its source, is also affected by the personal makeup of the individual. Technology can only predict how most people will react to noise.

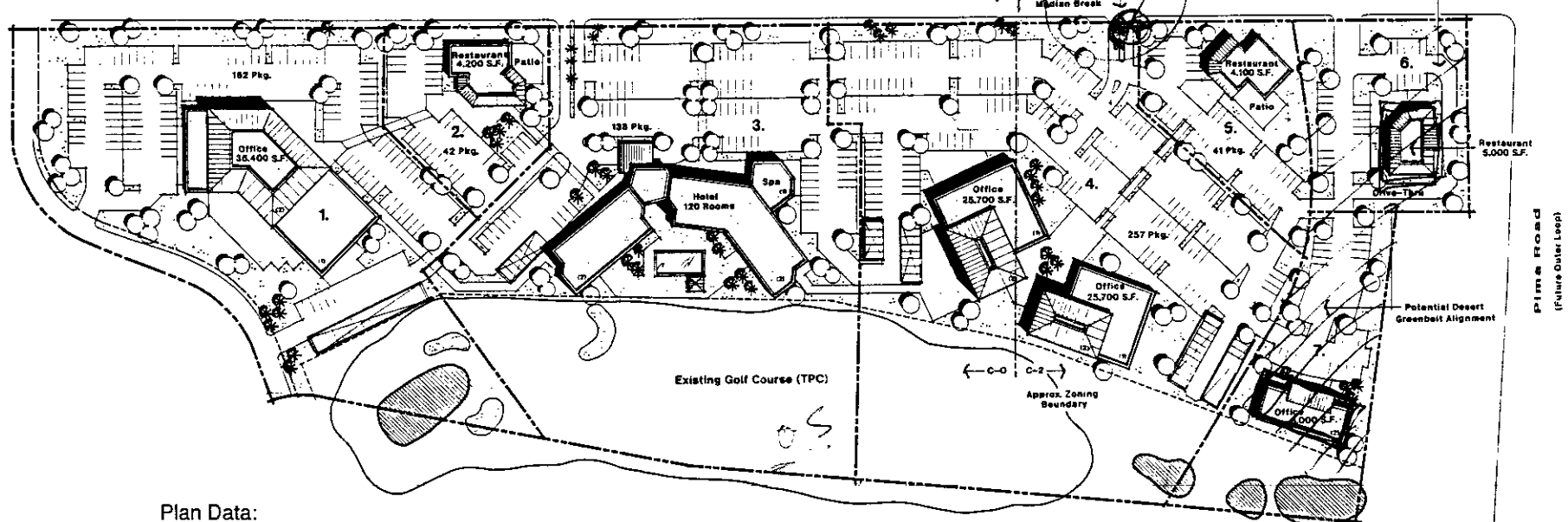
SINGLE EVENT NOISE EXPOSURE LEVEL	CUMULATIVE NOISE EXPOSURE
(SENEL) is the amount of noise created by one aircraft flyover, taking into account the sound intensity, pitch and the duration of the event.	is used to quantify the overall noise environment. This is best expressed as a day-night sound level (Ldn). Ldn is an average sound level over a 24-hour period with a 10 decibel penalty for noise occurring at night between 10 p.m. and 7 a.m. It is often expressed as a yearly average. Ldn is an important tool in land use planning.

LAND USE GUIDANCE CHART: AIRPORT NOISE INTERPOLATION							
LAND USE GUIDANCE ZONES (LUG)	NOISE EXPOSURE CLASS	INPUTS: AIRCRAFT NOISE ESTIMATING METHODOLOGIES				HUD NOISE ASSESSMENT GUIDELINES	SUGGESTED NOISE CONTROLS
		Ldn DAY NIGHT AVG SOUND LEVEL	NEF NOISE EXPOSURE FORECAST	CNP COMPOSITE NOISE RATING	CNEL COMMUNITY NOISE EQUIVALENT LEVEL		
A	MINIMAL EXPOSURE	0	0	0	0	"CLEARLY ACCEPTABLE"	NORMALLY REQUIRES NO SPECIAL CONSIDERATIONS
		TO	TO	TO	TO		
		55	20	90	55		
B	MODERATE EXPOSURE	55	20	90	55	"NORMALLY ACCEPTABLE"	LAND USE CONTROLS SHOULD BE CONSIDERED
		TO	TO	TO	TO		
		65	30	100	65		
C	SIGNIFICANT EXPOSURE	65	30	100	65	"NORMALLY UNACCEPTABLE"	NOISE EASEMENTS LAND USE AND OTHER COMPATIBILITY CONTROLS RECOMMENDED
		TO	TO	TO	TO		
		75	40	115	75		
D	SEVERE EXPOSURE	75	40	115	75	"CLEARLY UNACCEPTABLE"	CONTAINMENT WITHIN AIRPORT BOUNDARY OR USE OF POSITIVE COMPATIBILITY CONTROLS RECOMMENDED
		E	E	E	E		
		HIGHER	HIGHER	HIGHER	HIGHER		

SOUND LEVEL COMPARISON



No
? Median
? Break



Plan Data:

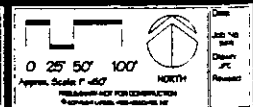
Parcel:	Use:	Gross Ac:	*Net Ac:
1.	Office	3.60	3.10
2.	Restaurant	0.80	0.80
3.	Hotel/Spa	4.80	3.00
4.	Office (2 Bldgs.)	5.60	4.00
5.	Restaurant	0.85	0.85
6.	Restaurant	1.00	1.00
7.	Office	1.30	0.90
Total:		17.95	13.65

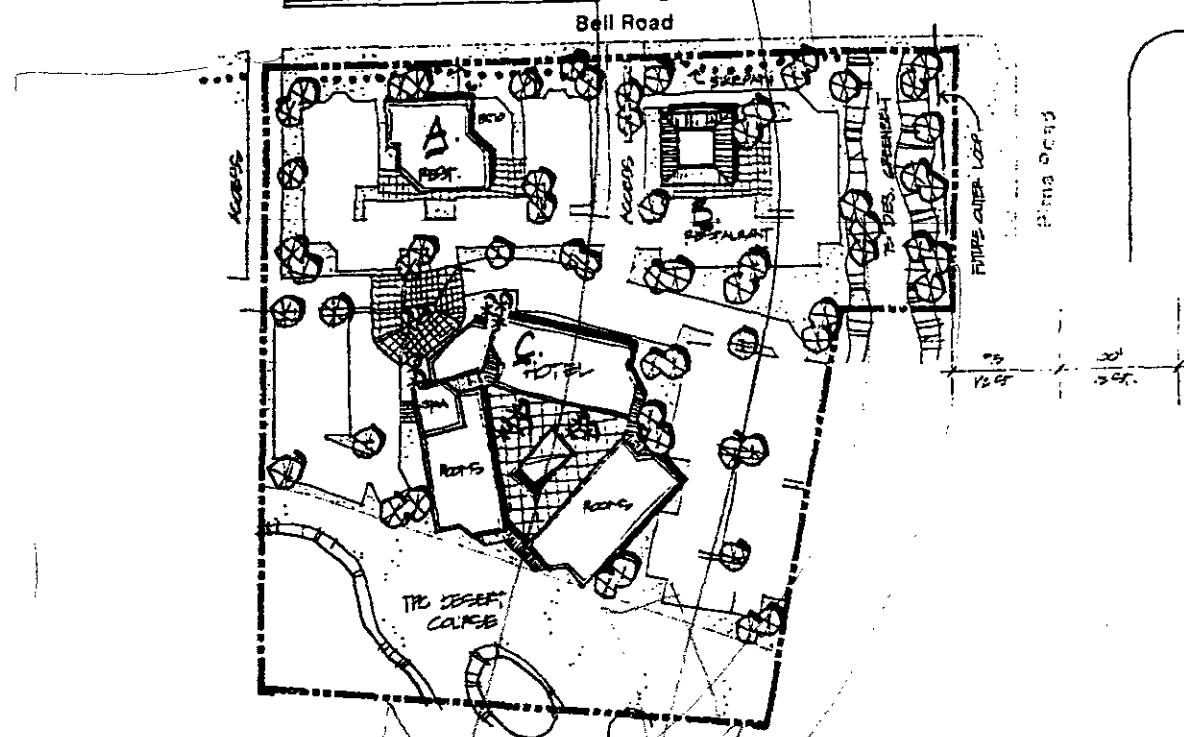
*Net of Golf Course

- GP/site dev. plan
- med. break - zoning case-prev.
- Drainage

**LARSON, VOSS
ASSOC., INC.**

Scottsdale International Corporate Center





PLAN SUMMARY...

- A. RESTAURANT
 - 2,000 SF.
 - 31 PKG. PROV.
- B. RESTAURANT
 - 5,000 SF.
 - 45 PKG. PROV.
- C. HOTEL
 - 144 ROOMS
 - 44 PKG. PROV.
 - 146 PKG. PROV.

• EXISTING ZONING: C-2

LARSON, VOSS
ASSOCIATES, INC.

Scottsdale International Corporate Center Parcel D

Prepared For: Osborn Managment



Scale: 1" = 50'



© LARSON, VOSS ASSOCIATES, INC.

7500 EAST MAIN STREET, SCOTTSDALE, ARIZONA 85251
FAX: (480) 944-1700 PHONE: (480) 944-1000

DP

N 89°52'10.3"W

2643.6869

SWC

(82) C160

200

171

DRAFT

2449.8843

S 00°32'21.8"W

