

O'HARE NOISE SURVEY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION V

DATA REPORT

A two day noise study was undertaken by the U. S. Environmental Protection Agency, Region V Office in response to a request by Congressman Abner Mikva for current aircraft noise level data around O'Hare Airport. A summer noise intern from the Office of Noise Abatement and Control supervised the survey.

Under Title IV, Section 402C of the 1970 Clean Air Act, the United States Environmental Protection Agency is authorized to work directly with any Federal agency toward the abatement of existing noise problems. As a result, U. S. EPA has been working with Great Lakes Federal Aviation Administration (FAA) and will supply them this data.

DESCRIPTION OF THE SURVEY

On August 24 and 28, 1972, quantitative noise measurements were made by EPA at 15 locations around O'Hare (See attached maps). At many of the locations, residents were interviewed to obtain their subjective comments on the noise problem.

Equipment employed for the measurements included 3 sound level meters (General Radio Model 1565-B) and a graphic level recorder (General Radio Model 1521-B). The sound level meters were used to obtain the peak sound pressure levels radiating from the aircraft. The "A" - weighing circuit and the fast meter response were both activated. "A" - weighing is a method of modifying the instrument frequency response so that it reacts nearly like the human ear. See Figure 1.

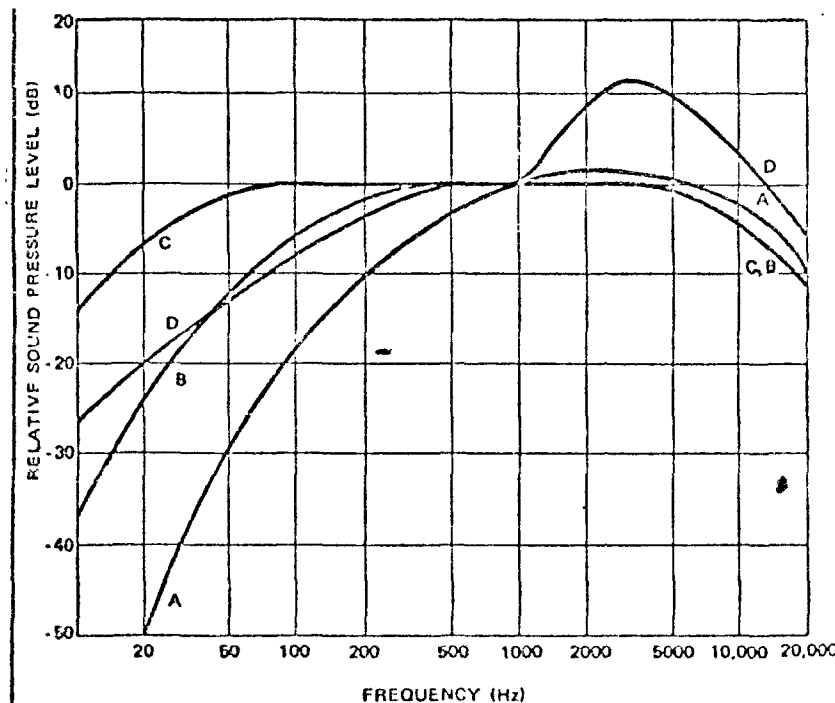


Fig.1, A,B,C, and D sound weighing curves.

The fast meter response permits the sound level meter to respond to the short duration jet noise level fluctuations. The graphic level recorder was used only at the first 3 locations (there is a substantial setup time for the equipment). The recorder produced curves showing the variation of sound level with time. It is important to compare this graphical data with the peak readings from the sound level meter. Peak sound readings representing very short time intervals do not in themselves fairly represent a noise problem.

Test locations were selected for the following reasons: Location No. 5 was chosen to show the highest noise levels expected at any residential area around O'Hare Field. Location Nos. 1,2,7,8,9,10,11, and 12 were chosen to

### Sound Levels and Human Response

	Response	Hearing Effects	Conversational Relationships
Carrier Deck Jet Operation	Very Loud Loud Amplified Speech		
Jet Takeoff (200 feet)			
Discotheque Auto Horn (3 feet)			
Riveting Machine Jet Takeoff (2,000 feet)			
Garbage Truck N.Y. Subway Station	Very Annoying		Shouting in ear
Heavy Truck (50 feet)	Hearing Damage (8 hours)		Shouting at 2 ft.
Pneumatic Drill (50 feet)			Very loud Conversation, 2 ft.
Alarm Clock	Annoying		Loud Conversation, 2 ft.
Freight Train (50 feet)			Loud Conversation, 4 ft.
Freeway Traffic (50 feet)	Telephone Use Difficult Intrusive		Normal Conversation, 12 ft.
Air Conditioning Unit (20 feet)			
Light Auto Traffic (100 feet)	Quiet		
Living Room Bedroom Library			
Soft Whisper (15 feet)	Very Quiet		
Broadcasting Studio	Just Audible		
	Threshold of Hearing		

CONTRIBUTION TO HEARING IMPAIRMENT BEGINS

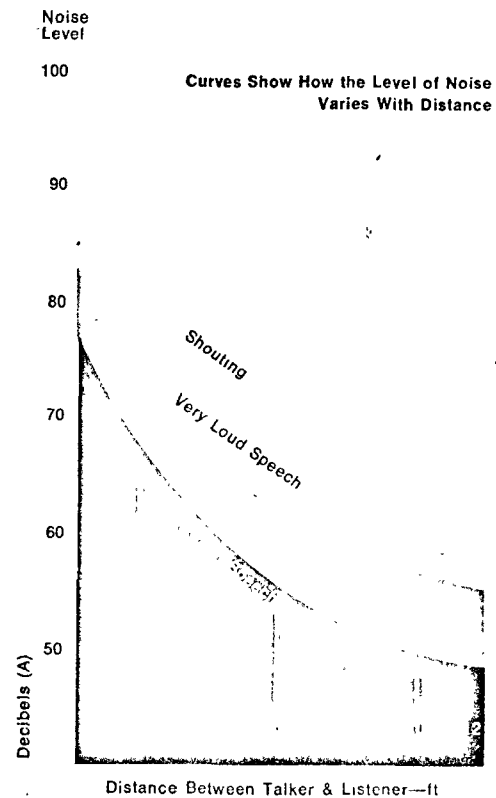


Fig. 2

Fig. 3

obtain noise data beneath landing patterns for future analysis of noise abatement landing procedures. Location Nos. 3,4,6,13, and 14 were chosen beneath takeoff patterns for a possible comparison between takeoff and landing noise. Location Nos. 2 and 7 are near large schools. Location Nos. 14 and 15 are both near large, vacant land areas.

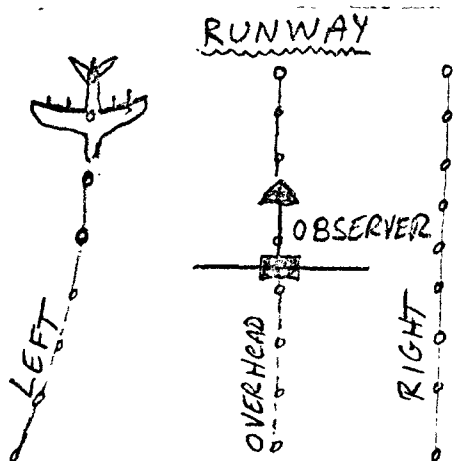
The new, quieter DC-10s, L-1011s, and 747s represented 1.3% of the 218 aircraft measured.

#### RELATION OF DATA TO HUMAN RESPONSE

The two charts shown in Figures 2 and 3 are useful in relating sound pressure levels to human response. Both charts were taken from a U. S. EPA Public Relations Circular, "Noise, Unwanted By-product of Modern Life."

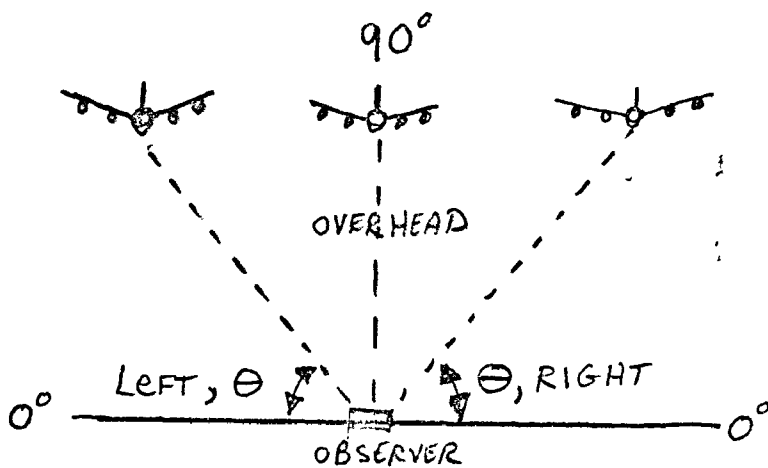
#### EXPLANATION OF THE DATA PRESENTATION

Parameters and data for each location are presented on pages 7 through 27. The Overflight Angle is a method used to describe the directional location of the aircraft during it's flight past the test location. To determine this parameter, the observer first faced the runway under study. See Figure 4. Then, as an aircraft passed, the angle " $\theta$ " to the "Left" or "Right" is recorded. If the flight path is at  $90^\circ$ , then the description "Overhead" is used. See Figure 5.



TOP VIEW

Fig. 4



SIDE VIEW

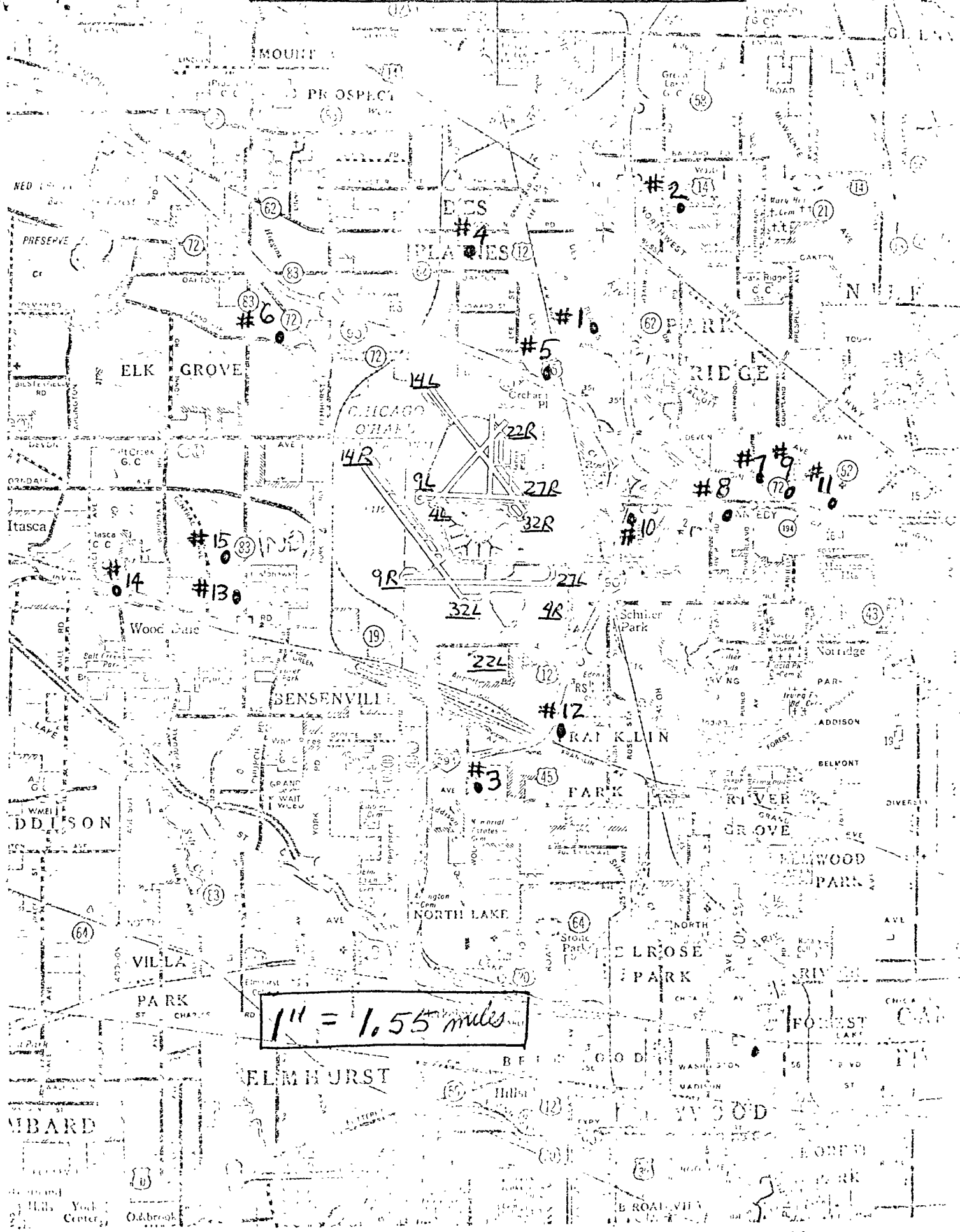
Fig. 5

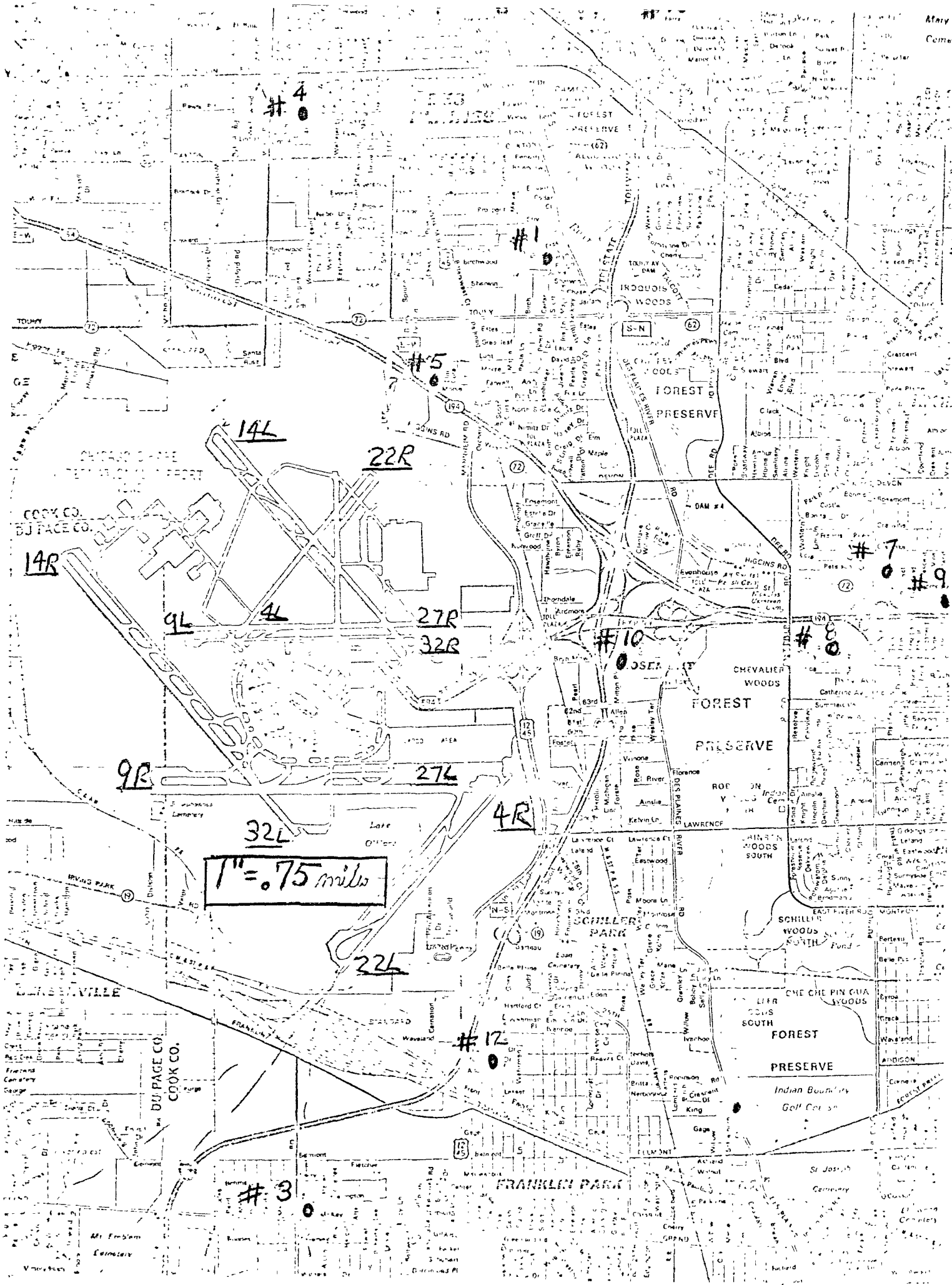
In some cases, the Neighborhood Noise was measured to provide an indication of background noise levels exceeded by the aircraft. These were average, not peak readings. The Time Period indicates the beginning and ending times for the series of measurements made at each location. Contained in parenthesis is the number of minutes within the time period. Average time between overflights indicates the repetitive nature of the noise at each location for the time of day studied.

To summarize the noise data at each location, the high, low, and average peak noise levels were calculated and reported. This was done separately for all aircraft and for each type. The 727/737/DC-9 aircraft were grouped together as having similar noise characteristics. Other aircraft types grouped in a similar manner are DC-8/707/DC-8 STRETCH, DC-10/L-1011, 747, all business jets, all turbo prop aircraft, and all non-turbo prop planes. The number of aircraft measured at each location is also indicated.

Graphical data taken at location Nos. 1,2, and 3 is presented following each of the location reports. The horizontal axis on the graph indicates time and the vertical axis the instantaneous noise level for each point of time. A Noise Exposure Analysis based on each of the three graphical data sets shows the time duration and the percentage of time that noise exceeds each of two specified levels. The first level, 65 DBA, was chosen as a sound pressure twice as loud as the normal neighborhood background level of 55 DBA (a 10 DB increase appears as twice the loudness to the human ear). The second level of 85 DBA was chosen as an annoying noise level at which shouting at 2 feet is required in order to communicate.

# NOISE STUDY LOCATIONS





1" = 0.75 miles

# 4

# 1

# 5

14L

22R

14R

9L

4L

27R

32R

9R

27L

32L

4R

22L

# 10

# 7

# 9

# 8

# 12

# 3

FRANKLIN PARK

OSER

CHEVALIER WOODS FOREST PRESERVE

SCHILLER PARK

SCHILLER WOODS SOUTH

CHE CHE PIN GUA WOODS FOREST PRESERVE

Indian Boundary Golf Course

COOK CO. DU PAGE CO.

DU PAGE CO. COOK CO.

LAND VILLE

St. Joseph Cemetery

St. Joseph Cemetery

St. Joseph Cemetery

St. Joseph Cemetery

St. Joseph Cemetery

St. Joseph Cemetery

St. Joseph Cemetery

#1 LOCATION: 2032 Welwyn, Des Plaines, Illinois  
(Near Birch and Howard)

DATE: August 24, 1972

WEATHER: Heavy overcast, 75 degrees, wind S.W. at 10 mph.

RUNWAY STUDIED: 22R, Landings

DISTANCE TO RUNWAY END (MILES): 1.7

OVERFLIGHT ANGLE (DEGREES): Overhead

NEIGHBORHOOD: Old, single family residential; heavy tree cover

NEIGHBORHOOD NOISE (DBA): -

TIME PERIOD (MIN.): 9:32 - 10:53 A.M. (81)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 1.8

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	21	97	92	85
707/DC-8/STRETCH	7	102	97	87
DC-10/L1011	2	88	86.5	85
BUSINESS JET	3	88	86	84
TURBO PROP	6	87	84	81
NON-TURBO PROP	6	78	74	68
ALL TYPES	45	102	88.9	68

COMMENTS: The resident at 2019 Welwyn permitted interior noise readings to be made:

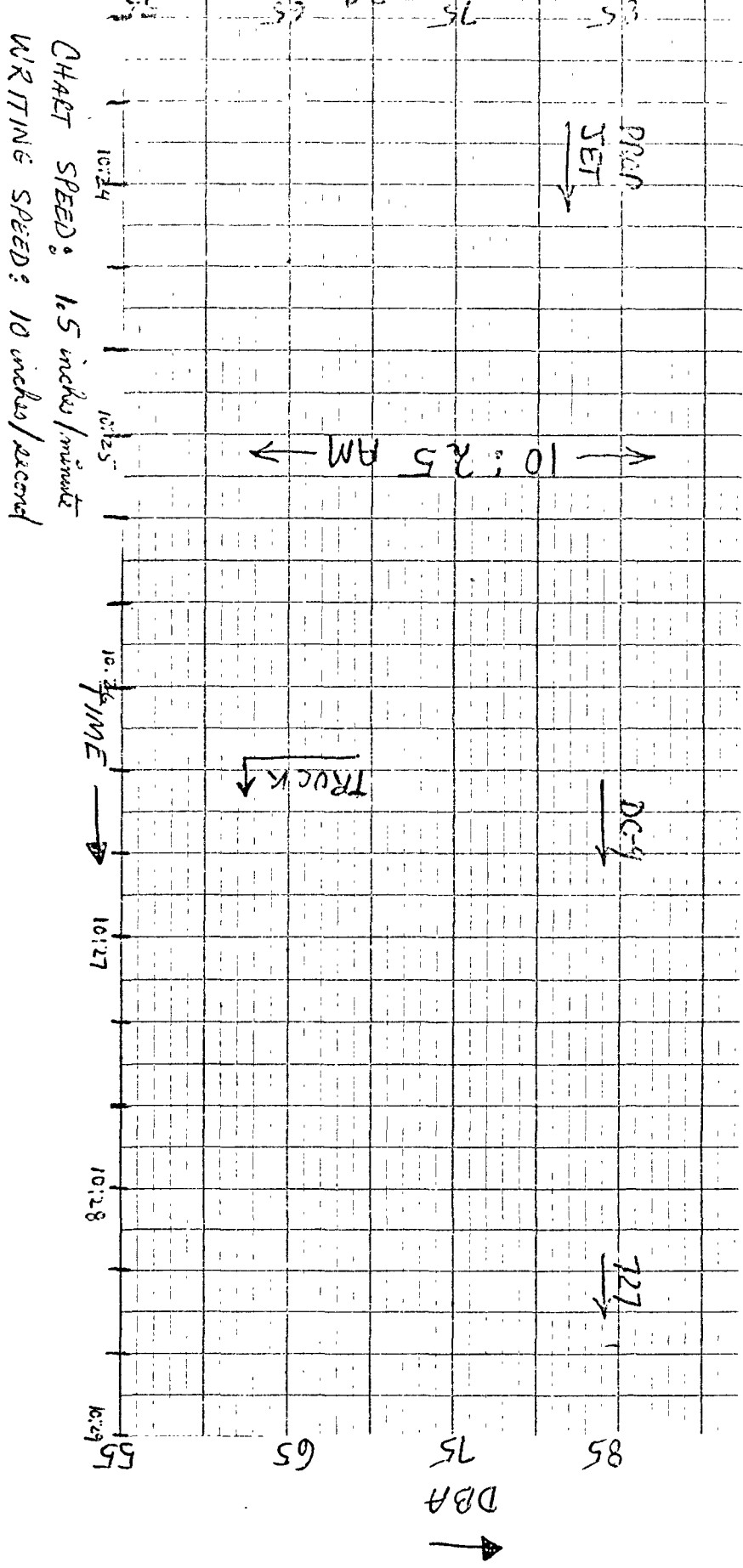
Door open - 73 DBA (707)

Windows and doors closed - 60 DBA (707)

The above interior noise levels greatly annoyed the residents. They also stated that everytime a jet passes over, their TV ghosts severely. They have not noticed an improvement within the last year although they have heard some of the quieter jets recently introduced. See Graphic Level Recorder output data attached.

LOCATION #1

GRAPHIC LEVEL RECORDER DATA



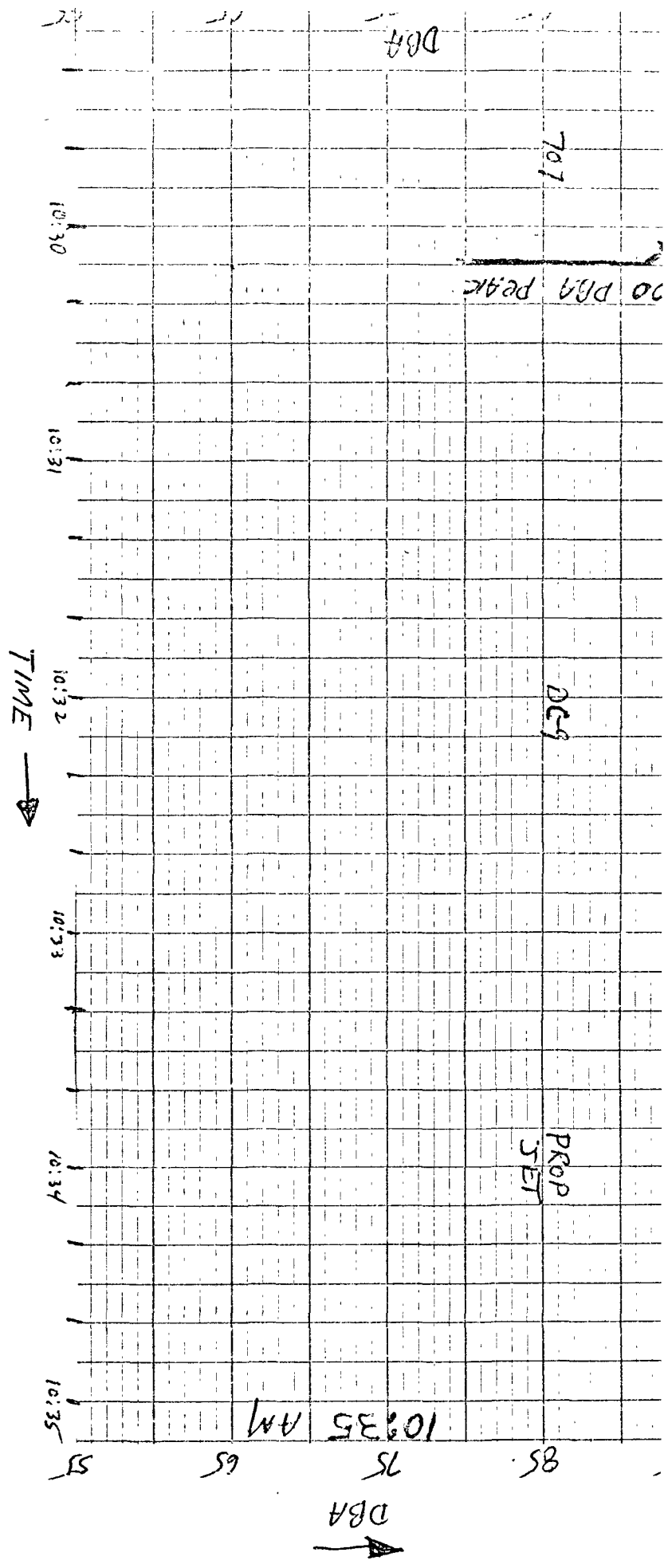
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LOCATION #1

GRAPHIC LEVEL RECORDER DATA

CHART SPEED: 1.5 INCHES/MINUTE  
WRITING SPEED: 10 INCHES/SECOND



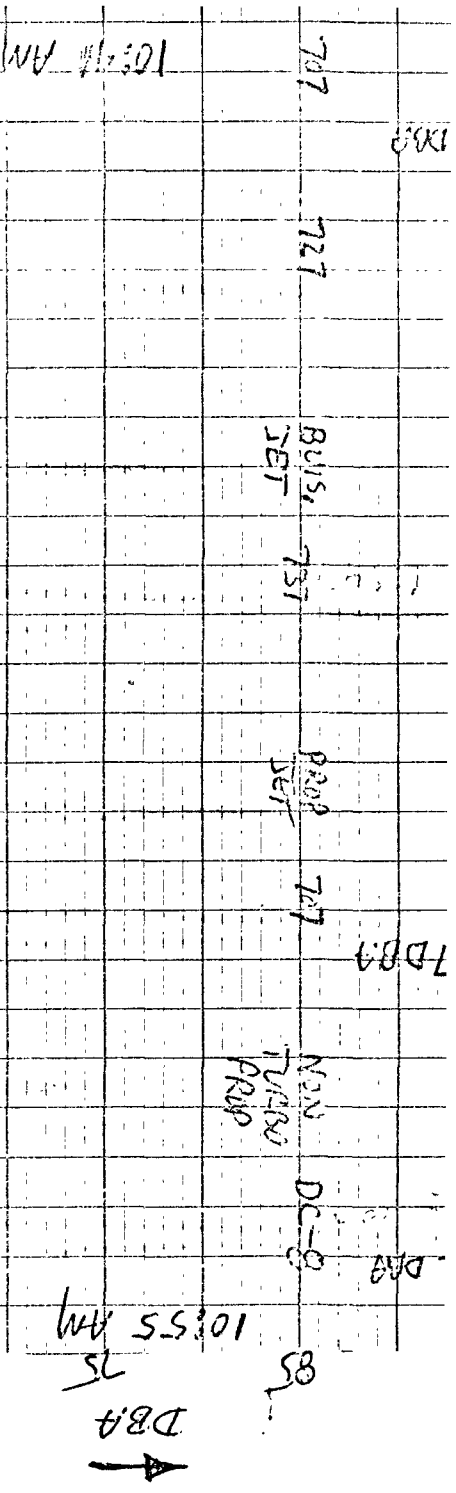


CHART SPEED: 5 INCHES/MINUTE  
 WRITING SPEED: 10 INCHES/SECOND

LOCATION #/

GRAPHIC LEVEL RECORDER DATA

NOISE EXPOSURE ANALYSIS FOR LOCATION NO. 1

10:24 - 10:54 A.M. AUG 24, 1972

AIRCRAFT TYPE	TIME (SECONDS) DURING WHICH THE SPECIFIED NOISE LEVELS WERE EXCEEDED FOR ONE OVERFLIGHT	
	65 DBA	85 DBA
DC-8/707/STRETCH	28	10
727/737/DC-9	24	6
PROP JET	16	-

PERCENT OF TIME DURING WHICH THE SPECIFIED NOISE LEVELS WERE EXCEEDED BY ALL OVERFLIGHTS BETWEEN 10:24 - 10:54 A.M. :

65 DBA	-	24%
85 DBA	-	4.2%

#2 LOCATION: Maine East Township High School, Park Ridge, Illinois  
(East side of School)

DATE: August 24, 1972

WEATHER: Cloudy, 78 degrees, wind S.W. at 12 mph

RUNWAY STUDIED: 22R, Landings

DISTANCE TO RUNWAY END (MILES): 3.5

OVERFLIGHT ANGLE (DEGREES): 65 - 75 degrees, Left

NEIGHBORHOOD: 5,000 student high school surrounded by residential  
single and townhouse units

NEIGHBORHOOD NOISE (DBA): -

TIME PERIOD (MIN.): 12:29 - 1:24 P.M. (55)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 3.2

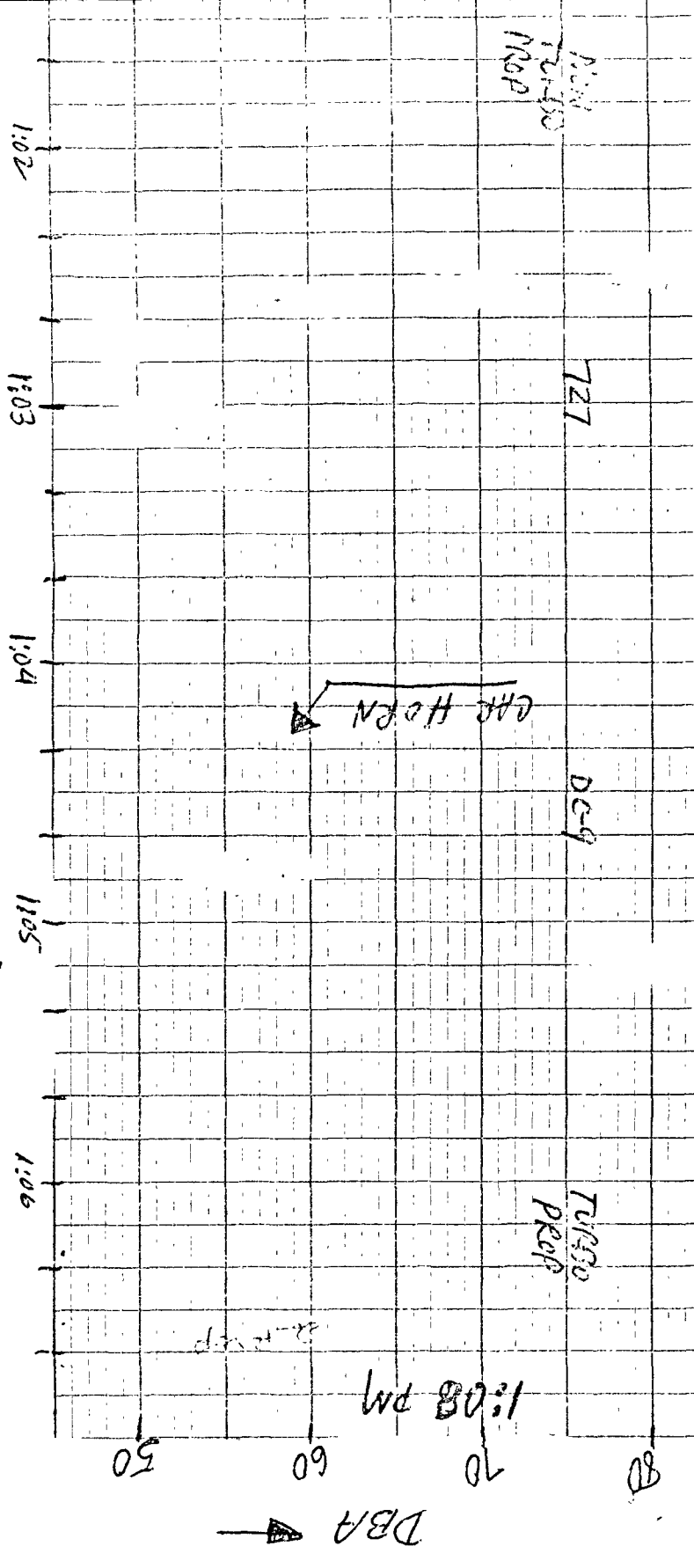
AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	9	88	84	80
707/DC-8/STRETCH	1		94	
TURBO PROP	3	80	78.6	78
NON-TURBO PROP	4	74	72	63
ALL TYPES	17	94	80.9	63

COMMENTS: Interior noise measurements were made in the old section  
of the school: Passage between buildings - 78 DBA (727)  
1st floor, window closed - 58 DBA (727)  
3rd floor, window closed - 69 DBA (727)

In an interview, the school nurse stated that teachers  
had been bothered by the noise in certain classrooms.

See Graphic Level Recorder Data attached.

AIRCRAFT SPEED : 1.5 INCHES/MINUTE  
 WRITING SPEED : 10 INCHES/SECOND



Noise Exposure Analysis for Location No. 2

1:02 - 1:07 AM Aug. 24, 1972

AIRCRAFT TYPE | TIME (SECONDS) DURING WHICH THE SPECIFIED  
 NOISE LEVELS WERE EXCEEDED FOR ONE OVER FLIGHT

AIRCRAFT TYPE	TIME (SECONDS) DURING WHICH THE SPECIFIED NOISE LEVELS WERE EXCEEDED FOR ONE OVER FLIGHT
DC-8 / 707 / STEETCH	65 DBA
727 / 737 / DC-9	28
TURBO PROP	20
	85 DBA

LOCATION # 2

#3 LOCATION: 2942 La Porte, Franklin Park, Illinois  
(Near Grand and Wolf)

DATE: August 24, 1972

WEATHER: Partly cloudy, 82 degrees, wind S.W. at 10 mph

RUNWAY STUDIED: 22L, Takeoff

DISTANCE TO RUNWAY END (MILES): 2.33

OVERFLIGHT ANGLE (DEGREES): Overhead and 50 degrees, Left

NEIGHBORHOOD: Old, single family residential

NEIGHBORHOOD NOISE (DBA): -

TIME PERIOD (MIN.): 3:33 - 3:52 P.M. (19)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 1

AIRCRAFT TYPE (OVER HEAD)	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	2	95	94.5	94
707/DC-8/STRETCH	2	96	95	94
BUSINESS JET	1		95	
ALL TYPES	5	96	94.8	94

AIRCRAFT TYPE (50 DEGREES, LEFT)	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	8	96	87.6	74
707/DC-8/STRETCH	1		86	
BUSINESS JET	1		82	
NON-TURBO PROP	1		63	
ALL TYPES	11	96	93.2	63

COMMENTS: Resident stated that he had lived at the above location for 20 years and had become accustomed to the noise. He has noticed the quieter DC-10 and 747 overflights.

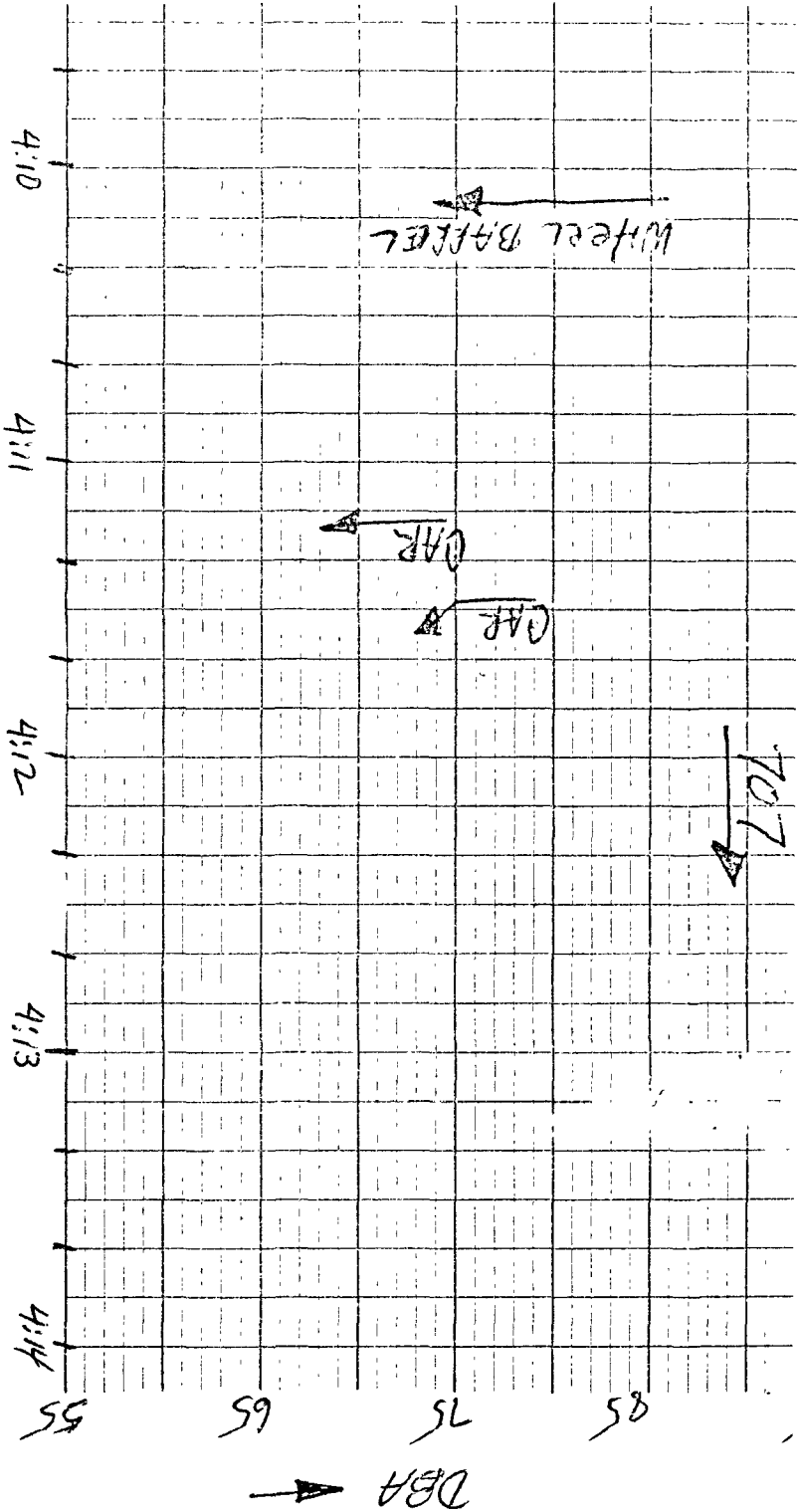


CHART SPEED : 4.5 INCHES/minute  
 WRITING SPEED : 10 INCHES/seconds

TIME (PM) →

Noise Exposure Analysis For Location No. 3

4:10 PM - 4:14 PM AUG. 29, 1972

AIRCRAFT TYPE | TIME (SECONDS) | DURING WHICH THE SPECIFIED NOISE LEVELS WERE EXCEEDED FOR ONE OVER FLIGHT

65 DBA | 85 DBA

DC-8/707/STRETCH | 56 | 16

LOCATION #3

#4 LOCATION: Cindy and Forest, Des Plaines, Illinois  
( 2 blocks North of Maine West High School)

DATE: August 24, 1972

WEATHER: Partly cloudy, 80 degrees, wind S.W. at 5 mph

RUNWAY STUDIED: 14L, Takeoff

DISTANCE TO RUNWAY END (MILES): 1.76

OVERFLIGHT ANGLE (DEGREES): Overhead

NEIGHBORHOOD: Grade School and suburban residential

NEIGHBORHOOD NOISE (DBA): 52

TIME PERIOD (MIN.): 5:25 - 6:01 P.M. (36)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 13

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	2	86	84	82
707/DC-8/STRETCH	1		92	
ALL TYPES	3	92	86.6	82

COMMENTS: In order to pass over this location, a sharp turn to the North was required immediately after takeoff. Of 16 planes measured, 3 veered over the above location. The average peak sound for the other aircraft passing West of the location was 73 DBA.



#5 LOCATION: Morse and Chestnut, Des Plaines, Illinois  
(4 blocks N.W. of Mannheim and the N.W. Tollway)

DATE: August 24, 1972

WEATHER: Partly cloudy, 75 degrees, wind S.W. at 5 mph

RUNWAY STUDIED: 22R, Landings

DISTANCE TO RUNWAY END (MILES): .68 (3,590 feet)

OVERFLIGHT ANGLE (DEGREES): Overhead

NEIGHBORHOOD: Old, single family suburban ranch homes with tree cover;  
O'Hare boundary and industrial park lie to the S.W.

NEIGHBORHOOD NOISE (DBA): -

TIME PERIOD (MIN.): 9:23 - 9:32 P.M. (9)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 1.2

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	3	112	108	102
707/DC-8/STRETCH	4	118	112	108
ALL TYPES	7	118	110.2	102

COMMENTS: This residential location was chosen as an example of the highest noise level around O'Hare.

#6 LOCATION: Landmier Road and Dierting, Des Plaines, Illinois  
(5 blocks N.W. of Touhy and Elmhurst)

DATE: August 24 - August 25, 1972

WEATHER: Partly cloudy, 75 degrees, wind S.W. at 5 mph

RUNWAY STUDIED: 14R, Takeoff

DISTANCE TO RUNWAY END (MILES): 1.78

OVERFLIGHT ANGLE (DEGREES): Overhead

NEIGHBORHOOD: Single family, suburban residential North of Landmier  
Road; industrial park to the South.

NEIGHBORHOOD NOISE (DBA): -

TIME PERIOD (MIN.): 11:52 - 12:22 A.M. (30)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 3

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	3	102	98.3	96
707/DC-8/STRETCH	6	109	100.5	91
NON-TURBO PROP	1		81	
ALL TYPES	10	109	97.9	81

COMMENTS: NONE

#7 LOCATION: Cumberland and Glendale, Park Ridge, Illinois  
(Near Cumberland and I-194)

DATE: August 28, 1972

WEATHER: Clear sky, 75 degrees, and N.W. wind at 5 mph

RUNWAY STUDIED: 27R, Landings

DISTANCE TO RUNWAY END (MILES): 2.93

OVERFLIGHT ANGLE (DEGREES): 35 - 75 degrees, Left

NEIGHBORHOOD: Old, two-story, single family residential, heavy  
tree cover

NEIGHBORHOOD NOISE (DBA): 50

TIME PERIOD (MIN.): 9:25 - 9:42 A.M. (17)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 2.8

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	4	79	78.5	78
NON-TURBO PROP	2	69	66	63
ALL TYPES	6	79	74	63

COMMENTS: This flight path is directly over the Kennedy Expressway.

#8 LOCATION: Bryn Mawr and Delphia, Chicago, Illinois  
(2 blocks South of the Kennedy across from the Marriot Inn)

DATE: August 28, 1972

WEATHER: Clear sky, 82 degrees, N.W. wind at 5 mph

RUNWAY STUDIED: 27R, Landings

DISTANCE TO RUNWAY END (MILES): 2.55

OVERFLIGHT ANGLE (DEGREES): 50 - 80 degree, Right

NEIGHBORHOOD: Very dense residential with 3 story apartments and the  
20 story Lamp Lighter Complex (all new)

NEIGHBORHOOD NOISE (DBA): 57

TIME PERIOD (MIN.): 10:18 - 11:18 A.M. (60)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 3.3

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	10	87	82.7	75
707/DC-8/STRETCH	5	94	90.6	82
NON-TURBO PROP	3	77	73	67
ALL TYPES	18	94	83.2	67

COMMENTS: A British-West Indies 727 was 10 DBA quieter than an American 727 at same altitude and location.

The flight path here is along the Kennedy Expressway.

#9 LOCATION: 2009 Ashland, Park Ridge, Illinois  
(Just North of the Kennedy Expressway)

DATE: August 28, 1972

WEATHER: Clear sky, 82 degrees, N.W. wind at 5 mph

RUNWAY STUDIED: 27R, Landings

DISTANCE TO RUNWAY END (MILES): 3.3

OVERFLIGHT ANGLE (DEGREES): 70 - 85 degrees, Left

NEIGHBORHOOD: Close-spaced, single family, residential

NEIGHBORHOOD NOISE (DBA): 60 - 65

TIME PERIOD (MIN.): 10:25 - 10:45 A.M. (20)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 5

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	2	86	81.5	77
707/DC-8/STRETCH	1		80	
TURBO PROP	1		77	
ALL TYPES	4	86	80	77

COMMENTS: Flight path is over the Kennedy Expressway.

#10 LOCATION: 9540 Bryn Mawr, Rosemont, Illinois  
(3 blocks West of River Road)

DATE: August 28, 1972

WEATHER: Clear sky, 85 degrees, N.W. wind at 5 mph

RUNWAY STUDIED: 27R, Landings

DISTANCE TO RUNWAY END (MILES): 1.28

OVERFLIGHT ANGLE (DEGREES): 35 - 50 degrees, Right

NEIGHBORHOOD: Trailer Park, farm house, and light industry

NEIGHBORHOOD NOISE (DBA): 58

TIME PERIOD (MIN.): 11:11 - 11:44 A.M. (33)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 3

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	7	87	84.8	81
707/DC-8/STRETCH	2	96	95.5	95
NON-TURBO PROP	2	72	69.5	67
ALL TYPES	11	96	84	67

COMMENTS: Aircraft land over the Kennedy Expressway.

#11 LOCATION: Oleander and Seminole, Chicago, Illinois  
(Between Harlem and Canfield)

DATE: August 28, 1972

WEATHER: Clear sky, 85 degrees, wind N.W. at 5 mph

RUNWAY STUDIED: 27R, Landings

DISTANCE TO RUNWAY END (MILES): 3.77

OVERFLIGHT ANGLE (DEGREES): Directly overhead

NEIGHBORHOOD: Old, close packed residential, sing family dwellings

NEIGHBORHOOD NOISE (DBA): 58 (63 peak)

TIME PERIOD (MIN.): 11:31 - 12:14 P.M. (43)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 2.1

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	11	88	79	74
707/DC-8/STRETCH	3	88	88	
L1011/DC-10	1		82	
NON-TURBO PROP	5	71	69.2	67
ALL TYPES	20	88	78.1	69

COMMENTS: At 5724 North Oleander, resident stated that the planes fly lower and louder more on some days than others. She stated that the noise levels the Environmental Protection Agency measured were lower than normal. For her, the greatest annoyance is between 4:00 P.M. and 9:00 P.M.

She has felt no relief since the introduction of the DC-10 and L-1011 because large numbers of 707's still pass overhead.

#12 LOCATION: 10217 McNerney Drive, Franklin Park, Illinois  
(Near Mannheim and the Tri-State)

DATE: August 28, 1972

WEATHER: Clear sky, 85 degrees, wind N.W. at 5 mph

RUNWAY STUDIED: 32L, Landings

DISTANCE TO RUNWAY END (MILES): 1.8

OVERFLIGHT ANGLE (DEGREES): Overhead

NEIGHBORHOOD: Small homes, very closely packed

NEIGHBORHOOD NOISE (DBA): -

TIME PERIOD (MIN.): 12:45 - 1:45 P.M. (60)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 2

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	21	97	94.4	91
707/DC-8/STRETCH	4	105	100.5	97
TURBO PROP	1		88	
NON-TURBO PROP	4	81	78.2	75
ALL TYPES	31	105	93	75

COMMENTS: NONE



#13 LOCATION: West Greenvalley and North Spruce, Bensenville, Illinois  
(2 blocks North of Routes 19 and 83)

DATE: August 28, 1972

WEATHER: Partly cloudy, 88 degrees, wind N. W. at 7 mph

RUNWAY STUDIED: 9R, Takeoff

DISTANCE TO RUNWAY END (MILES): 2.02

OVERFLIGHT ANGLE (DEGREES): 80 - 85 degrees, Left

NEIGHBORHOOD: Single family, suburban residential

NEIGHBORHOOD NOISE (DBA): -

TIME PERIOD (MIN.): 1:13 - 1:26 P.M. (13)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 2.1

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	5	96	90.4	87
707/DC-8/STRETCH	1		103	
ALL TYPES	6	103	92.5	87

COMMENTS: NONE

#14 LOCATION: Addison and Irving Park, Wooddale, Illinois

DATE: August 28, 1972

WEATHER: Partly cloudy, 88 degrees, wind N.W. 8 mph

RUNWAY STUDIED: 9R, Takeoff

DISTANCE TO RUNWAY END (MILES): 3.57

OVERFLIGHT ANGLE (DEGREES): 75 - 90 degrees, Right

NEIGHBORHOOD: Vacant land to the North; old, suburban residential  
to the South

NEIGHBORHOOD NOISE (DBA): -

TIME PERIOD (MIN.): 1:35 - 1:58 P.M. (23)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 3.8

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	1		87	
707/DC-8/STRETCH	2	95	92	89
ALL TYPES	3	95	90.3	87

COMMENTS: 3 of the 6 planes observed veered to 30 - 45 degrees, right.  
The average peak noise for these planes was 78.3 DBA.

A large quantity of undeveloped land lies North of Irving  
Park Road to Thorndale Avenue.

#15 LOCATION: 16 West 164th Foster, Woodale, Illinois  
(West of Route 83 between Irving Park and Thorndale)

DATE: August 28, 1972

WEATHER: Partly cloudy, 88 degrees, wind N.W. at 8 mph

RUNWAY STUDIED: 9R, Takeoff

DISTANCE TO RUNWAY END (MILES): 2.17

OVERFLIGHT ANGLE (DEGREES): 75 - 85 degrees, Right

NEIGHBORHOOD: Suburban, single family residential; there is a large  
cornfield N. W. of the above location

NEIGHBORHOOD NOISE (DBA): -

TIME PERIOD (MIN.): 2:20 - 2:38 P.M. (18)

AVG. TIME BETWEEN OVERFLIGHTS (MIN.): 3

AIRCRAFT TYPE	NO.	PEAK NOISE (DBA)		
		HIGH	AVG.	LOW
727/737/DC-9	2		Same	
ALL TYPES	2	95	89.5	84

COMMENTS: The average of 3 other aircraft veering at 30 - 45 degrees, Right was 74.6 DBA for 727's.

The resident at the above location complained of severe annoyance, especially from 3:00 - 5:00 P.M. and in the middle of his sleep. He also stated that landings were louder than takeoffs and the above data represents a quiet day for him.