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LOS ANGELES INTERNATIONAL AIRPORT DATA PACKAGE NUMBER 7. AIRPOR--ETC(U)
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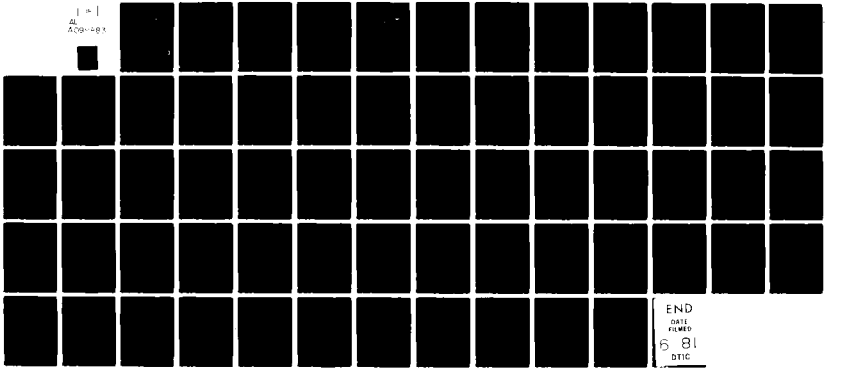

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DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

DATE: December 19, 1979

NATIONAL AVIATION FACILITIES EXPERIMENTAL CENTER
ATLANTIC CITY, NEW JERSEY 08405

IN REPLY REFER TO: ANA-220

SUBJECT: Los Angeles Simulation Model Results for Stage 1 Experiments

FROM: Program Manager, ANA-220

TO: Frank Jones

LEVEL III

Enclosed is data package 7 for review by the Task Force members. The Stage 1 experiments have been re-worked since the last meeting in November and reflect the latest comments of the group.

Attachment A is a list of the Stage 1 and Stage 2 experiments.

The Stage 1 experiments (attachment B) are arranged in sets to illustrate various comparisons requested by the Task Force members. VRF and IFR weather conditions have been separated along with each configuration (westerly, easterly, and night time operations). Each experiment contains a description of the objective, the runway configuration, the related experiments and a summary of the results. A link node diagram is included to illustrate the airfield changes noted in the experiment.

The results of the experiments are presented in the following sets:

Set 1 - Experiments 1, 7, 7A, 7B, 11, and 13

Set 2 - Experiments 2, 3, 8, 8A, 8B, and 12

Set 3 - Experiments 6, 9, and 16

Set 4 - Experiments 4, 10, and 15

Set 5 - Experiments 5 and 10A

Set 1 of the Stage 1 experiments deals with the VFR-1 weather conditions during westerly flow of traffic. The demand (aircraft schedule) follows the pattern of distributions over class of operation, arrival fixes, runways and gates observed during normal conditons for experiments 1, 7, 7A, 7B and 13. The distribution of traffic for experiment 11 was changed for departures dependent upon the projected increase due to tunnel improvements. Experiment 11 was repeated under the same demand but with the departures automatically rerouted to 24R when a departure queue of 4 built-up on runway 25R.

Set 2 of the Stage 1 experiments deals with the IFR-1 and IFR-2 weather conditions during westerly flow of traffic. Initially, the demand (aircraft schedule) followed the VFR conditions for runway use. This demand had to be modified because of the excessive arrival delays encountered on 25L. All arriving aircraft heading for gate areas 1, 2, 3 and 4 were assigned runway 24R shifting the demand to the north complex. Gate areas 1, 2, 3 and 4 were selected because of their location on the airfield. Gate 4 was the closest one (in the south complex) to runway 24R. This modified demand method was used for experiments 2, 3, 8, 8A and 8B. The distribution of traffic for experiment 12 was changed for departures dependent upon the projected increase in demand for use of 25R after tunnel construction. Experiment 12 was repeated under the same demand but with the departures automatically rerouted to 24L when a departure queue of 4 built-up on runway 25R.

Set 3 of the Stage 1 experiments deals with the VFR-1 weather conditions during easterly flow of traffic. Initially, the demand followed the mirror image of runway use for the westerly flow. The arrival demand was modified because of delays encountered on 7R. This modified demand was used for experiments 6, 9 and 16.

Set 4 of the Stage 1 experiments deals with the VFR weather conditions during night time operation. The original aircraft schedule was reworked to permit arrivals on 6R only and departures on 24L (heavys and north bound traffic only) and on 25R (all others). No arrivals have been assigned to 7L because the model, at the present time, can not direct arrivals when the runway is free of a departure queue.

Set 5 of the Stage 1 experiments deals with the IFR weather condition during night time operation.

JOHN R. VANDERVEER

Enclosures

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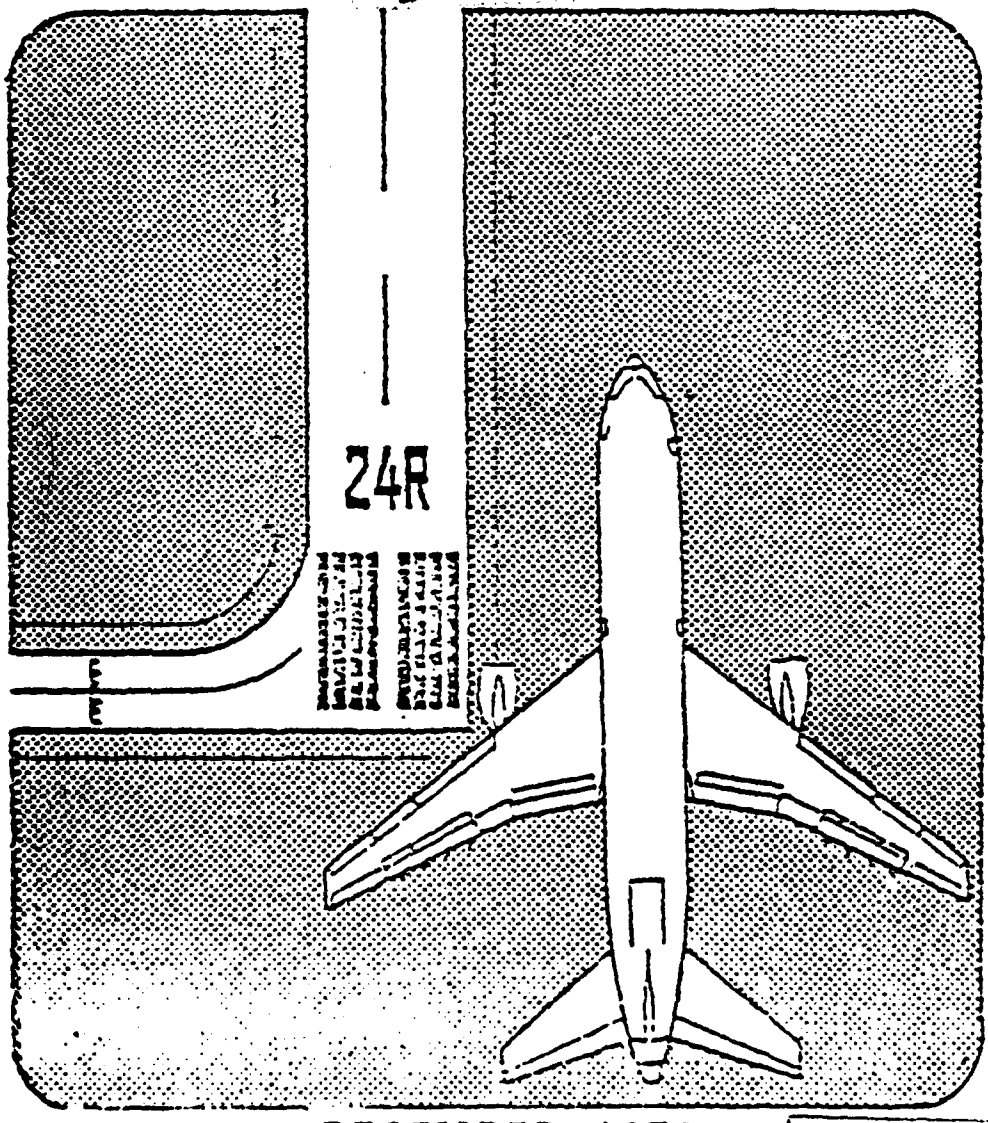
LOS ANGELES INTERNATIONAL AIRPORT

DATA PACKAGE [redacted] Number 7.

AIRPORT IMPROVEMENT TASK FORCE DELAY STUDIES.



DECEMBER 1979

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LIST OF TABLES

LAX - STAGE 1

EXPERIMENT NO. 1

Objective:

To obtain baseline delay estimates for the following runway configuration in VFR-1 for 1978 demand.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
24R, 24L, 25R, 25L	24R, 24L, 25R, 25L

Related Comparison Experiments:

Calibration was performed using this configuration ("A")

Experiment 7 uses configuration "A" with 1982 demand.

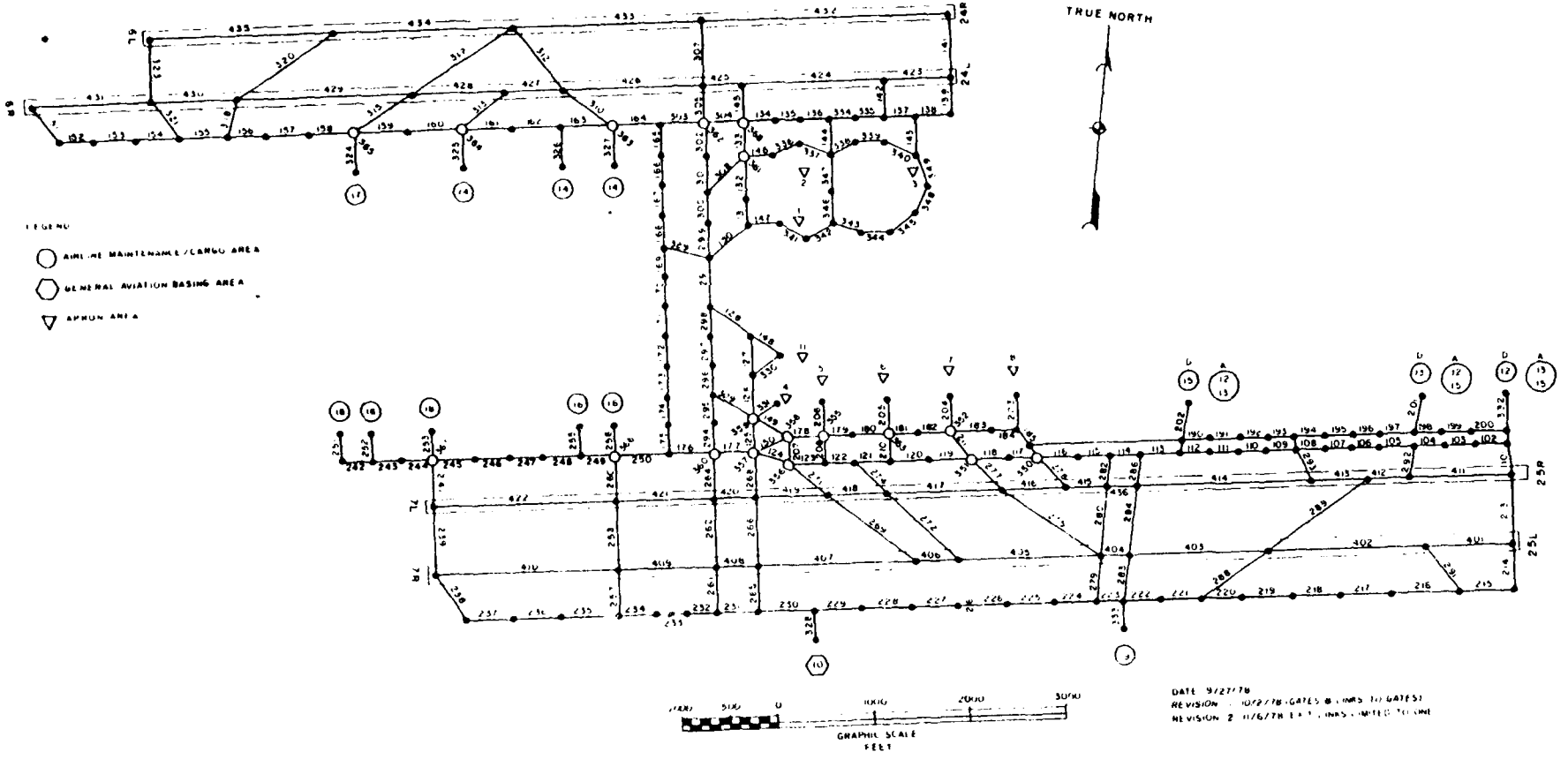


Figure 1 LAX LINK NODE DIAGRAM (PRESENT)

TABLE 3

SUMMARY OF RESULTS

EXPERIMENT NO. 1

TIME	AVERAGE FLOW RATES: ARRIVALS RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DEMAND	DIFF.	DEPARTURES RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DEMAND	DIFF.	AVERAGE TRAVEL TIME: FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	10.0	2.0	6.0	10.0	30.0	29	+1.0	4.0	16.0	13.0	8.0	41.0	48	-7.0	9.5	4.0	7.4
8-9	11.0	3.0	14.0	10.0	38.0	39	-1.0	2.2	23.8	18.5	8.0	57.9	64	-6.1	10.4	4.3	11.6
9-10	8.0	2.0	12.3	16.1	38.4	40	-1.6	4.5	26.3	22.4	3.4	56.6	52	+4.6	9.9	4.3	18.4
10-11	11.0	1.0	19.7	22.9	49.6	50	-0.4	3.5	17.3	19.8	8.3	49.0	48	+1.0	10.3	4.4	13.1
11-12	14.0	5.0	9.4	32.3	60.7	59	+1.7	7.8	13.1	13.1	12.1	46.2	52	-5.2	14.3	4.5	9.8
12-13	9.0	2.0	11.6	23.6	46.2	45	+1.2	4.0	12.8	12.9	15.7	55.4	65	-7.6	14.5	4.6	14.1
13-14	10.0	1.0	14.4	16.0	41.4	42	-0.6	3.0	18.7	18.7	16.2	59.2	51	+8.2	10.7	4.4	21.8
14-15	7.0	3.0	12.5	21.6	44.1	47	-2.9	9.0	19.2	19.2	5.9	43.4	39	+4.4	11.9	4.4	10.8

TIME	ARRIVAL DELAYS AVERAGE: RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	DEPARTURE DELAYS AVERAGE: RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	GRAND TOTAL: ARR. DELAY	DEP. DELAY
7-8	0.3	0.1	0.1	0.1	0.2	0.4	0.1	0.7	1.5	0.9	1.5	1.3	0.0	0.3	0.0	0.7	1.6
8-9	0.7	0.1	0.3	0.4	0.4	0.1	0.0	1.8	5.5	6.3	4.0	5.4	0.0	0.1	0.0	0.5	5.5
9-10	0.2	0.0	0.4	1.0	0.6	0.0	0.1	1.6	12.2	12.3	2.0	10.6	0.0	0.2	0.2	0.7	11.0
10-11	0.4	0.0	0.8	1.9	1.2	0.1	0.1	0.9	2.9	10.0	3.7	5.9	0.0	0.3	0.1	1.4	6.3
11-12	0.2	0.7	0.9	2.2	1.9	0.1	0.1	1.2	1.5	2.6	9.6	3.8	0.0	0.2	0.0	2.1	4.0
12-13	0.1	0.0	0.9	9.8	5.3	0.1	0.1	2.7	3.2	13.2	10.3	7.5	0.0	0.5	0.1	5.5	8.1
13-14	0.6	1.3	0.7	1.7	1.1	0.1	0.1	1.9	3.6	21.8	15.8	12.7	0.0	1.0	0.3	1.3	14.0
14-15	3.2	3.0	1.3	4.7	2.5	0.1	0.0	0.4	0.4	8.5	1.9	4.2	0.0	0.3	0.5	2.6	5.0

LAX - STAGE 1

EXPERIMENT NO. 7 (7A)(7B)

Objective:

To obtain baseline delay estimates for the following runway configurations in VFR 1 for 1982 demand. (+5%)(+15%)

To obtain delay estimates for 1982 with no improvements to the airport.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
24R, 24L, 25R, 25L	24R, 24L, 25R, 25L

Related Comparison Experiments:

Experiment 11 is similar with an improved ATC system scenario (1982) and the 1982 near-term improvements.

Prior Experiment 1 is similar for the 1978 demand.

12/3/79

TABLE 4

SUMMARY OF RESULTS

EXPERIMENT NO. 7

TIME	AVERAGE FLOW RATES: ARRIVALS RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DEMAND	DIFF.	DEPARTURES RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DEMAND	DIFF.	AVERAGE TRAVEL TIME: FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	2.0	1.0	6.0	2.0	27.0	25	+2.0	2.0	16.0	15.0	8.0	41.0	48	-7.0	9.7	4.7	7.4
8-9	12.0	1.0	14.2	17.0	44.2	45	-1.0	6.1	24.9	19.4	7.9	58.3	64	-5.7	10.5	4.7	13.9
9-10	6.1	1.0	15.0	18.0	40.0	41	-1.0	5.0	28.3	18.7	6.1	58.1	54	+4.1	10.7	4.1	16.8
10-11	11.0	2.0	13.2	25.3	52.5	53	-0.5	7.9	21.6	15.9	5.0	50.4	48	+2.4	11.5	4.6	13.1
11-12	12.0	3.0	22.5	21.5	59.0	62	-3.0	5.0	16.1	14.7	8.5	45.1	52	-6.9	12.0	4.6	10.3
12-13	12.0	1.0	11.4	23.0	47.4	44	+3.4	3.8	26.2	19.5	13.6	63.1	65	-2.9	12.6	4.5	17.7
13-14	8.0	2.0	9.6	20.1	39.7	40	-0.3	5.2	24.1	14.6	15.2	59.1	54	+5.1	10.6	4.5	16.1
14-15	10.0	5.0	13.3	23.6	51.9	53	-1.1	5.1	12.5	14.8	11.5	43.9	41	+2.9	10.5	4.4	9.4

TIME	ARRIVAL DELAYS AVERAGE: RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	DEPARTURE DELAYS AVERAGE: RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	GRAND TOTAL: ARR. DELAY	DEP. DELAY
7-8	0.0	0.0	1.5	2.7	0.8	0.2	0.2	0.4	0.9	2.4	1.6	1.6	0.0	2.2	0.0	1.2	1.7
8-9	0.4	0.2	1.1	1.2	1.0	2.0	0.1	3.0	3.7	12.0	6.5	6.3	0.0	1.5	2.0	1.1	7.8
9-10	0.0	0.0	1.3	1.8	1.3	0.3	0.1	3.7	11.3	7.2	6.4	8.7	0.0	1.5	0.0	1.7	10.2
10-11	0.6	0.6	0.8	3.1	1.8	0.1	0.0	2.3	8.2	2.8	4.1	5.2	0.0	1.4	0.0	1.1	6.6
11-12	0.1	0.4	3.4	2.8	2.4	0.1	0.1	1.8	1.1	1.4	3.1	1.2	0.0	0.4	0.0	2.4	2.6
12-13	0.4	2.0	1.6	6.1	3.5	0.1	0.2	1.4	5.2	12.4	9.3	9.5	0.0	1.9	0.1	1.3	11.4
13-14	0.2	0.0	1.7	1.8	1.4	0.1	0.1	1.9	5.7	16.4	10.8	8.0	0.0	1.0	0.1	1.6	1.0
14-15	0.3	0.0	2.0	1.5	1.2	0.1	0.0	0.5	1.9	5.2	3.3	3.2	0.1	0.6	0.0	1.3	3.1

TABLE 5

SUMMARY OF RESULTS

EXPERIMENT NO. 7A

TIME	AVERAGE FLOW RATES													AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES								
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	4.0	2.0	7.0	13.0	28.0	26	+2.0	5.0	19.0	15.0	5.0	44.0	50	-6.0	10.1	4.0	7.4
8-9	6.0	2.0	11.0	24.0	45.4	47	-1.6	7.0	23.6	18.8	8.1	59.5	67	-2.5	11.0	4.4	12.7
9-10	9.0	2.0	19.5	12.6	42.1	43	-0.9	4.9	27.5	17.0	9.8	59.2	57	+2.2	12.4	4.4	20.3
10-11	13.0	2.0	10.2	27.8	53.0	56	-3.0	4.1	18.3	19.9	10.8	53.1	50	+3.1	13.0	4.4	20.2
11-12	11.0	3.0	22.2	27.0	63.2	65	-1.8	6.6	20.0	15.3	7.6	49.5	55	-5.5	14.4	4.8	13.5
12-13	10.0	1.0	12.9	22.9	46.8	46	+0.8	5.3	27.4	14.6	12.9	60.2	68	-7.8	19.2	4.7	19.3
13-14	8.0	2.0	13.2	22.0	45.2	42	+3.2	4.1	27.0	17.0	10.3	58.4	57	+1.4	13.6	4.6	24.1
14-15	14.0	3.0	11.0	26.3	54.3	55	-0.7	8.0	15.0	22.1	11.5	56.6	43	+13.6	13.0	4.8	24.3

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.2	0.0	0.5	1.5	0.9	0.1	0.1	0.4	1.7	0.9	2.0	1.3	0.0	0.1	0.0	1.1	1.4
8-9	0.1	0.1	0.8	2.9	1.8	0.1	0.1	1.6	2.8	9.3	7.3	5.6	0.0	0.3	0.0	2.0	5.9
9-10	0.2	0.0	3.6	2.0	2.3	0.1	0.1	4.5	11.5	17.2	6.7	11.6	0.0	0.6	0.3	2.5	12.5
10-11	0.5	0.0	0.9	6.3	3.5	0.1	0.0	2.9	9.9	13.0	11.2	11.0	0.0	0.5	0.6	3.6	12.1
11-12	0.3	2.0	4.0	8.6	5.2	0.1	0.1	1.2	2.5	11.4	9.5	6.2	0.0	0.4	0.0	5.4	6.6
12-13	0.2	0.0	2.3	17.0	9.9	0.1	0.1	3.0	7.8	21.1	12.7	11.6	0.0	0.8	0.7	10.1	13.1
13-14	0.3	0.0	0.8	8.6	4.5	0.1	0.2	3.2	6.3	31.0	10.0	13.8	0.0	0.5	0.7	4.8	15.0
14-15	0.1	1.1	1.0	6.7	3.5	0.1	0.1	0.8	1.5	25.5	11.2	12.9	0.0	0.6	1.5	3.7	15.0

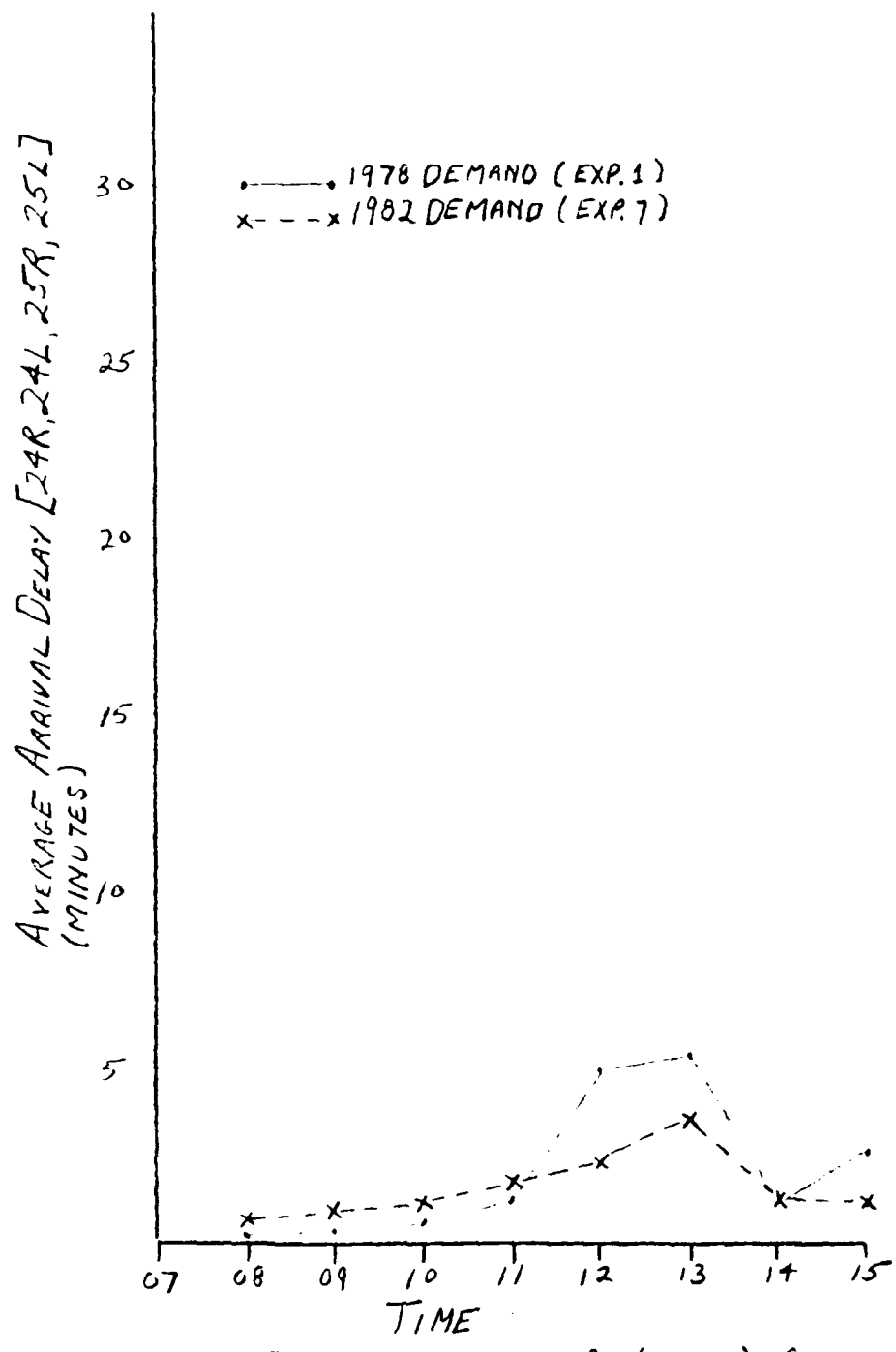
TABLE 6

SUMMARY OF RESULTS

EXPERIMENT NO. 7B

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	6.0	0.0	10.0	14.9	30.9	29	+1.9	3.0	19.6	15.2	10.0	47.8	55	-7.2	9.6	4.1	7.7
8-9	10.7	3.0	14.9	19.8	48.4	51	-2.6	8.1	22.9	18.5	8.2	57.7	74	-16.3	11.1	4.8	15.4
9-10	8.3	0.0	17.3	17.8	43.4	46	-2.6	5.9	29.6	16.6	5.1	57.3	62	-4.8	13.4	4.9	24.6
10-11	11.0	4.0	17.5	23.2	55.7	61	-5.3	6.0	24.1	18.1	11.1	59.3	55	+4.3	15.0	4.8	34.5
11-12	15.0	3.0	15.3	23.2	56.5	71	-4.5	3.0	23.6	16.6	14.1	57.3	60	-2.7	21.9	4.5	26.7
12-13	6.0	3.0	15.0	22.8	46.8	50	-3.2	6.0	24.8	19.9	11.3	67.0	74	-7.0	36.2	4.6	23.5
13-14	6.0	1.0	16.0	22.5	45.5	46	-0.5	4.0	25.4	16.5	8.4	54.3	62	-7.7	45.4	5.0	24.6
14-15	17.0	6.0	14.0	22.9	59.9	60	-0.1	7.0	18.0	15.7	12.5	53.2	47	+6.2	34.9	6.2	32.6

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.2	0.0	0.1	1.2	0.6	0.1	0.0	1.0	1.8	1.6	2.1	1.8	0.0	0.4	0.0	0.7	2.2
8-9	0.3	0.0	0.3	1.0	0.4	0.1	0.1	6.1	8.8	8.9	7.3	8.1	0.0	0.7	0.0	0.6	8.5
9-10	0.6	0.0	5.3	4.0	3.8	0.1	0.5	8.5	9.7	28.4	4.5	15.0	2.0	0.7	0.3	4.4	16.0
10-11	0.3	0.9	3.4	10.7	5.6	0.0	0.4	2.4	8.3	37.5	9.4	16.9	0.0	0.9	1.3	6.0	19.1
11-12	0.2	0.3	1.3	28.9	12.3	0.1	0.1	1.2	2.6	26.4	14.9	12.5	0.0	1.1	1.7	12.5	15.3
12-13	0.0	0.0	1.6	53.9	26.7	0.1	0.4	2.7	6.4	33.8	15.6	12.8	0.0	1.3	1.8	27.2	15.9
13-14	0.5	0.0	1.9	20.8	35.7	0.1	0.6	2.5	2.7	35.5	9.6	13.7	0.0	1.0	1.4	36.4	16.1
14-15	0.5	0.1	0.7	65.4	25.4	0.1	1.8	1.9	5.0	35.1	11.6	15.2	0.0	1.2	2.2	27.3	18.6



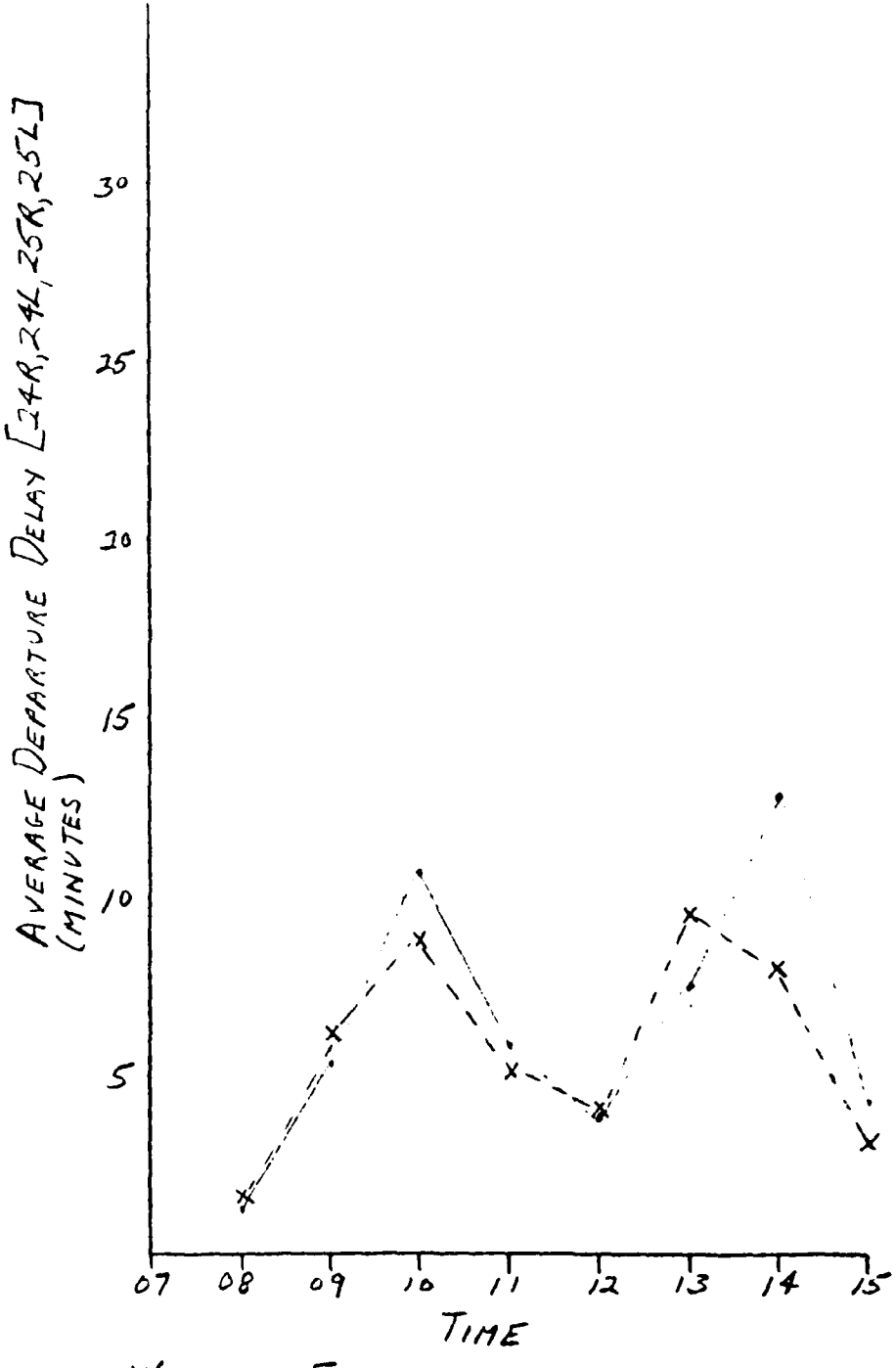


FIGURE 2 R (1978) COMPARISON - WESTERLY FLOW

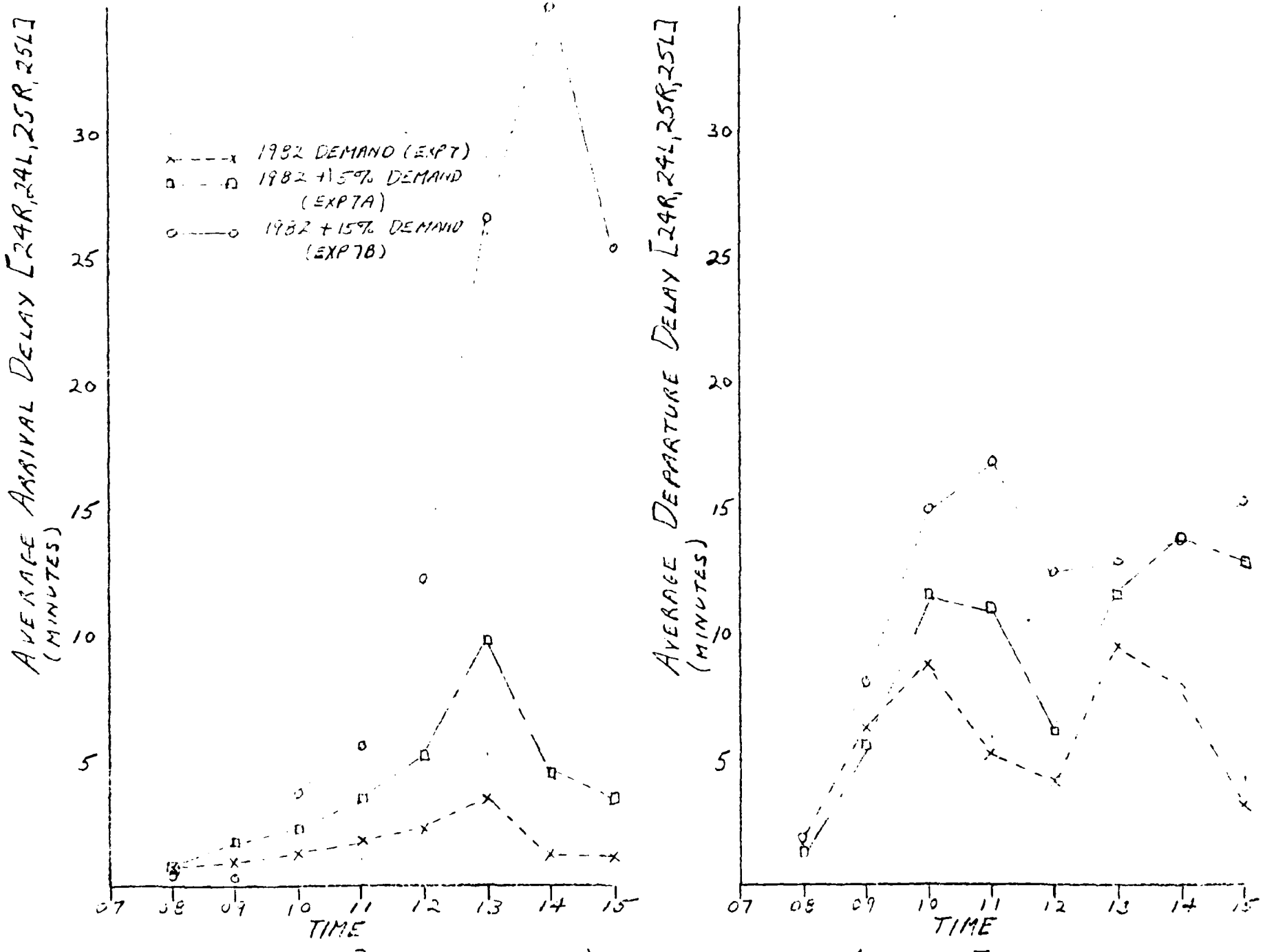


FIGURE 3 VFR (1970) COMPARISON - WESTERLY FLOW

LAX - STAGE 1

EXPERIMENT NO. 11

Objective:

To assess delays to aircraft in 1982 for the following runway configuration in VFR 1 with an improved ATC system scenario (1982) and the 1982 near-term improvements.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
24R, 24L, 25R, 25L	24R, 24L, 25R, 25L

Related Comparison Experiments:

Experiment 13 is identical less improvements #2 (high-speed taxiway off runway 25L) and improvements #3 (strengthening of the Sepulverda tunnel).

Prior Experiment 7 is similar without the noted improvements and a 1978 ATC system scenario.
Prior Experiment 1 is similar without the noted improvements and a 1978 demand and a 1978 ATC system scenario.

TABLE 7

SUMMARY OF RESULTS

EXPERIMENT NO. 11

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	2.0	1.0	6.0	17.9	26.9	25	+1.9	3.0	13.0	16.0	10.0	41.0	48	-7.0	9.8	4.2	4.7
8-9	1.3	1.0	14.0	15.3	43.3	45	-1.7	2.2	14.0	25.0	10.4	51.7	64	-12.3	10.8	4.6	14.9
9-10	6.0	1.0	15.0	19.2	40.2	41	-0.7	4.6	23.0	25.2	7.0	59.8	54	+5.8	12.0	4.1	17.9
10-11	11.0	3.0	15.2	22.1	50.2	53	-2.8	4.1	11.0	19.8	11.6	46.5	48	-1.5	12.8	4.6	23.2
11-12	12.0	3.0	19.9	22.4	57.3	62	-4.7	2.0	16.0	18.0	12.8	48.8	52	-3.2	15.6	4.7	18.1
12-13	12.0	1.0	13.8	22.9	49.7	44	+5.7	1.0	15.7	20.6	11.6	48.9	65	-16.1	16.9	5.0	29.0
13-14	8.0	2.0	10.0	21.3	41.3	40	+1.3	4.0	17.3	25.7	9.5	56.5	54	+2.5	12.7	5.4	29.4
14-15	10.0	5.0	13.0	19.8	47.8	53	-5.2	4.3	6.7	22.7	10.9	44.6	41	+3.6	12.4	4.8	34.3

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.1	0.0	2.5	0.5	0.9	0.1	0.1	0.0	0.2	1.7	1.6	1.1	0.0	0.0	0.0	1.1	1.1
8-9	0.0	0.1	1.0	2.0	1.2	0.1	0.1	0.2	0.2	13.7	6.1	5.1	5.0	0.6	0.3	1.4	9.0
9-10	0.0	0.0	2.4	3.9	2.7	0.1	0.1	0.7	2.1	18.0	6.7	9.2	0.0	0.3	0.5	2.9	10.0
10-11	0.5	0.4	1.2	5.7	3.0	0.1	0.1	0.6	1.2	18.9	14.8	12.1	0.0	0.9	0.6	3.2	13.6
11-12	0.1	0.5	7.1	9.2	6.1	0.1	0.1	1.9	0.7	19.7	8.8	9.7	0.0	1.1	0.4	6.3	11.2
12-13	0.3	0.0	5.8	12.9	7.7	0.1	0.3	0.8	0.5	27.6	6.3	13.1	0.0	0.8	0.8	8.1	14.7
13-14	0.2	0.0	1.1	6.3	3.6	0.1	1.3	2.7	1.1	23.2	7.6	13.4	0.0	1.5	1.8	4.9	15.7
14-15	0.2	0.1	4.1	4.4	3.0	0.1	0.3	0.2	0.2	27.6	10.1	16.6	0.0	1.4	3.7	3.4	21.7

12/3/71

TABLE 8

SUMMARY OF RESULTS

EXPERIMENT NO. 11 (REROUTED DEPARTURES TO 24R FROM 25R)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	2.0	1.0	6.0	18.0	27.0	25	+2.0	2.0	13.0	16.0	10.0	41.0	48	-7.0	9.4	4.4	6.2
8-9	10.0	1.0	17.0	15.7	43.9	45	-1.1	12.2	14.0	19.8	10.9	57.0	64	-7.0	10.2	4.5	12.6
9-10	6.0	4.0	15.0	18.1	40.1	41	-0.9	12.3	22.8	18.7	8.9	62.7	54	+8.7	10.5	4.2	11.7
10-11	11.0	3.0	14.1	26.0	54.1	53	+1.1	6.7	11.2	16.2	11.6	45.7	48	-2.3	11.0	4.6	11.2
11-12	12.0	3.0	22.9	21.4	59.2	62	-2.7	5.5	16.0	15.9	11.1	48.5	52	-3.5	11.3	4.5	10.5
12-13	12.0	1.0	10.0	22.6	45.6	44	+1.6	15.5	15.9	16.9	15.2	63.4	65	-1.6	10.5	4.2	14.6
13-14	8.0	2.0	10.0	20.0	40.0	40	0.0	10.7	17.1	18.5	12.4	58.7	54	+4.7	10.0	4.4	11.6
14-15	10.0	5.0	13.0	24.0	52.0	53	-1.0	5.3	6.8	20.6	8.6	41.3	41	+0.3	10.2	4.5	8.2

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE							GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.0	0.0	1.2	0.2	0.5	0.2	0.1	0.0	0.2	1.6	1.4	1.0	0.0	0.3	0.0	0.8	1.3
8-9	0.1	0.2	0.6	0.8	0.6	0.0	0.0	2.2	0.5	8.5	6.6	5.1	0.1	2.0	0.0	0.6	7.1
9-10	0.0	0.2	1.2	1.5	1.1	0.3	0.2	11.8	2.9	7.2	5.6	6.4	0.0	1.7	0.0	1.6	8.1
10-11	0.1	0.4	0.9	2.3	1.4	0.1	0.0	2.7	1.5	5.7	5.7	4.3	0.0	1.7	0.0	1.5	6.0
11-12	0.1	0.9	1.0	2.5	1.6	0.3	0.2	3.1	0.6	7.4	5.3	4.3	0.0	0.7	0.0	2.1	5.0
12-13	0.3	0.0	0.9	2.4	1.5	0.2	0.1	8.6	1.2	12.9	6.5	7.5	0.0	1.4	0.0	1.8	8.7
13-14	0.2	0.0	1.1	0.1	0.8	0.2	0.1	10.9	2.3	6.0	3.4	5.5	0.0	0.3	0.0	1.1	6.3
14-15	0.2	0.0	1.3	1.2	0.9	0.3	0.1	0.6	0.2	4.1	2.7	2.7	0.1	0.4	0.0	1.3	3.2

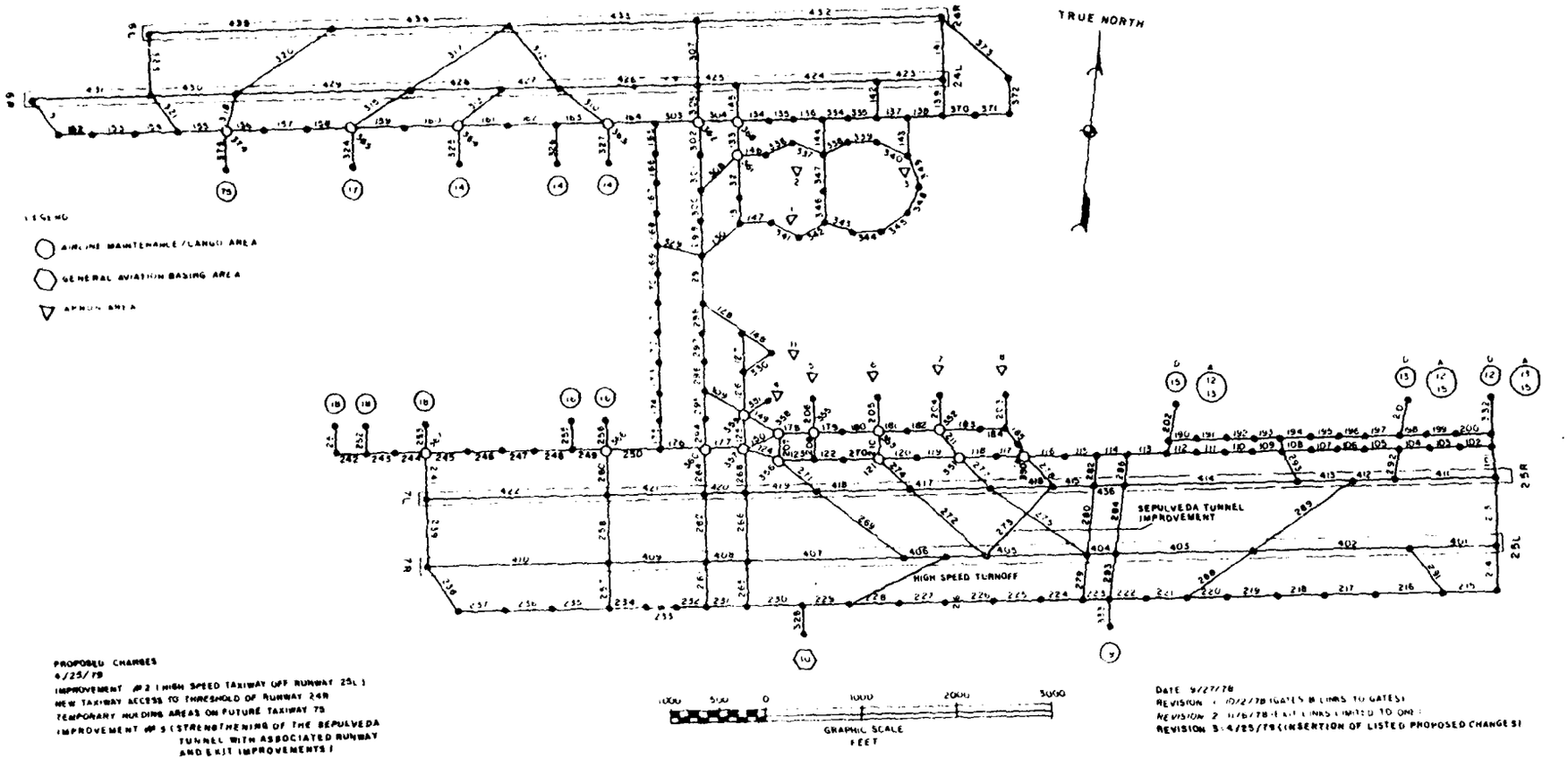


Figure 4 LAX LINK NODE DIAGRAM
(NEAR TERM IMPROVEMENTS)

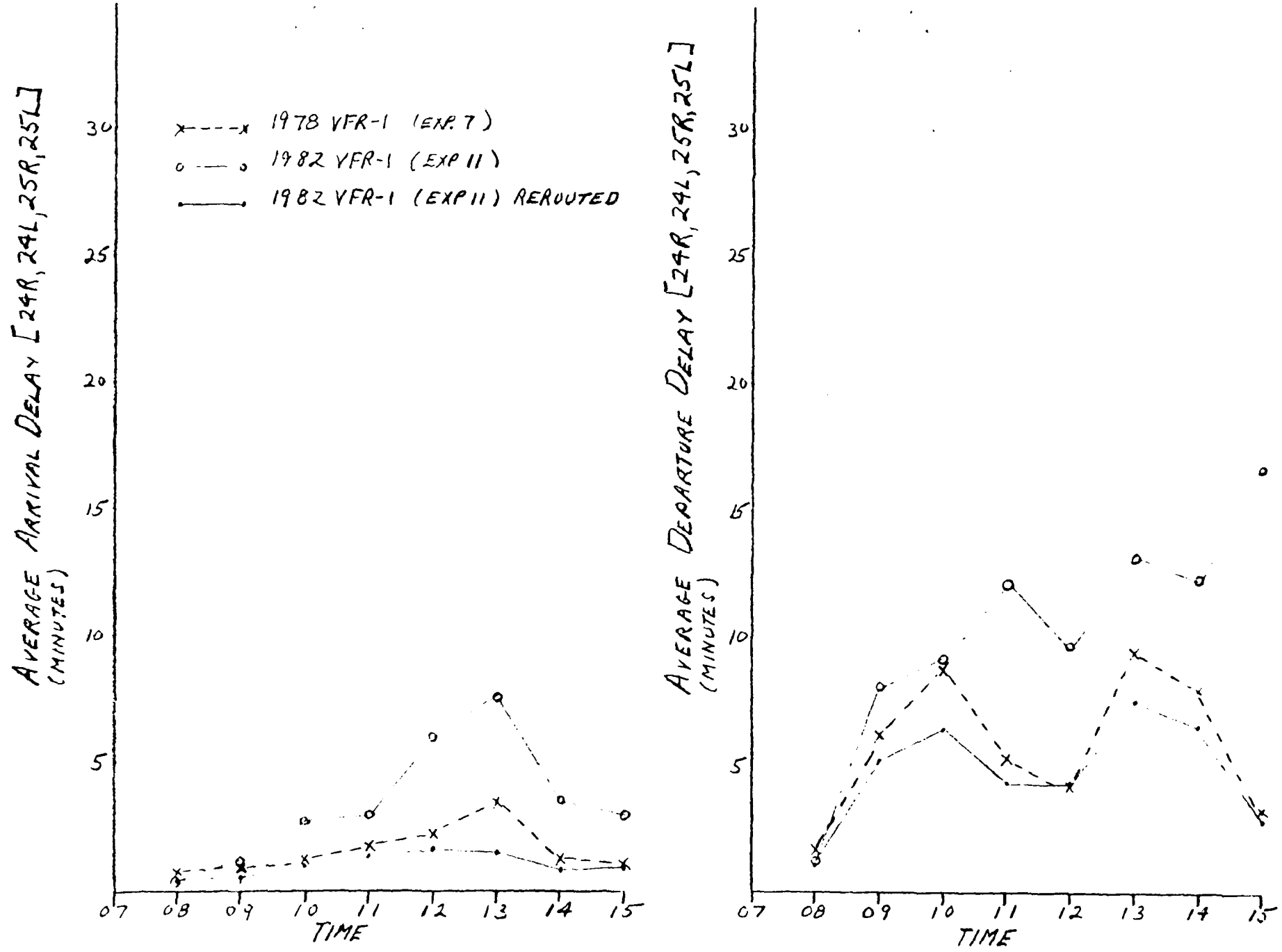


FIGURE 5 VFR (1978 AND 1982) COMPARISON WESTERLY FLOW

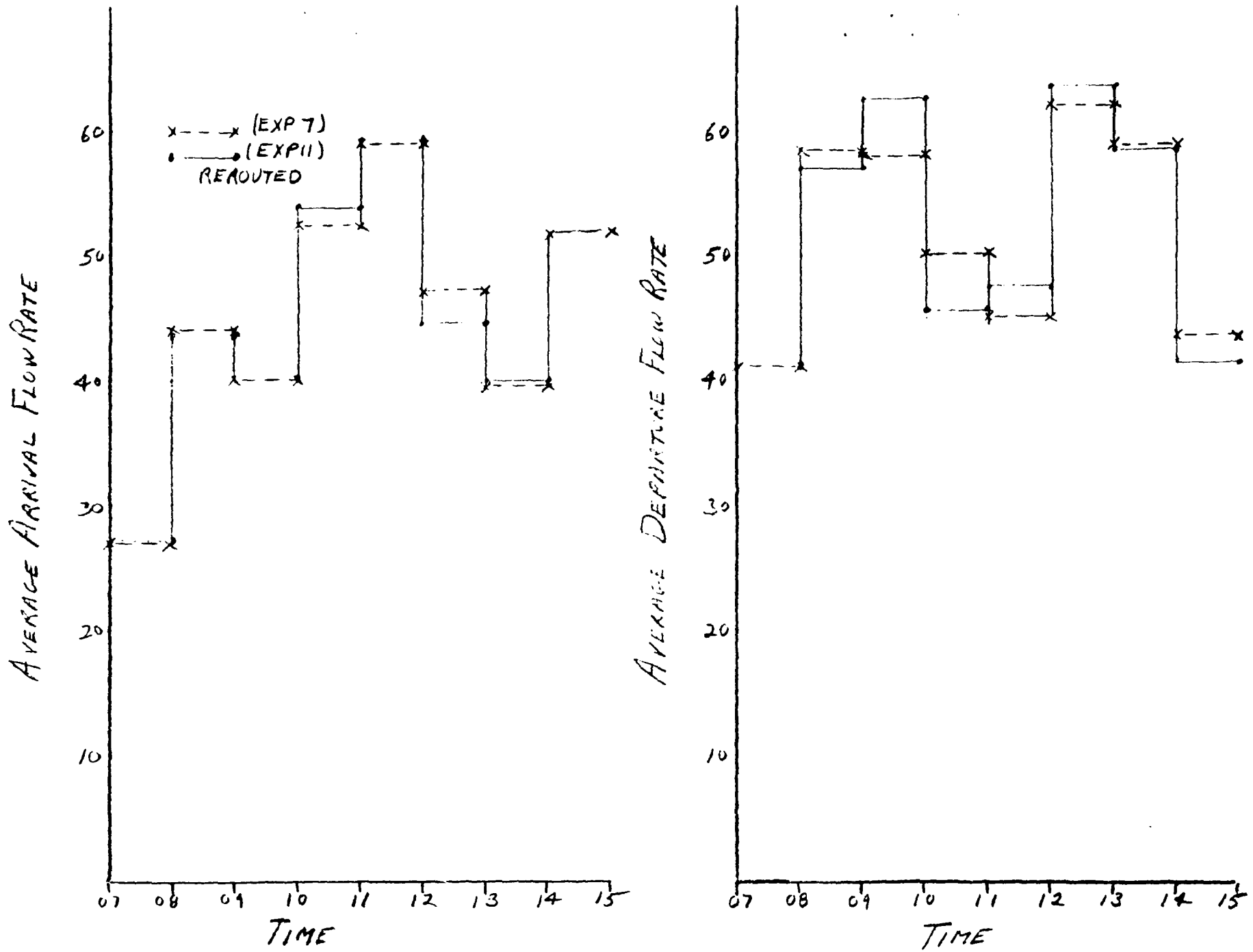


FIGURE 6 VFR (1975) COMPARISON - WESTERLY FLOW

LAX - STAGE 13

EXPERIMENT NO. 13

Objective:

To assess the delay impact to aircraft in 1982 for the following runway configuration in VFR 1 with an improved(1982) ATC system scenario and the 1982 near-term improvement less improvement #2 and #3.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
24R, 24L, 25R, 25L	24R, 24L, 25R, 25L

Related Comparison Experiments:

Prior Experiment 11 is similar except improvements #2 and #3 are included in run.

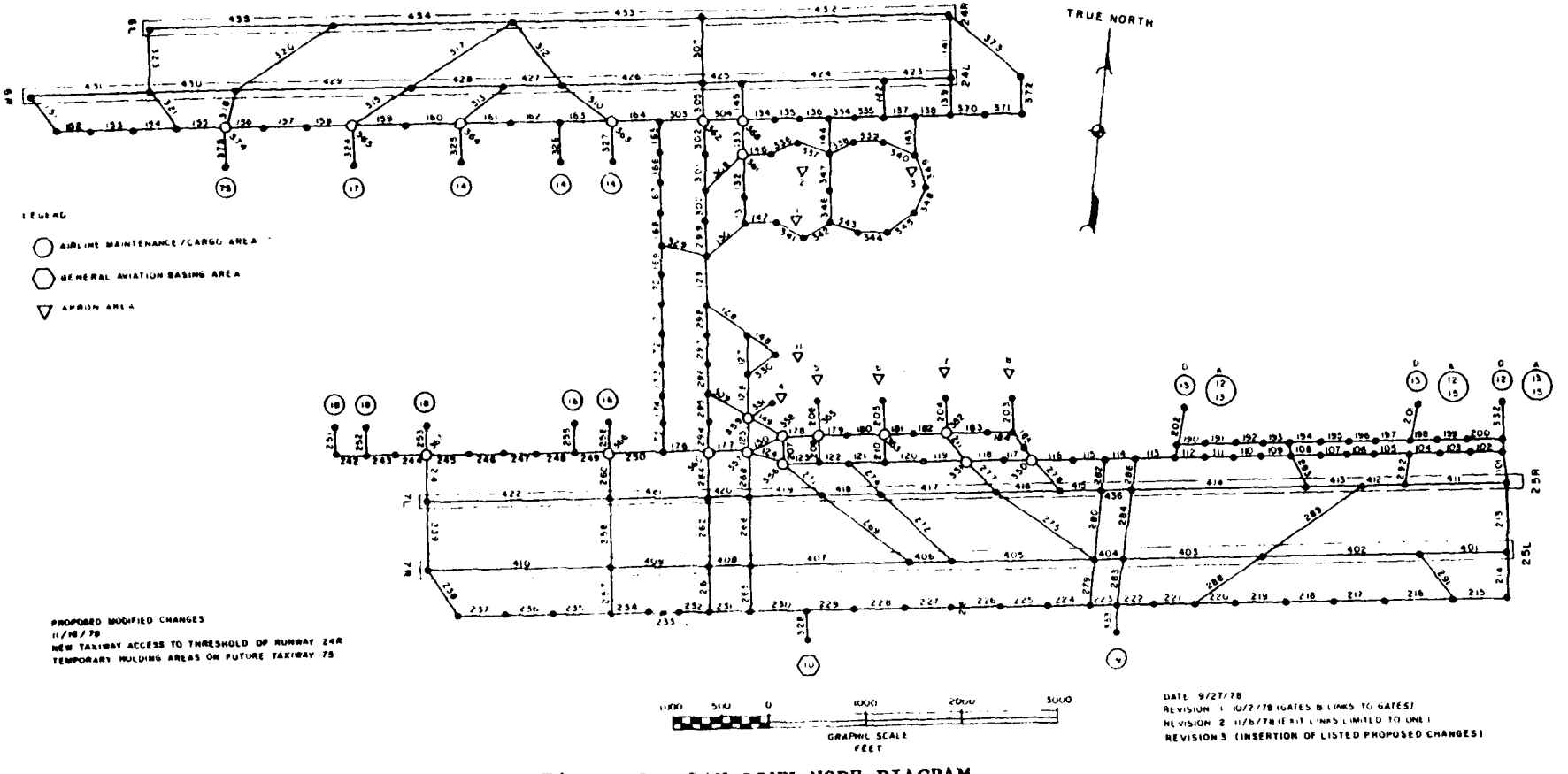
TABLE 9

SUMMARY OF RESULTS

EXPERIMENT NO. 13

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	2.0	1.0	6.0	19.0	27.0	25	+2.0	2.0	16.0	15.0	6.0	41.0	48	-7.0	9.3	4.3	7.4
8-9	10.0	1.0	14.0	17.0	42.0	45	-1.0	6.1	21.0	19.3	8.7	58.1	64	-5.1	10.3	4.4	12.—
9-10	6.0	4.0	15.0	18.0	43.0	41	+1.0	5.5	21.4	19.5	8.2	58.6	54	+4.6	10.4	4.3	15.9
10-11	11.0	3.0	13.7	26.0	53.7	53	+0.7	7.4	20.5	16.4	7.1	49.9	48	+1.9	10.9	4.5	11.9
11-12	12.0	3.0	12.8	21.0	53.6	62	-3.2	5.0	17.2	14.6	9.1	45.9	53	-6.1	11.7	—	7.7
12-13	12.0	1.0	10.7	23.0	46.7	44	+2.7	7.0	25.0	20.0	13.0	65.6	65	-2.4	11.3	4.0	16.7
13-14	8.0	2.0	9.6	20.0	39.8	40	+0.2	5.0	24.3	15.4	11.5	56.2	54	+2.2	11	4.6	14.7
14-15	10.0	5.0	13.0	24.0	52.0	53	-1.0	5.5	15.1	13.7	11.2	45.5	41	+2.5	10.2	4.4	3.1

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.0	0.0	0.8	0.3	0.4	0.2	0.1	0.7	1.2	2.4	1.6	1.5	0.0	0.2	0.0	0.9	1.9
8-9	0.2	0.5	2.1	2.7	2.7	0.1	0.2	3.6	3.6	10.1	4.7	6.1	0.0	1.3	0.0	1.0	7.7
9-10	0.0	0.0	1.1	1.4	1.1	—	0.1	9.2	10.1	8.0	5.3	8.3	0.0	1.5	0.2	1.5	10.0
10-11	0.7	0.3	0.1	2.0	1.3	—	0.2	2.2	6.0	3.5	0.1	4.7	0.0	0.1	0.0	1.3	5.6
11-12	0.1	0.7	2.4	2.1	1.7	0.3	0.2	1.8	1.5	11.2	2.1	5.2	2.0	0.4	0.0	2.3	7.5
12-13	0.4	0.0	1.1	3.8	2.2	0.1	0.2	1.7	5.9	14.5	7.5	9.7	0.0	1.8	0.1	2.5	10.6
13-14	0.2	0.0	0.9	1.0	0.3	0.2	0.2	1.8	0.6	7.6	4.0	7.1	0.0	1.7	0.0	1.2	8.8
14-15	0.1	0.0	1.2	1.2	0.4	0.2	0.1	1.7	1.8	2.—	3.0	2.2	0.0	0.5	0.0	1.2	2.5



Figrue 7 LAX LINK NODE DIAGRAM
(24L BYPASS AND HOLDING AREA)

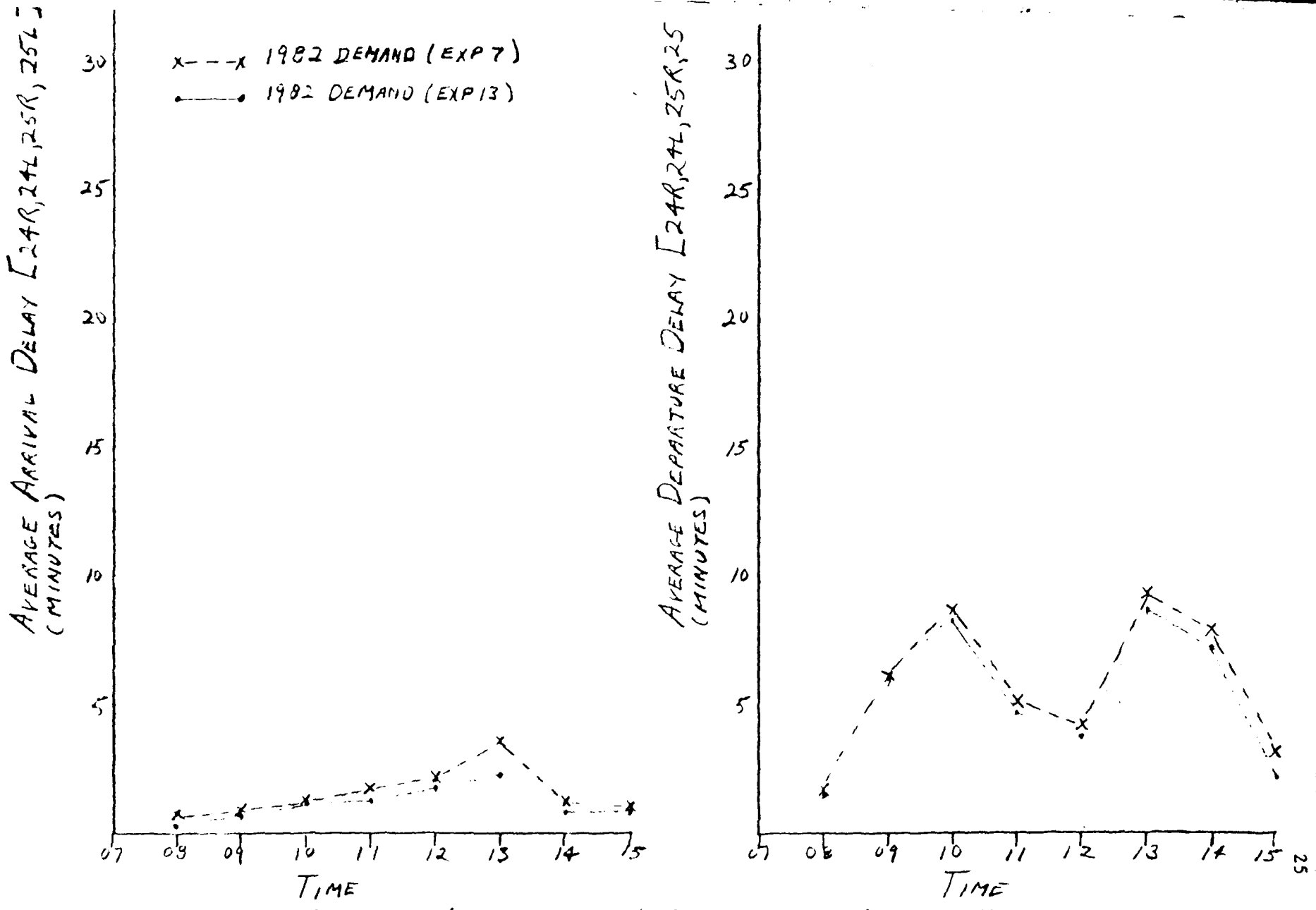


FIGURE 8 VFR (1978 AND 1982) COMPARISON - WESTERLY FLOW

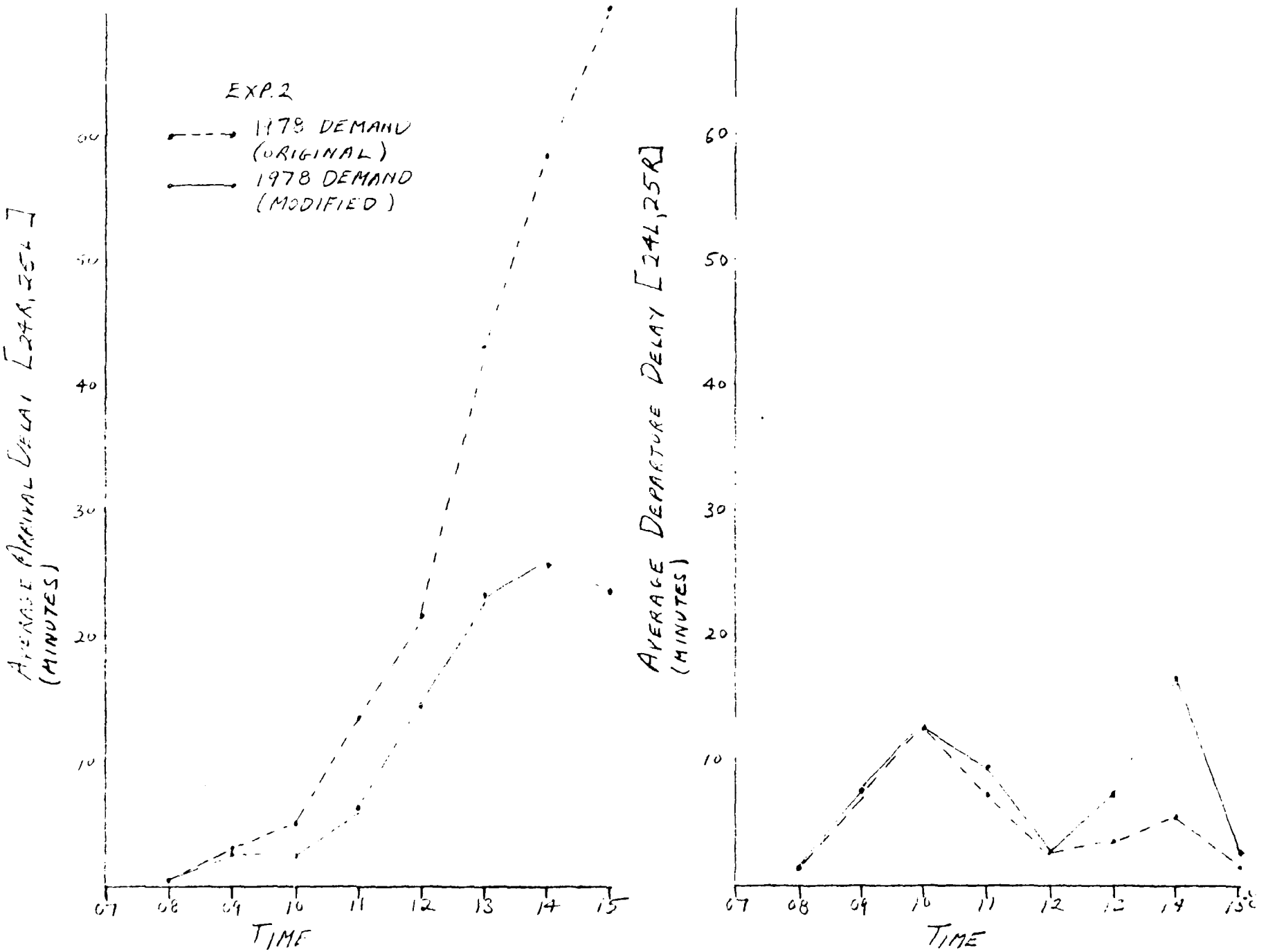


FIGURE 4 IFR-1 (1978) COMPARISON - WESTERLY FLOW

LAX - STAGE 1

EXPERIMENT NO. 3

Objective:

To obtain baseline delay estimates for the following runway configuration in IFR 2 with 1978 demand.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
24R, 25L	24L, 25R

Related Comparison Experiments:

Prior Experiment 2 is similar except for IFR 1 conditions.

TABLE 13

SUMMARY OF RESULTS

EXPERIMENT NO. 3 (MODIFIED DEMAND)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	[illegible]	0.0	0.0	18.6	30.0	29	+1.0	0.0	20.0	[illegible]	0.0	[illegible]	48	-7.5	10.0	[illegible]	[illegible]
8-9	[illegible]	[illegible]	0.0	15.0	[illegible]	39	-3.0	[illegible]	19.9	[illegible]	[illegible]	[illegible]	61	-23.2	12.8	[illegible]	[illegible]
9-10	[illegible]	[illegible]	0.0	32.7	37.7	40	-2.3	0.0	25.5	18.1	0.0	43.6	52	-13.7	14.7	5.1	[illegible]
10-11	17.0	0.0	0.0	23.0	[illegible]	50	-10.0	0.0	22.2	[illegible]	0.0	36.6	48	-11.4	20.0	9.1	58.0
11-12	21.8	0.0	0.0	[illegible]	+48	59	-17.2	0.0	19.0	16.0	0.0	[illegible]	52	-17.0	31.1	6.8	73.4
12-13	21.8	0.0	0.0	22.6	[illegible]	45	-0.6	0.0	18.0	15.7	0.0	33.7	65	-31.3	47.8	7.2	82.6
13-14	18.4	0.0	0.0	22.6	41.0	42	-1.0	0.0	[illegible]	15.5	0.0	36.4	51	-14.6	52.4	7.5	[illegible]
14-15	18.2	0.0	0.0	22.6	40.1	47	-6.1	0.0	[illegible]	14.5	0.0	35.4	39	-3.6	51.5	16.4	90.6

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE							GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.1	0.0	[illegible]	[illegible]	0.0	[illegible]	[illegible]	[illegible]	0.0	0.9	[illegible]
8-9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.2	[illegible]	15.7	12.2	[illegible]	[illegible]	0.0	0.4	0.9	[illegible]	17.[illegible]
9-10	1.0	0.0	0.0	8.0	5.4	0.5	0.5	0.0	25.8	35.9	0.0	[illegible]	0.0	0.5	6.1	6.2	35.1
10-11	1.2	0.0	0.0	17.6	10.6	0.2	4.6	0.0	23.6	[illegible]	0.0	[illegible]	0.0	0.9	16.8	[illegible]	[illegible]
11-12	9.3	0.0	0.0	[illegible]	21.9	0.3	1.9	0.0	[illegible]	[illegible]	0.0	[illegible]	0.0	[illegible]	23.9	[illegible]	[illegible]
12-13	[illegible]	0.0	0.0	[illegible]	[illegible]	0.2	2.3	0.0	[illegible]	[illegible]	0.0	[illegible]	0.0	1.2	[illegible]	[illegible]	[illegible]
13-14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0	[illegible]	[illegible]	0.0	[illegible]	[illegible]	1.0	[illegible]	[illegible]	[illegible]
14-15	[illegible]	[illegible]	0.0	[illegible]	[illegible]	[illegible]	11.5	0.0	[illegible]	56.8	0.0	[illegible]	0.0	1.1	[illegible]	[illegible]	[illegible]

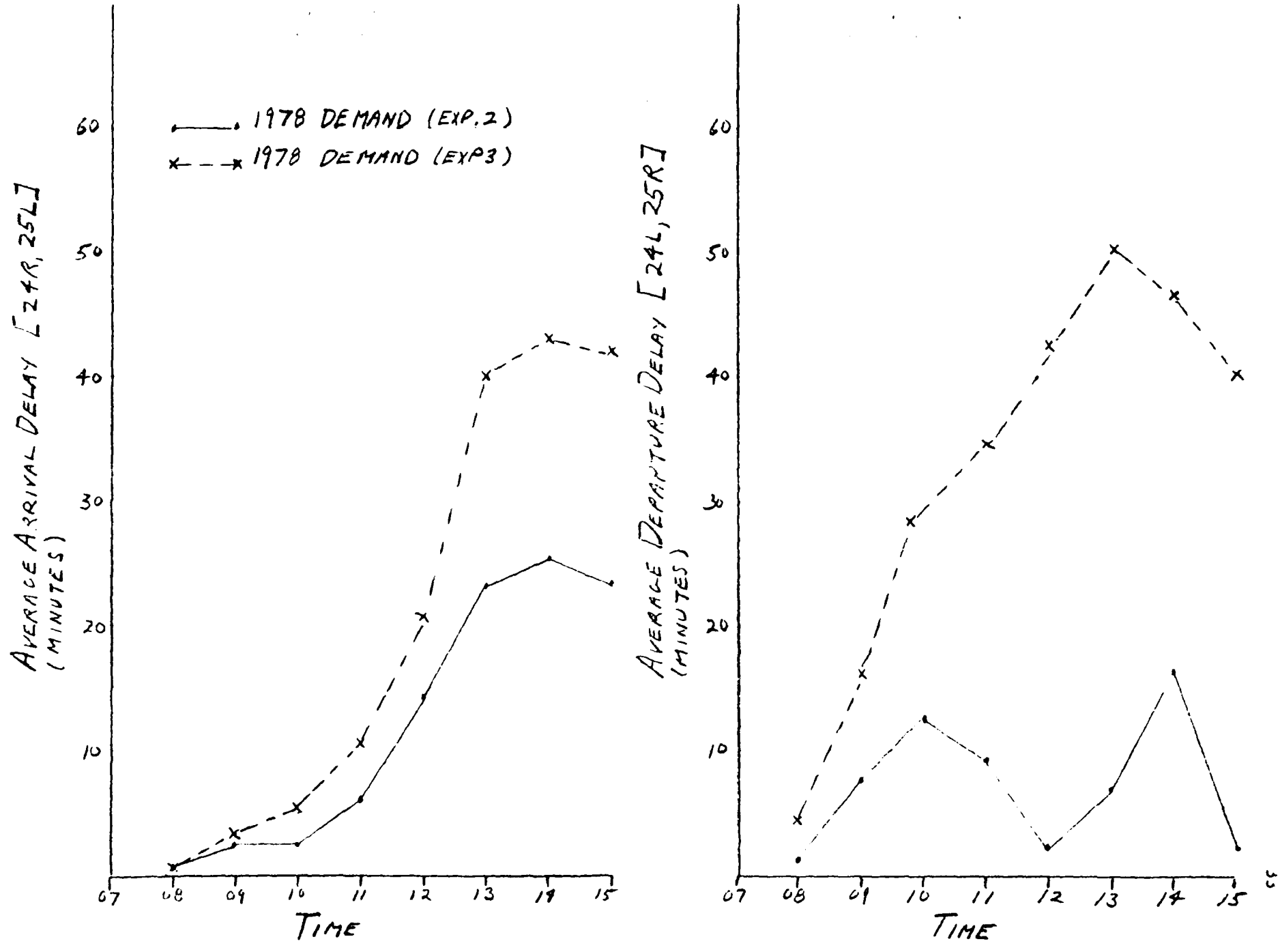


FIGURE 10 JFR-1 / IFR-2 (1978) COMPARISON - WESTERLY FLOW

LAX - STAGE 1

EXPERIMENT NO. 8

Objective:

To obtain baseline delay estimates for the following runway configurations in IFR 1 for 1982 demand.

To obtain delay estimates for 1982 with no improvements to the airport.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
24R, 24L, 25R, 25L	24L, 25R

Related Comparison Experiments:

Experiment 12 is identical but with an improved ATC system (1982) scenario and the 1982 near-term improvements.

Prior Experiment #2 is identical except for a 1978 demand.

TABLE 14

SUMMARY OF RESULTS

EXPERIMENT NO. 8 (MODIFIED PLAN 6)

TIME	AVERAGE FLOW RATES													AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES								
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	4.0	0	0	22.0	26.0	25	+1.0	0	18.0	23.0	0	41.0	48	-7.0	12.2	4.1	7.4
8-9	20.0	0	0	24.1	44.1	45	-0.9	0	24.8	27.9	0	52.7	64	-11.3	13.9	4.6	14.7
9-10	2.0	0	0	25.5	33.5	41	-7.5	0	35.3	23.8	0	59.1	54	+5.1	17.9	7.4	12.8
10-11	20.0	0	0	29.0	49.0	53	-4.0	0	31.6	20.4	0	52.0	48	+4.0	20.9	4.7	19.0
11-12	25.4	0	0	27.4	52.8	62	-9.2	0	23.2	27.9	0	51.1	52	-0.9	26.1	4.7	9.1
12-13	34.2	0	0	26.1	50.3	44	+6.3	0	26.1	32.7	0	58.8	65	-6.2	35.7	7.7	12.0
13-14	14.5	0	0	25.1	39.6	40	-0.4	0	31.2	33.4	0	64.6	64	+0.6	30.1	4.6	14.8
14-15	21.1	0	0	26.5	47.6	53	-5.4	0	20.1	25.7	0	45.8	41	+4.8	29.5	4.7	9.0

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.0	0	0	4.3	3.6	0.2	0.1	0	0.8	2.2	0	1.6	0.0	0.3	0.0	3.9	1.1
8-9	2.7	0	0	5.7	4.3	0.2	0.1	0	9.3	7.3	0	8.2	0.0	0.6	0.1	4.6	4.1
9-10	0.0	0	0	10.9	8.3	0.2	0.1	0	13.5	4.8	0	10.0	0.0	0.7	2.3	8.7	13.0
10-11	2.8	0	0	16.7	11.0	0.2	0.1	0	12.8	3.9	0	9.3	0.0	0.5	2.8	11.3	12.6
11-12	8.7	0	0	23.3	16.2	0.2	0.1	0	4.4	2.1	0	3.2	0.0	0.2	0.1	16.5	3.5
12-13	14.0	0	0	38.3	26.6	0.2	0.1	0	7.5	5.1	0	6.1	0.0	0.3	0.0	26.7	6.4
13-14	5.5	0	0	30.3	21.3	0.2	0.1	0	6.9	5.6	0	8.7	0.0	0.4	0.1	21.5	14.8
14-15	2.3	0	0	34.5	20.2	0.2	0.1	0	3.6	2.7	0	3.2	0.0	0.2	0.1	20.5	3.5

TABLE 15

SUMMARY OF RESULTS

EXPERIMENT NO. 8A (MODIFIED DEMAND)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	7.0	0.0	0.0	21.5	28.5	26	+2.5	0.0	24.0	20.0	0.0	44.0	50	-6.0	12.2	4.1	7.3
8-9	17.4	0.0	0.0	24.3	41.7	47	-5.3	0.0	24.0	30.6	0.0	54.6	67	-12.4	14.3	4.6	13.2
9-10	11.5	0.0	0.0	26.5	38.0	43	-5.0	0.0	29.7	26.7	0.0	56.4	57	-0.6	18.6	4.4	20.0
10-11	11.4	0.0	0.0	24.6	46.0	56	-10.0	0.0	27.2	28.6	0.0	55.8	50	+5.8	24.6	4.5	22.1
11-12	25.0	0.0	0.0	28.0	53.0	65	-12.0	0.0	27.8	22.5	0.0	50.3	55	-4.7	32.7	4.5	9.9
12-13	23.6	0.0	0.0	23.2	46.8	46	+0.8	0.0	26.4	31.1	0.0	57.3	68	+10.7	41.4	4.7	17.9
13-14	17.1	0.0	0.0	24.1	41.2	42	-0.8	0.0	28.1	30.0	0.0	58.1	57	+1.1	54.9	4.7	18.9
14-15	23.4	0.0	0.0	26.3	49.7	55	-5.3	0.0	27.8	22.5	0.0	50.3	43	+7.3	99.9	4.8	14.9

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	1.0	0.0	0.0	2.8	2.9	0.2	0.7	0.0	1.4	1.5	0.0	1.4	0.0	0.3	0.0	3.8	1.7
8-9	1.3	0.0	0.0	7.7	5.0	0.2	0.2	0.0	6.6	7.3	0.0	6.1	0.0	0.6	0.1	5.4	7.6
9-10	0.5	0.0	0.0	12.8	9.1	0.2	0.1	0.0	15.1	9.4	0.0	12.4	0.0	0.6	1.3	9.4	14.3
10-11	4.6	0.0	0.0	22.0	15.2	0.1	0.1	0.0	18.3	6.7	0.0	12.4	0.0	0.4	3.7	15.4	16.5
11-12	12.1	0.0	0.0	32.9	23.1	0.1	0.1	0.0	4.3	1.9	0.0	3.2	0.0	0.4	0.1	23.3	3.7
12-13	9.2	0.0	0.0	55.1	31.9	0.2	0.1	0.0	12.5	10.7	0.0	11.5	0.0	0.2	0.6	32.2	12.3
13-14	2.4	0.0	0.0	76.4	45.8	0.2	0.1	0.0	14.2	10.3	0.0	12.1	0.0	0.4	1.0	46.1	13.5
14-15	6.8	0.0	0.0	70.6	40.5	0.2	0.1	0.0	10.6	5.0	0.0	8.2	0.0	0.2	0.6	40.8	9.0

TABLE 16

SUMMARY OF RESULTS

EXPERIMENT NO. 8B (MODIFIED DEMAND)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	7.0	0.0	0.0	12.4	19.4	29	+0.4	0.0	22.6	25.4	0.0	48.0	55	-7.0	11.4	4.1	8.0
8-9	21.1	0.0	0.0	23.0	44.1	51	-6.9	0.0	25.0	28.9	0.0	53.9	74	-20.1	13.4	4.8	17.5
9-10	14.9	0.0	0.0	22.9	37.8	46	-8.2	0.0	26.7	28.9	0.0	55.6	62	-6.4	21.7	5.0	29.5
10-11	18.8	0.0	0.0	29.1	47.9	61	-13.1	0.0	27.3	32.1	0.0	59.4	55	+4.4	31.7	4.6	34.8
11-12	22.3	0.0	0.0	26.8	49.1	71	-21.9	0.0	32.0	27.0	0.0	59.0	60	-1.0	49.1	4.6	27.2
12-13	21.9	0.0	0.0	27.5	49.4	50	-0.6	0.0	24.1	30.2	0.0	54.3	74	-9.7	67.7	4.7	21.7
13-14	22.1	0.0	0.0	25.6	47.7	46	+1.7	0.0	27.5	29.3	0.0	56.8	62	-5.4	74.6	4.9	23.0
14-15	22.2	0.0	0.0	28.3	50.5	60	-1.5	0.0	28.2	23.8	0.0	52.0	47	+5.0	71.3	4.7	24.2

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.0	0.0	0.0	2.4	2.6	0.1	0.1	0.0	1.9	2.3	0.0	2.1	0.0	0.4	0.0	2.8	2.5
8-9	3.5	0.0	0.0	4.2	3.8	0.1	0.2	0.0	13.2	9.6	0.0	11.2	0.0	0.4	0.3	4.1	11.9
9-10	4.9	0.0	0.0	17.3	12.4	0.2	0.5	0.0	20.1	17.7	0.0	18.7	0.0	0.6	4.6	13.1	23.9
10-11	5.3	0.0	0.0	35.4	23.2	0.2	0.2	0.0	22.1	16.2	0.0	19.0	0.0	0.7	9.3	22.0	24.0
11-12	21.8	0.0	0.0	54.5	39.6	0.1	0.3	0.0	17.6	2.7	0.0	10.7	0.0	1.0	9.7	40.0	21.4
12-13	32.5	0.0	0.0	73.2	58.2	0.2	0.2	0.0	16.1	3.5	0.0	10.2	0.0	0.8	4.2	58.6	15.9
13-14	36.5	0.0	0.0	89.9	65.1	0.2	0.2	0.0	16.9	5.9	0.0	11.1	0.0	0.5	5.5	65.5	17.4
14-15	16.9	0.0	0.0	96.7	61.6	0.2	0.2	0.0	19.4	5.8	0.0	12.7	0.0	0.5	5.0	62.0	18.2

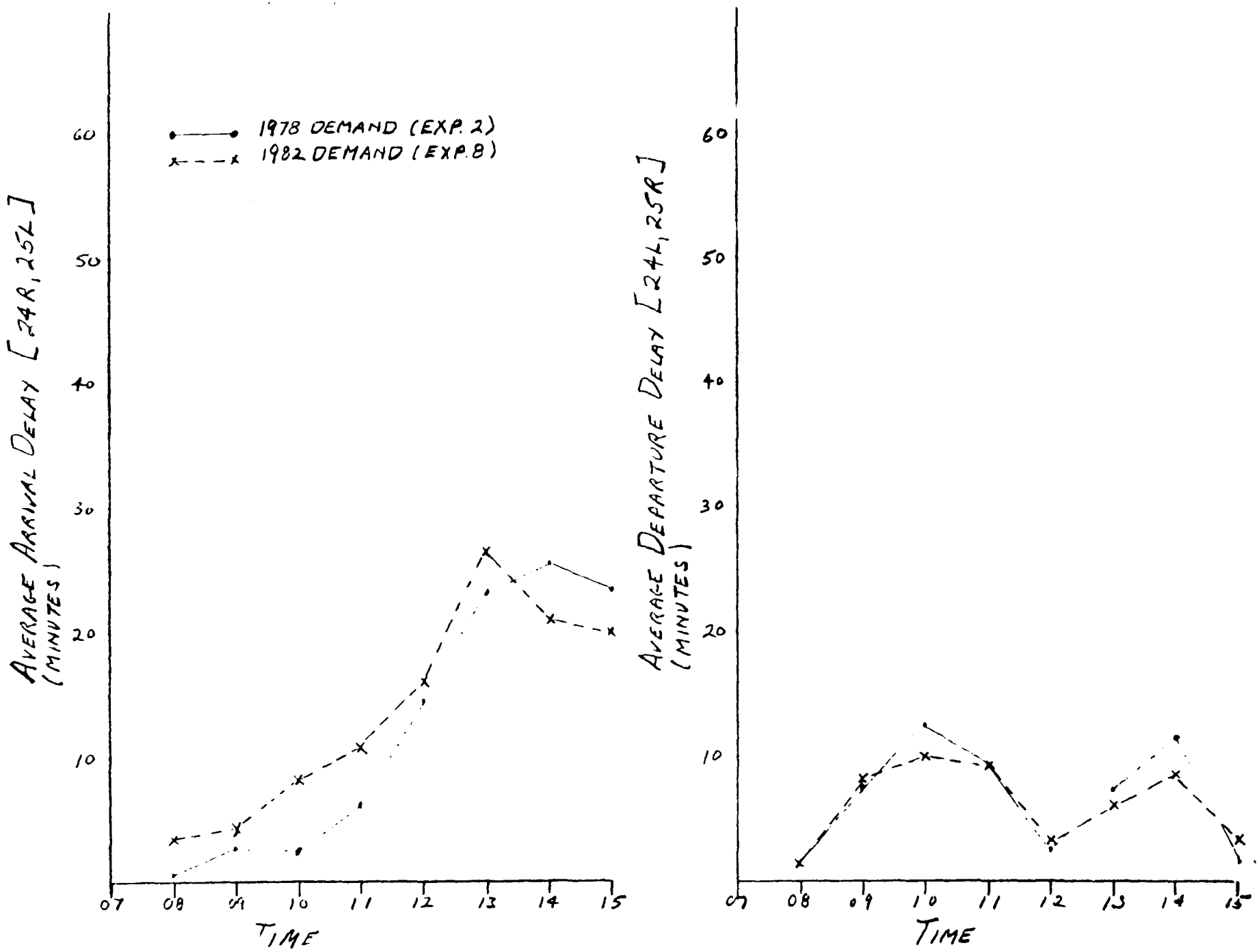


FIGURE 11 IFR-1 (1978) COMPARISON - WESTERLY FLOW

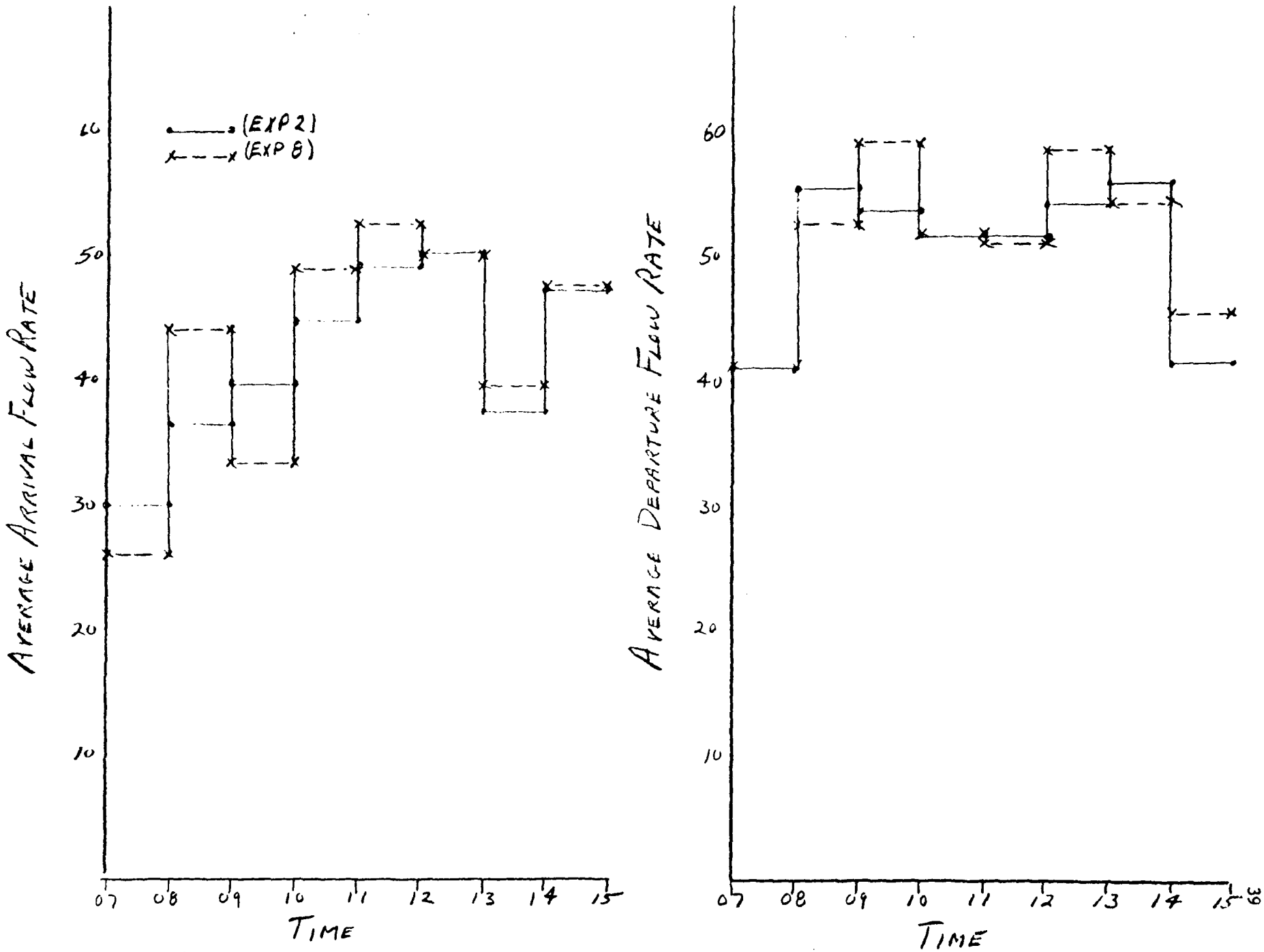


FIGURE 12 IFR-1 (1978) COMPARISON - WESTERLY FLOW

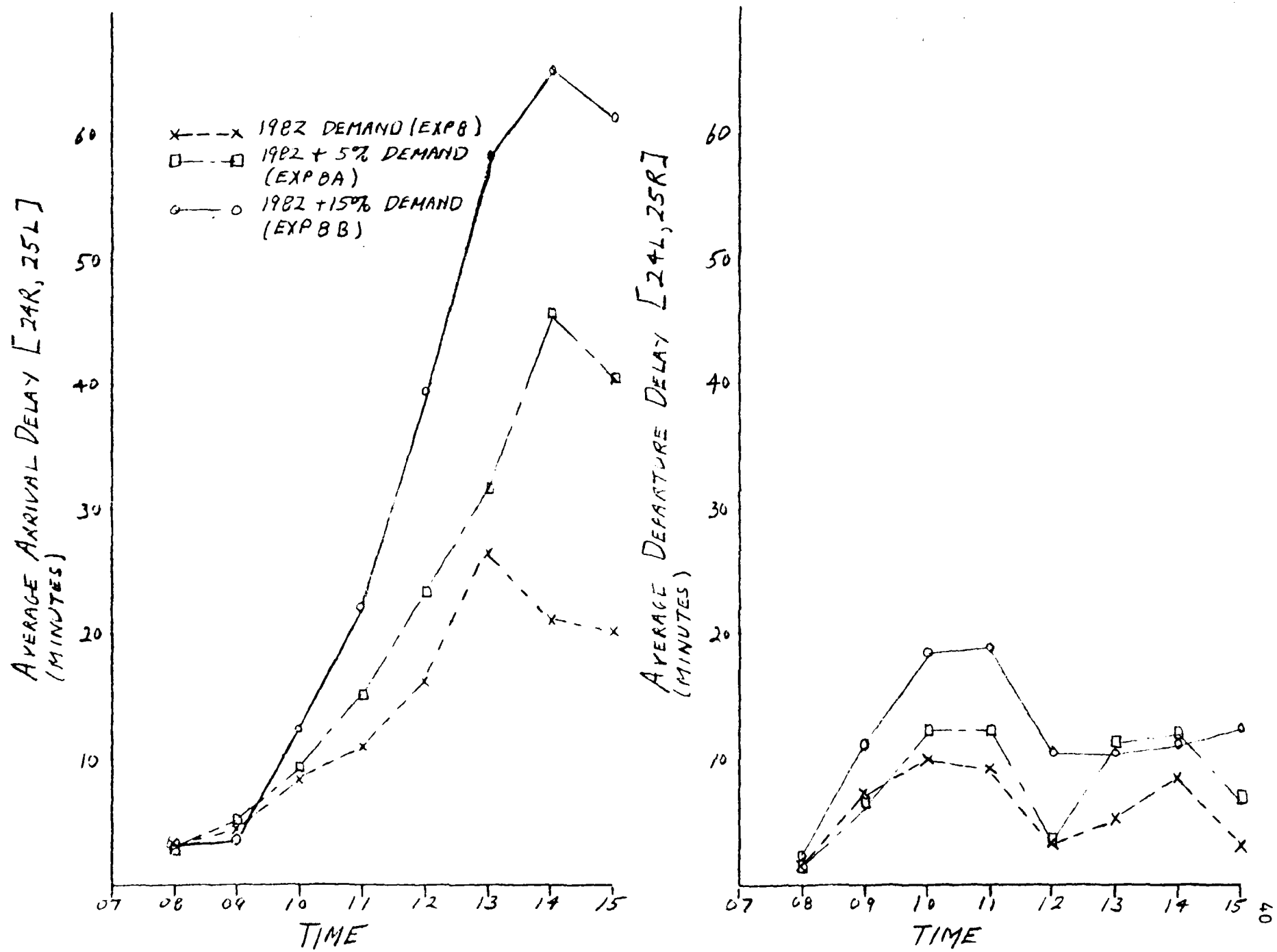


FIGURE 13 IFR-1 (1978) COMPARISON - WESTERLY FLOW

LAX - STAGE 1

EXPERIMENT NO. 12

Objective:

To assess delays to aircraft in 1982 for the following runway configuration in IFR 1 with an improved ATC system scenario (1982) and the 1982 near-term improvements.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
24R, 24L, 25R, 25L	24L, 25R

Related Comparison Experiments:

Prior Experiment #8 is similar except for the noted improvements and a 1978 ATC system scenario.

TABLE 17

SUMMARY OF RESULTS

EXPERIMENT NO. 13 (MODIFIED DEMAND)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	4.0	0.0	0.0	22.0	26.0	25	+1.0	0.0	15.0	26.0	0.0	41.0	48	-7.0	10.5	4.2	6.3
8-9	20.0	0.0	0.0	23.5	43.5	45	-1.5	0.0	16.2	38.5	0.0	54.7	64	-9.3	13.6	4.8	13.0
9-10	8.0	0.0	0.0	22.8	31.8	41	-9.2	0.0	22.3	22.2	0.0	65.0	54	+11.0	19.7	4.3	13.2
10-11	22.2	0.0	0.0	28.3	50.5	53	-2.5	0.0	15.2	31.1	0.0	46.1	48	-1.9	23.0	4.7	12.0
11-12	25.2	0.0	0.0	31.0	56.4	62	-5.2	0.0	12.0	31.8	0.0	43.8	52	-2.3	19.4	4.7	7.6
12-13	25.0	0.0	0.0	21.9	46.9	44	+1.9	0.0	14.9	38.0	0.0	54.9	65	-10.1	29.5	4.2	13.9
13-14	11.1	0.0	0.0	24.2	35.3	40	-4.7	0.0	21.1	36.6	0.0	57.7	54	+3.7	34.4	4.5	19.6
14-15	21.7	0.0	0.0	19.5	51.4	53	-1.6	0.0	10.8	33.7	0.0	44.5	41	+3.5	30.8	4.6	10.0

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE							GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.0	0.0	0.0	2.3	2.0	0.1	0.3	0.0	0.1	1.6	0.0	1.1	0.0	0.2	0.0	2.4	1.3
8-9	1.2	0.0	0.0	6.5	4.1	0.1	0.3	0.0	1.0	7.4	0.0	6.1	0.2	0.5	0.9	4.5	7.6
9-10	0.0	0.0	0.0	13.6	10.1	0.2	0.2	0.0	2.3	10.5	0.0	7.1	0.0	0.5	0.5	10.5	8.1
10-11	1.3	0.0	0.0	22.4	13.2	0.1	0.1	0.0	1.9	8.1	0.0	6.1	0.0	0.6	0.3	13.4	7.0
11-12	1.3	0.0	0.0	25.5	14.5	0.1	0.1	0.0	1.8	2.4	0.0	2.2	0.0	0.2	0.0	14.7	2.4
12-13	3.1	0.0	0.0	38.5	20.4	0.1	0.2	0.0	1.1	10.5	0.0	7.6	0.0	0.4	1.0	20.7	9.0
13-14	0.3	0.0	0.0	37.1	25.5	0.2	0.1	0.0	2.0	9.3	0.0	8.5	0.0	0.4	1.1	25.8	9.8
14-15	1.0	0.0	0.0	36.3	21.6	0.1	0.1	0.0	0.1	5.7	0.0	4.6	0.0	0.2	0.1	21.8	4.9

TABLE 18

SUMMARY OF RESULTS

EXPERIMENT NO. 12 (MODIFIED DEMAND)
(REROUTED DEPARTURES TO 24L)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 24R	RWY 24L	RWY 25R	RWY 25L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	4.0	0	0	22.0	26.0	25	+1.0	0	15.0	26.0	0	41.0	48	-7.0	10.5	4.2	6.3
8-9	20.0	0	0	24.9	44.9	45	-0.1	0	25.2	30.2	0	55.4	61	-3.6	12.4	4.7	14.2
9-10	8.0	0	0	27.0	35.0	41	-6.0	0	34.7	27.2	0	61.9	54	+7.9	16.6	4.2	15.7
10-11	22.0	0	0	30.6	52.6	53	-0.4	0	26.3	24.2	0	50.5	48	+2.5	17.2	4.7	13.5
11-12	25.9	0	0	30.7	56.6	62	-5.4	0	18.9	30.2	2	49.1	52	-2.9	17.7	4.7	8.3
12-13	24.6	0	0	29.0	53.6	44	+9.6	0	28.2	27.4	0	56.2	65	-8.8	22.0	4.8	14.9
13-14	11.5	0	0	27.7	39.2	40	-0.8	0	34.0	21.6	0	58.6	54	+4.6	12.1	4.6	17.2
14-15	22.0	0	0	30.5	52.5	53	-0.5	0	16.7	29.8	0	46.5	41	+5.5	14.0	4.7	10.6

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-IN	RWY 24R	RWY 24L	RWY 25R	RWY 25L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	2.0	0.0	0.0	2.3	2.0	0.1	0.2	0.0	0.1	1.6	0.0	1.1	0.0	0.2	0.0	2.3	1.3
8-9	1.9	0.0	0.0	3.5	2.8	0.2	0.2	0.0	9.8	5.8	0.0	7.6	0.0	0.5	0.5	3.2	8.6
9-10	0	0.0	0.0	9.2	7.1	0.2	0.2	0.0	11.7	4.3	0.0	8.4	0.0	0.7	1.2	7.4	10.4
10-11	1.6	0.0	0.0	11.4	7.3	0.1	0.1	0.0	7.4	5.1	0.0	6.4	0.0	0.6	1.1	7.5	8.1
11-12	1.4	0.0	0.0	13.5	8.0	0.2	0.1	0.0	2.4	3.1	0.0	2.8	0.0	0.2	0.0	8.2	3.1
12-13	2.3	0.0	0.0	12.9	13.1	0.2	0.1	0.0	11.1	6.0	0.0	8.5	0.0	0.3	0.3	13.4	9.2
13-14	1.2	0.0	0.0	3.5	2.9	0.2	0.1	0.0	13.1	5.5	0.0	9.9	0.0	0.5	1.3	3.2	11.7
14-15	1.7	0.0	0.0	7.1	4.7	0.2	0.1	0.0	5.9	3.2	0.0	4.3	0.0	0.4	0.7	5.0	5.4

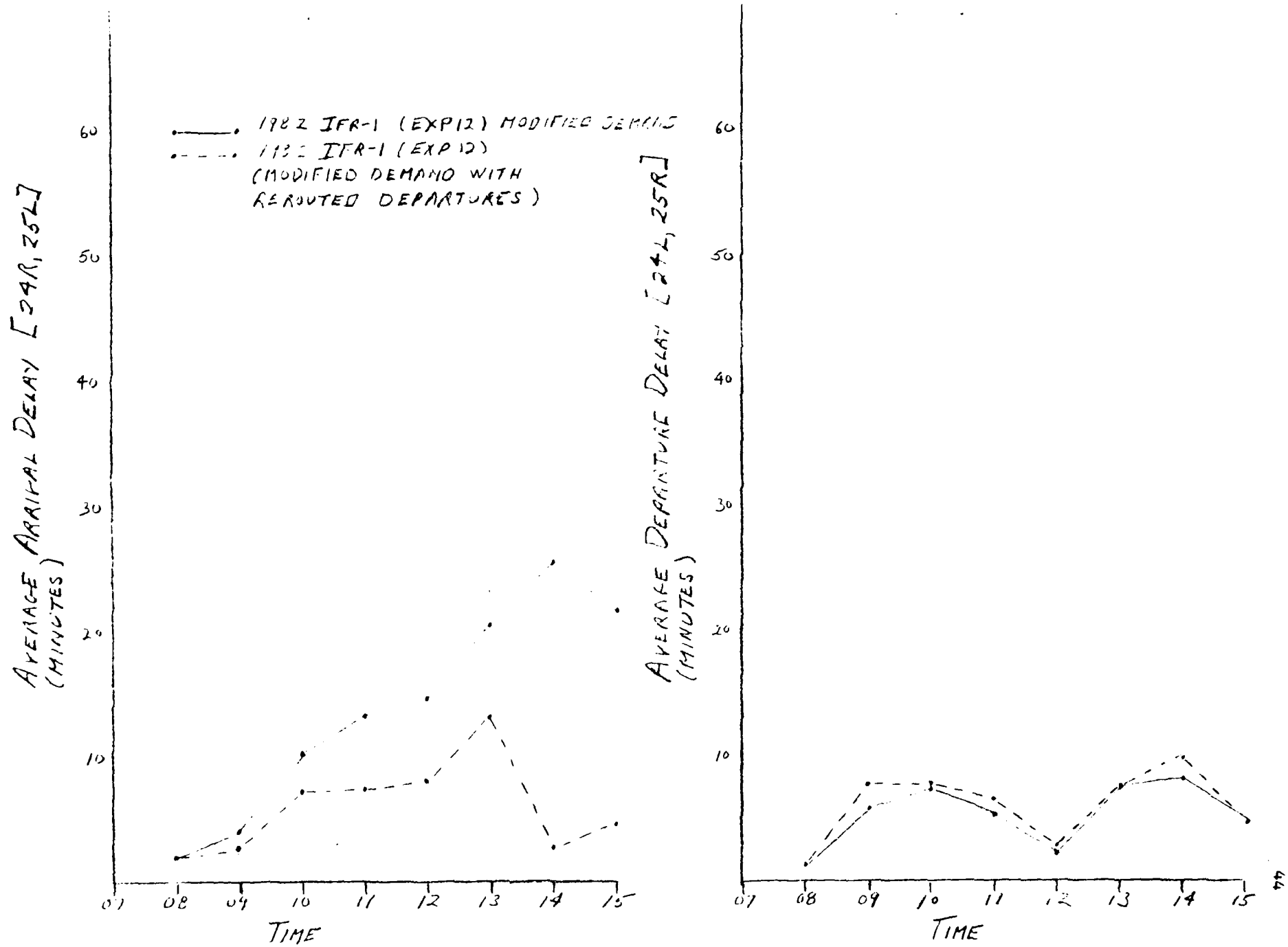


FIGURE 14 IFR-1 (1982) COMPARISON - WESTERLY FLOW

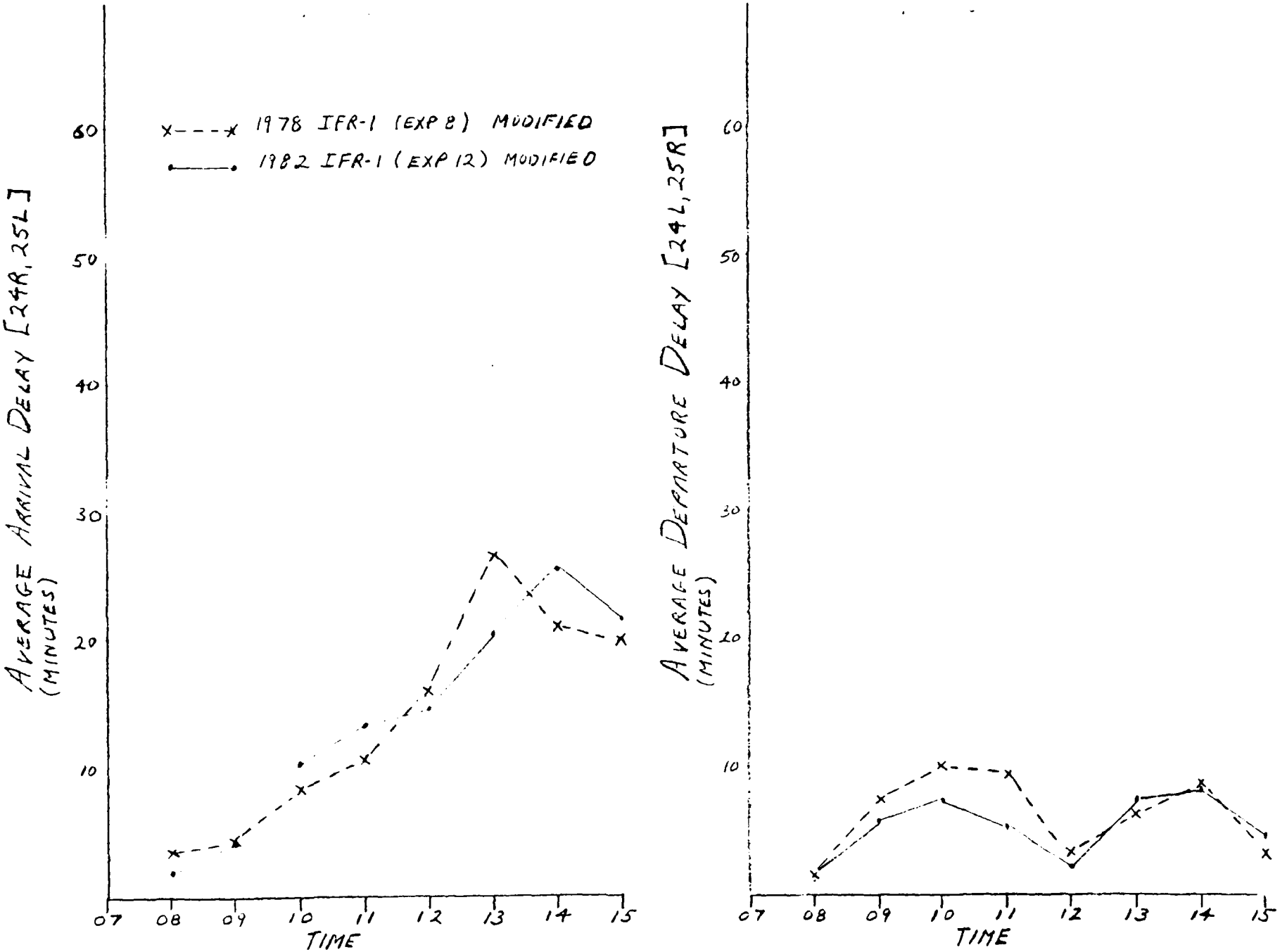


FIGURE 15 IFR-1 (1978 AND 1982) COMPARISON-WESTERLY FLOW

TABLE 19

SET 3 DEMAND

VFR--EASTERLY FLOW

EXPERIMENT		RWY 6R	RWY 6L	RWY 7R	RWY 7L	TOTAL
6	A	19	80	155	97	351
	D	160	38	81	140	419
	TOTAL	179	118	236	237	770
6*	A	19	124	119	89	351
	D	160	38	81	140	419
	TOTAL	179	162	200	229	770
9* AND 16*	A	17	118	133	95	363
	D	171	42	78	135	426
	TOTAL	188	160	211	230	789
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					

* MODIFIED DEMAND

LAX - STAGE 1

EXPERIMENT NO. 6

Objective:

To obtain baseline delay estimates for the following runway configuration in VFR 1 for 1978 demand for east operations.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
6R, 6L, 7R, 7L	6R, 6L, 7R, 7L

Related Comparison Experiments:

Experiment #9 is identical except for the 1982 demand.

12/11/78

TABLE 20

SUMMARY OF RESULTS

EXPERIMENT NO. 6

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 6R	RWY 6L	RWY 7R	RWY 7L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 6R	RWY 6L	RWY 7R	RWY 7L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	2.0	10.0	10.0	8.0	30.0	29	+1.0	16.0	4.0	8.0	13.0	41.0	48	-7.0	10.1	4.3	7.2
8-9	3.0	11.0	10.0	14.0	38.0	39	-1.0	21.0	2.5	3.0	16.2	55.7	64	-8.3	9.8	4.5	13.0
9-10	2.0	8.0	16.1	12.1	38.2	40	-1.8	27.0	4.5	2.4	19.6	53.5	52	+1.5	10.6	4.9	20.3
10-11	1.2	11.0	22.8	14.9	49.7	50	-0.3	16.3	2.5	7.0	19.9	45.7	48	-0.3	11.5	6.1	23.8
11-12	5.0	14.0	28.2	9.4	56.6	59	-2.4	16.7	7.5	13.9	15.6	53.7	52	+1.7	12.5	4.7	15.4
12-13	2.0	9.0	24.4	11.6	47.0	45	+2.0	21.5	3.9	12.1	13.3	50.8	65	-14.2	21.8	5.5	16.7
13-14	1.0	10.0	19.1	14.8	44.9	42	+2.1	19.0	2.1	17.2	13.2	51.5	51	+0.5	14.0	8.8	28.5
14-15	3.0	7.0	20.2	12.2	42.4	47	-4.6	13.0	10.0	6.8	21.8	51.6	39	+12.4	13.1	6.0	28.2

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE							GRAND TOTAL	
	RWY 6R	RWY 6L	RWY 7R	RWY 7L	ALL RWY	RWY CROSS	TAXI-IN	RWY 6R	RWY 6L	RWY 7R	RWY 7L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.1	0.2	0.2	0.0	0.2	0.0	0.3	0.7	0.0	2.0	1.9	1.2	0.0	0.4	0.0	0.5	1.6
8-9	0.0	0.8	0.4	0.4	0.5	0.1	0.2	5.9	1.0	3.7	10.2	6.6	0.0	0.6	0.1	0.8	7.3
9-10	0.0	0.2	1.0	0.4	0.6	0.2	0.4	0.9	4.1	4.0	19.5	12.1	0.0	1.4	1.5	1.2	15.0
10-11	0.0	0.4	2.9	1.1	1.7	0.2	1.7	0.9	1.3	6.0	22.6	10.9	0.0	3.1	4.5	3.6	18.5
11-12	0.3	0.3	14.1	0.4	7.1	0.2	0.4	1.1	1.1	14.9	9.7	7.2	0.0	2.0	1.7	7.7	10.9
12-13	0.5	2.1	20.3	1.1	11.1	0.2	4.0	1.9	1.5	12.5	18.6	9.0	0.0	1.9	0.8	15.3	11.7
13-14	0.4	0.0	4.5	0.2	4.6	0.1	4.6	1.6	2.2	20.2	23.8	13.5	0.0	5.4	4.6	9.3	23.5
14-15	0.0	0.2	5.2	1.9	3.0	0.1	1.4	1.4	1.2	12.4	19.1	10.2	0.0	5.8	6.8	4.5	22.8

12/15/77

TABLE 21

SUMMARY OF RESULTS

EXPERIMENT NO. 6 (MODIFIED DEMAND)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 6R	RWY 6L	RWY 7R	RWY 7L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 6R	RWY 6L	RWY 7R	RWY 7L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	2.0	11.0	10.0	7.0	30.0	29	+1.0	16.0	4.0	8.0	13.0	41.0	48	-7.0	10.1	4.3	7.0
8-9	3.0	16.0	5.0	14.0	38.0	39	-1.0	29.0	2.0	8.0	17.9	56.9	64	-7.1	10.1	4.7	12.8
9-10	2.0	12.6	13.9	11.9	39.8	40	-0.2	27.9	5.0	3.1	20.2	56.2	52	+4.2	10.4	4.5	17.8
10-11	1.0	15.0	18.2	14.1	48.3	50	-1.7	16.1	3.6	7.5	21.2	48.4	48	+0.4	11.0	4.9	17.7
11-12	5.0	22.0	25.1	8.2	61.1	59	+2.1	15.8	7.2	14.2	14.6	51.8	52	-0.2	14.2	4.3	11.6
12-13	2.0	16.6	17.0	10.8	45.8	45	+0.8	23.0	4.2	16.5	13.0	56.7	65	-7.3	12.3	4.7	14.3
13-14	1.0	13.0	13.9	13.9	41.8	42	-0.2	20.8	2.9	14.3	17.8	55.8	51	+4.8	10.0	5.8	21.1
14-15	3.0	19.0	15.1	9.1	46.2	47	-0.8	9.9	8.9	6.3	20.1	45.2	39	+6.2	11.0	4.4	12.3

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 6R	RWY 6L	RWY 7R	RWY 7L	ALL RWY	RWY CROSS	TAXI-IN	RWY 6R	RWY 6L	RWY 7R	RWY 7L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.1	0.3	0.2	0.0	0.2	0.0	0.2	0.8	0.0	1.5	1.6	1.1	0.0	0.4	0.0	0.7	1.5
8-9	0.3	1.4	0.2	0.2	0.7	0.0	0.2	6.7	1.2	3.2	8.3	6.5	0.0	0.5	0.1	0.9	7.1
9-10	0.0	0.4	0.9	0.4	[illegible]	0.1	0.3	9.4	5.1	1.9	15.2	10.7	0.0	1.0	0.8	0.9	12.5
10-11	0.3	0.3	1.5	0.9	0.9	0.1	0.6	1.6	1.7	3.9	16.1	8.3	0.0	2.0	2.3	1.6	12.6
11-12	0.3	0.7	7.8	0.5	3.7	0.1	0.2	1.4	1.5	13.2	4.0	5.4	0.0	1.1	0.1	4.0	6.6
12-13	0.1	0.7	3.5	0.6	1.7	0.3	0.4	5.9	2.9	7.9	13.0	7.7	0.0	1.3	0.3	2.3	9.3
13-14	1.4	0.5	1.0	0.6	0.7	0.2	1.6	1.9	2.8	10.4	19.8	9.8	0.0	4.2	3.0	2.5	16.0
14-15	0.8	0.4	0.6	1.1	0.6	0.1	0.3	0.8	1.2	2.2	7.9	4.3	0.0	1.0	1.8	1.0	7.1

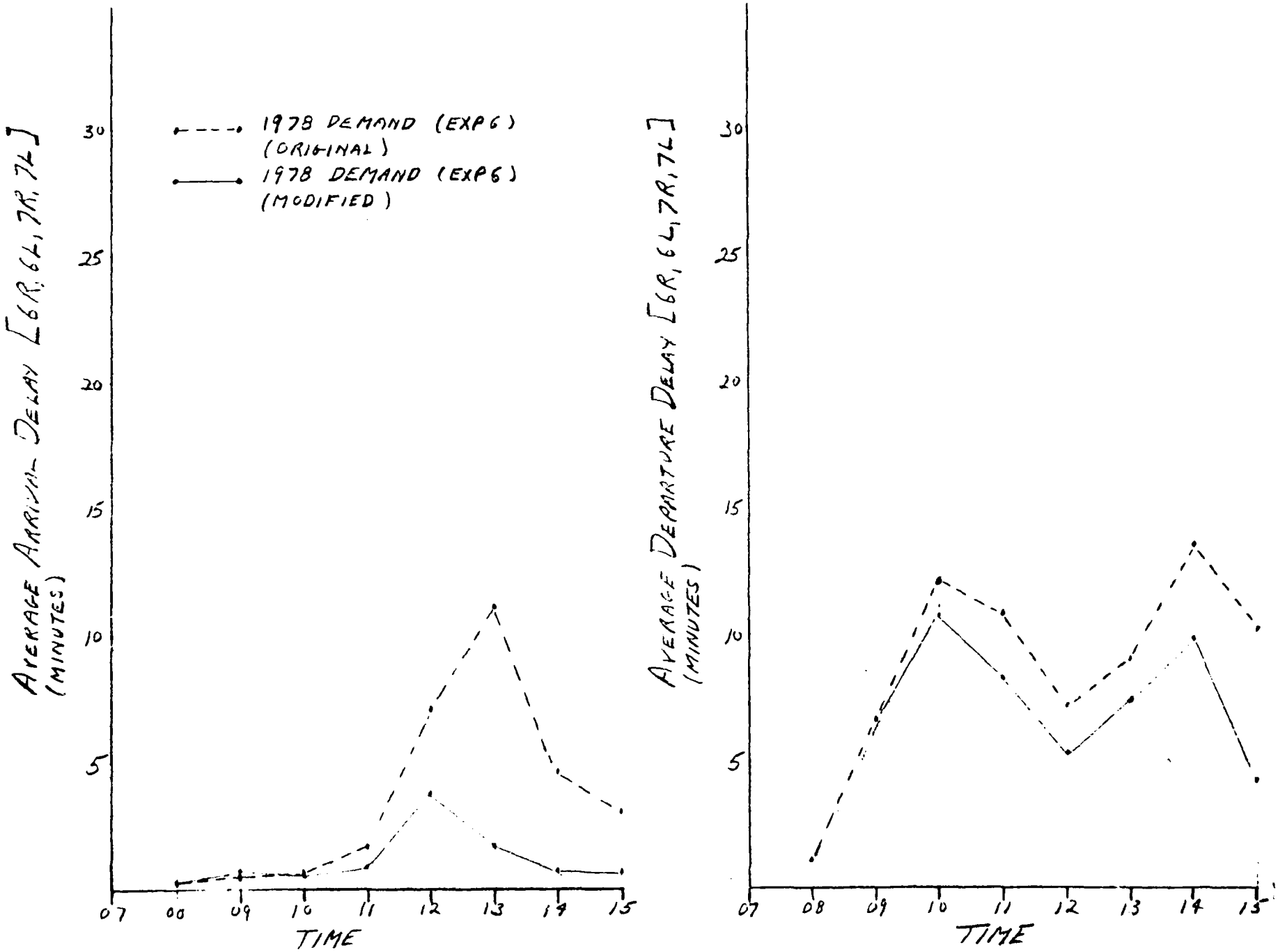


FIGURE 16 IFR-1 (1978) COMPARISON - EASTERLY FLOW

LAX - STAGE 1

EXPERIMENT NO. 9

Objective:

To obtain baseline delay estimates for the following runway configurations in VFR 1 for 1982 demand for east operations.

To obtain delay estimates for 1982 with no improvements to the airport for east operations.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
6R, 6L, 7R, 7L	6R, 6L, 7R, 7L

Related Comparison Experiments:

Experiment #16 is identical except for near-term improvements #5, #7, and #8 and a 1982 ATC system scenario.

Prior Experiment #6 is similar with a 1978 demand.

TABLE 22

SUMMARY OF RESULTS

EXPERIMENT NO. 9 (MODIFIED DEMAND)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 6R	RWY 6L	RWY 7R	RWY 7L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 6R	RWY 6L	RWY 7R	RWY 7L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	1.0	5.0	17.0	6.0	26.0	25	+1.0	16.0	2.0	6.7	16.9	43.6	48	-4.4	10.6	4.0	6.9
8-9	1.0	12.0	15.0	11.0	45.0	45	0.0	24.5	6.1	7.7	18.2	56.5	64	-7.5	10.7	4.5	13.7
9-10	1.0	7.0	17.0	15.0	40.0	41	-1.0	31.5	4.9	5.4	14.3	56.1	54	+2.1	10.9	4.3	16.0
10-11	3.0	17.3	20.0	14.0	54.9	53	+1.9	16.8	8.0	5.2	19.9	51.9	48	+3.9	10.5	4.6	12.9
11-12	3.0	21.1	17.6	13.0	54.7	62	-2.1	16.8	5.0	8.6	16.9	47.3	52	-4.7	10.4	4.3	8.4
12-13	1.0	24.9	9.4	9.0	44.3	44	+0.3	25.1	4.0	16.1	19.3	64.5	65	-0.5	12.9	4.7	14.2
13-14	2.0	10.5	17.0	10.0	39.5	40	-0.5	25.3	5.0	12.2	13.0	55.5	54	+1.5	10.4	4.4	13.7
14-15	5.0	14.6	20.7	12.0	52.3	53	-0.7	12.7	5.3	11.0	14.5	43.5	41	+2.5	11.7	4.3	8.2

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 6R	RWY 6L	RWY 7R	RWY 7L	ALL RWY	RWY CROSS	TAXI-IN	RWY 6R	RWY 6L	RWY 7R	RWY 7L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.0	0.0	0.4	1.2	.5	0.1	0.2	1.0	0.6	1.6	2.0	1.5	0.0	0.3	0.0	0.8	1.8
8-9	0.4	0.6	0.9	0.6	0.7	0.1	0.3	3.2	5.8	4.1	11.8	6.2	3.0	1.5	0.4	1.1	8.1
9-10	0.0	0.0	2.5	1.5	1.6	0.2	0.2	8.4	2.5	7.6	13.3	9.0	2.0	1.2	0.2	2.0	10.4
10-11	0.4	0.8	1.3	0.6	0.9	0.2	0.2	4.4	2.6	5.9	8.6	5.9	0.6	0.8	0.4	1.3	7.1
11-12	0.5	0.6	1.2	0.9	0.9	0.2	0.2	1.5	1.8	2.5	4.8	2.9	0.0	0.5	0.0	1.3	3.4
12-13	0.5	4.0	0.4	0.5	2.5	0.1	0.4	8.4	6.7	4.7	9.3	7.6	2.0	1.3	0.1	3.0	9.0
13-14	0.0	0.3	0.8	1.0	2.7	0.1	0.2	6.3	3.1	4.1	7.4	7.0	0.0	1.3	0.0	1.0	8.3
14-15	0.2	2.7	1.2	1.9	1.5	0.2	0.1	2.1	1.7	3.3	3.6	2.9	0.0	0.4	0.0	1.8	3.3

LAX - STAGE 1

EXPERIMENT NO. 16

Objective:

To assess delays to aircraft in two of the following runway configurations in VFR 1 with near-term improvements #5, #7, and #8 for east operations and a 1982 ATC system scenario.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
6R, 6L, 7R, 7L	6R, 6L, 7R, 7L

Related Comparison Experiments:

Prior Experiment #9 is identical except for noted improvements to the airport and an improved ATC system scenario.

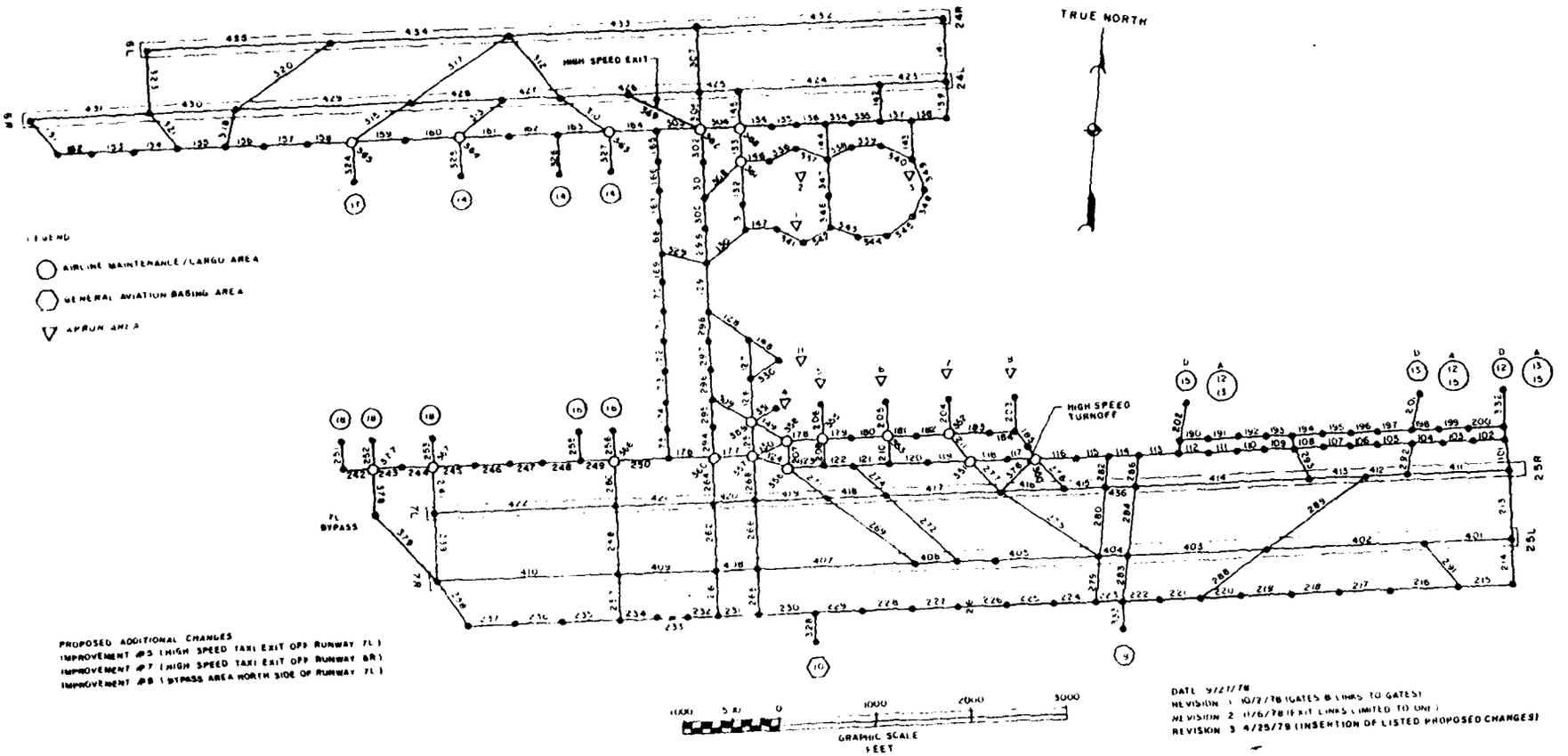


Figure 17 LAX LINK NODE DIAGRAM
(7L BYPASS AND HIGH SPEED EXITS
OFF 7L AND 6R)

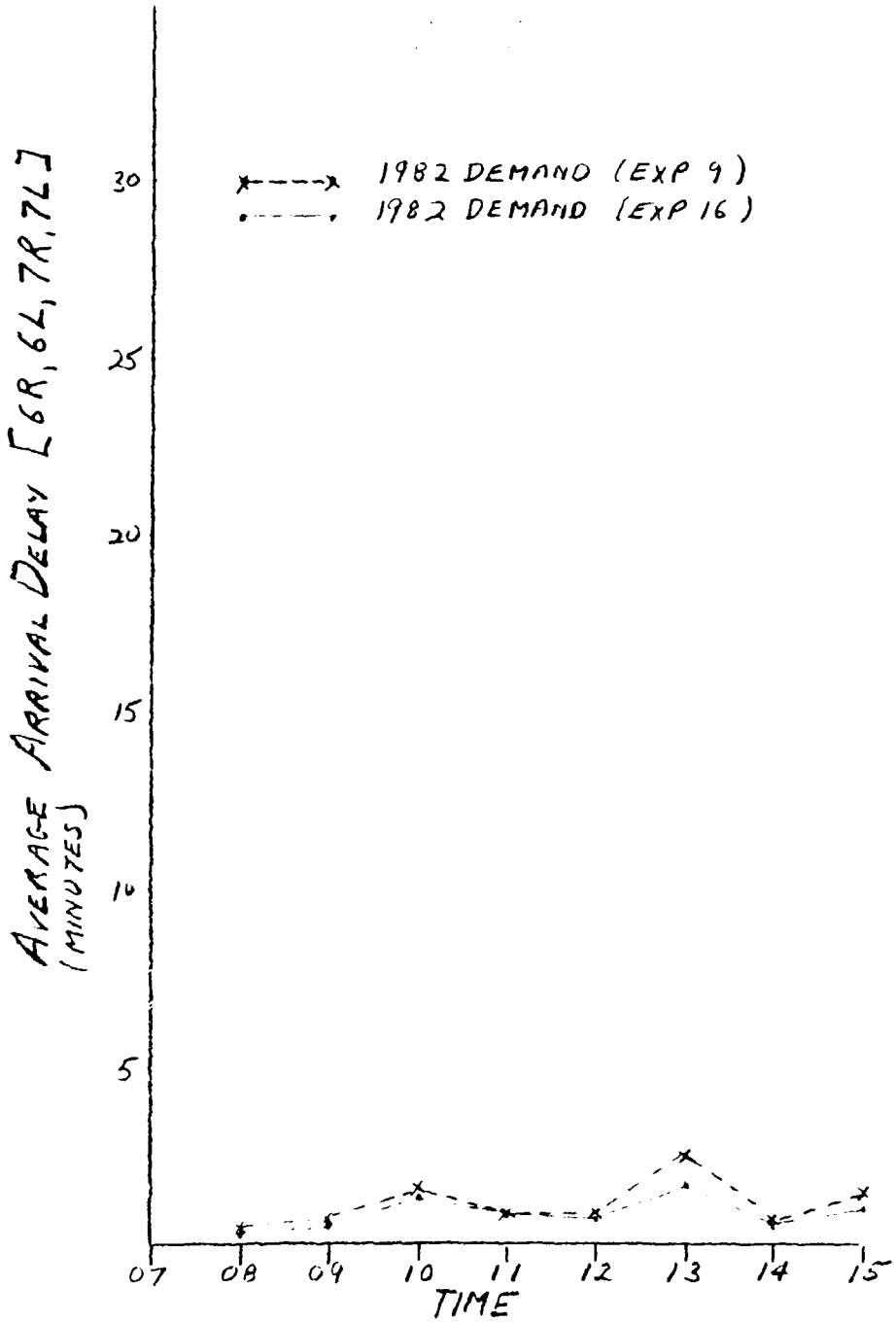
TABLE 23

SUMMARY OF RESULTS

EXPERIMENT NO. 16 (MODIFIED DEMAYD)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 6R	RWY 6L	RWY 7R	RWY 7L	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 6R	RWY 6L	RWY 7R	RWY 7L	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
7-8	1.0	5.0	14.0	6.0	26.0	25	+1.0	16.0	2.0	5.6	17.0	43.6	48	-4.4	10.5	4.3	7.0
8-9	1.0	18.0	15.0	11.0	45.0	45	0.0	24.6	6.0	8.1	18.5	57.2	64	-6.8	10.7	4.5	13.3
9-10	1.0	7.0	17.0	15.0	40.0	41	-1.0	31.9	5.1	5.2	14.8	56.5	54	+2.5	10.7	4.4	15.6
10-11	3.0	18.0	20.6	14.0	55.0	53	+2.0	18.9	7.8	5.1	18.8	50.6	48	+2.6	10.5	4.6	12.0
11-12	3.0	21.0	18.0	18.0	60.0	62	-2.0	17.0	5.1	7.0	17.9	49.0	52	-3.0	10.2	4.4	9.6
12-13	1.0	25.0	9.0	9.1	44.1	44	10.1	25.4	4.1	15.6	18.3	63.4	65	-1.6	12.1	4.7	13.5
13-14	2.0	10.1	17.0	9.9	39.0	40	-0.2	24.7	4.9	11.7	14.0	55.3	54	+1.3	10.4	4.4	13.4
14-15	5.0	14.1	21.0	12.0	52.1	53	-0.9	12.5	5.4	11.4	13.7	43.0	41	+2.0	11.5	4.3	7.7

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 6R	RWY 6L	RWY 7R	RWY 7L	ALL RWY	RWY CROSS	TAXI-IN	RWY 6R	RWY 6L	RWY 7R	RWY 7L	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
7-8	0.0	0.0	0.3	0.7	0.3	0.1	0.1	1.0	0.7	2.5	1.6	1.5	0.0	0.2	0.0	0.5	1.8
8-9	0.3	0.5	0.9	0.5	0.6	0.1	0.3	2.3	5.5	4.4	12.0	6.1	0.0	1.3	0.4	1.0	7.8
9-10	0.0	0.0	2.1	1.3	1.4	0.2	0.2	8.3	2.3	8.5	12.3	8.8	0.0	1.0	0.2	1.8	10.0
10-11	0.3	0.7	1.4	0.6	0.9	0.2	0.2	3.2	2.6	3.6	8.3	5.1	0.0	0.3	0.4	1.3	6.3
11-12	0.4	0.5	1.0	0.7	0.7	0.3	0.7	1.4	3.3	2.4	5.1	3.0	0.0	0.4	0.0	1.1	3.4
12-13	0.2	2.7	0.1	0.6	1.7	0.1	0.4	8.1	4.0	3.6	9.7	7.3	0.0	0.9	0.0	2.2	8.1
13-14	0.0	0.2	0.7	0.8	0.5	0.2	0.1	5.9	2.6	10.6	8.0	7.1	0.0	0.8	0.0	0.8	7.9
14-15	0.3	0.6	1.2	1.5	1.0	0.2	0.1	1.6	1.2	3.5	2.4	2.4	0.0	0.4	0.0	1.3	3.8



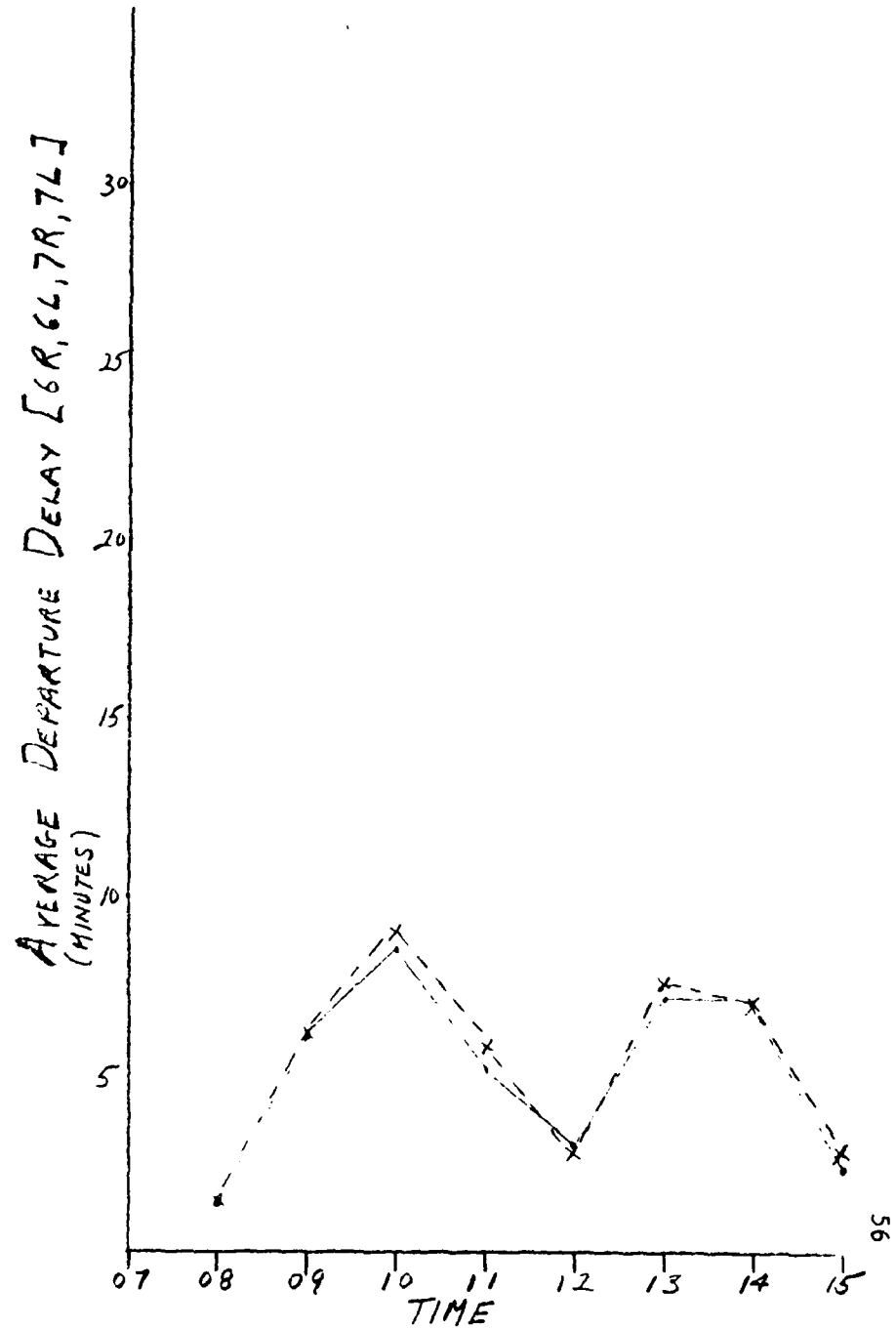


FIGURE 18 VFR-1 (1978 AND 1982) COMPARISON - EASTERLY FLOW

TABLE 24

SET 4 DEMAND

VFR--NIGHT TIME

EXPERIMENT		RWY 6R	RWY 7L	RWY 24L	RWY 25R	TOTAL
4	A	31	87	0	0	118
	D	0	0	69	69	138
	TOTAL	31	87	69	69	256
4*	A	118	0	0	0	118
	D	0	0	63	75	138
	TOTAL	118	0	63	75	256
10* AND 15*	A	117	0	0	0	117
	D	0	0	69	73	142
	TOTAL	117	0	69	73	259
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					

* MODIFIED DEMAND

LAX - STAGE 1

EXPERIMENT NO. 4

Objective:

To obtain baseline delay estimates for the following runway configuration in VFR 1 for 1978 demand for nighttime operations.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
6R, 7L	24L, 25R

Related Comparison Experiments:

Experiment 5 is identical except for IFR 1 weather conditions.

Experiment 10 is identical except for 1982 demand.

TABLE 25

SUMMARY OF RESULTS

EXPERIMENT NO. 4

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 6R	RWY 7L	RWY 24L	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
0-1	3.0	14.0	0	0	17.0	19	-2.0			8.0	5.0	13.0	24	-11.0	11.4	4.6	17.3
1-2	4.0	15.0			19.0	18	+1.0			4.5	8.0	12.5	19	+3.5	14.7	4.3	14.9
2-3	5.0	5.0			10.0	14	+4.0			0.0	7.0	7.0	9	0.0	25.8	4.4	25.7
3-4	1.0	1.0			10.0	5	+5.0			16.0	1.0	17.0	4	+13.0	32.0	7.1	17.7
4-5	1.0	1.0	0	0	10.0	10	0.0			6.5	5.0	11.5	7	+4.5	10.7	4.6	25.2
5-6	3.0	3.0			6.0	7	-1.0			4.0	4.5	8.5	10	-1.5	11.0	4.7	7.3
6-7	6.5	6.5	0	0	13.0	16	-3.0			12.0	7.0	9.5	17	-7.5	10.3	4.4	17.1
7-8	3.5	6.5	0	0	10.0	29	-19.0			8.5	9.5	18.0	48	-30.0	14.4	4.0	20.6

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-IN	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
0-1										14.2	10.4	13.2	2.0	0.0	0.6	0.3	13.2
1-2	0.2	5.0			4.0	0.0	0.1	0.0	0.0	45.8	36.7	39.1	0.0	0.0	0.0	4.1	39.1
2-3	11.2	22.8			17.0	0.0	0.0	0.0	0.0	0.0	16.7	16.7	0.0	0.0	0.0	17.0	16.7
3-4	1.0	22.7	0	0	22.3	0.0	0.0	0		72.9	7.3	67.1	0.0	0.0	1.7	22.3	70.8
4-5	0.0	0.1			0.1	0.0	0.1	0		18.0	5.7	13.5	0.0	0.2	7.2	0.2	20.7
5-6	0.0	0.1			0.1	0.0	0.1	0		0.0	3.6	1.9	0.0	0.0	0.0	0.2	1.9
6-7	0.6	0.1			0.1	0.0	0.1			15.4	2.8	11.2	0.0	0.0	0.0	0.0	11.2
7-8	4.0	7.1			5.9	0.0	0.1			27.3	23.5	24.7	0.0	0.2	0.2	6.0	24.9

TABLE 26

SUMMARY OF RESULTS

EXPERIMENT NO. 4 (MODIFIED DEMAND)
(ALL ARRIVALS ON 6R)

TIME	AVERAGE FLOW RATES: ARRIVALS							DEPARTURES							AVERAGE TRAVEL TIME		
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 6R	RWY 7L	RWY 24L	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
0-1	15.0	0	0	0	15.0	19	-4.0	0	0	9.6	11.6	21.2	24	-3.8	14.8	5.4	10.8
1-2	21.4	0	0	0	21.4	18	+3.4	0	0	6.0	8.0	14.0	19	-5.0	17.6	5.5	12.3
2-3	13.6	0	0	0	13.6	14	-0.4	0	0	2.0	4.4	13.4	9	-5.6	16.3	5.4	16.0
3-4	6.0	0	0	0	6.0	5	+1.0	0	0	5.4	1.0	6.4	4	+2.4	9.9	5.2	11.5
4-5	10.0	0	0	0	10.0	10	0.0	0	0	3.0	5.0	8.0	7	+1.0	10.8	5.7	8.8
5-6	7.0	0	0	0	7.0	7	0.0	0	0	3.0	5.0	8.0	10	-2.0	11.2	4.4	4.9
6-7	16.0	0	0	0	16.0	16	0.0	0	0	5.9	9.0	14.9	17	-2.1	13.1	5.4	10.5
7-8	6.9	0	0	0	6.9	29	-22.1	0	0	16.3	26.0	42.3	48	-5.7	30.4	5.4	12.5

TIME	ARRIVAL DELAYS: AVERAGE							DEPARTURE DELAYS: AVERAGE								GRAND TOTAL	
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-IN	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
0-1	3.6	0.0	0.0	0.0	3.6	0.0	0.1	0.0	0.0	8.7	0.5	4.2	0.0	0.1	0.0	3.7	4.3
1-2	6.1	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	15.2	0.1	6.8	0.0	0.1	0.0	6.9	6.9
2-3	8.9	0.0	0.0	0.0	8.9	0.0	0.0	0.0	0.0	14.9	0.7	10.3	0.0	0.0	0.0	8.9	10.3
3-4	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	6.0	0.0	5.1	0.0	0.0	0.0	0.3	5.1
4-5	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	7.0	0.0	2.6	0.0	0.0	0.0	0.2	3.6
5-6	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
6-7	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	12.3	0.0	4.8	0.0	0.0	0.0	3.1	4.8
7-8	21.4	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	15.7	1.0	6.7	0.0	0.3	0.0	21.4	6.9

LAX - STAGE 1

EXPERIMENT NO. 10

Objective:

To obtain baseline delay estimates for the following runway configurations in VFR 1 for 1982 demand.

To obtain delay estimates for 1982 with no improvements to the airport.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
6R, 7L	24L, 25R

Related Comparison Experiments:

Experiment 10A is identical except for IFR 1 weather conditions.

Experiment 15 is identical except for near-term improvements #5 and #7 and an improved ATC system scenario.

Prior Experiment 4 is identical except for 1978 demand.

TABLE 27

SUMMARY OF RESULTS

EXPERIMENT NO. 10 (MODIFIED)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 6R	RWY 7L	RWY 24R	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
0-1	12.0	0	0	0	12.0	19	-7.0	0	0	10.8	13.0	23.8	26	-2.2	10.6	5.3	12.0
1-2	18.0	.0	0	0	18.0	22	-4.0	0	0	9.7	7.0	16.7	19	-2.3	33.9	5.4	15.3
2-3	22.9	0	0	0	22.9	13	+9.9	0	0	7.4	6.0	13.4	10	+3.4	34.0	5.2	15.8
3-4	5.1	0	0	0	5.1	4	+1.1	0	0	4.1	2.0	6.1	4	+2.1	11.2	4.6	14.4
4-5	10.0	0	0	0	10.0	9	+1.0	0	0	2.1	1.0	3.1	7	-3.9	11.1	5.3	5.5
5-6	10.0	0	0	0	10.0	9	+1.0	0	0	8.9	7.0	15.9	10	+5.9	13.6	5.3	13.1
6-7	13.3	0	0	0	13.3	16	-2.7	0	0	4.1	11.0	15.1	18	-2.9	12.3	5.4	11.7
7-8	6.5	0	0	0	6.5	25	-18.5	0	0	17.0	26.0	43.0	48	-5.0	30.3	5.4	11.7

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-IN	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
0-1	0.7	0.0	0.0	0.0	0.7	0.0	0.1	0.0	0.0	11.9	0.3	5.6	0.0	0.1	0.0	0.8	5.7
1-2	23.2	0.0	0.0	0.0	23.2	0.0	0.0	0.0	0.0	15.7	0.0	9.1	0.0	0.0	0.0	23.2	9.1
2-3	24.1	0.0	0.0	0.0	24.1	0.0	0.0	0.0	0.0	18.6	0.0	10.2	0.0	0.2	0.0	24.1	10.4
3-4	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	11.7	0.0	7.9	0.0	0.0	0.0	2.0	7.9
4-5	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.5	0.0	0.0	0.0	0.6	0.5
5-6	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	12.6	0.0	7.0	0.0	0.5	0.0	3.0	7.5
6-7	1.4	0.0	0.0	0.0	1.4	0.0	0.1	0.0	0.0	23.8	0.2	6.5	0.0	0.1	0.0	1.5	6.7
7-8	20.9	0.0	0.0	0.0	20.9	0.0	0.1	0.0	0.0	13.8	0.6	5.8	0.0	0.3	0.0	21.0	6.1

TABLE 28

SUMMARY OF RESULTS

EXPERIMENT NO. 15 (MODIFIED)

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 6R	RWY 7L	RWY 24R	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
0-1	12.0	0	0	0	12.0	19	-7.0	0	0	10.7	13.0	23.7	26	-2.3	10.8	5.5	12.0
1-2	20.0	0	0	0	20.0	22	-2.0	0	0	10.1	7.0	17.1	19	-1.9	31.2	5.6	15.4
2-3	21.5	0	0	0	21.5	13	+8.5	0	0	7.5	6.0	13.5	10	+3.5	22.6	5.4	16.2
3-4	4.5	0	0	0	4.5	4	+0.5	0	0	3.7	2.0	5.7	4	+1.7	9.8	4.7	12.7
4-5	10.0	0	0	0	10.0	9	+1.0	0	2	2.0	1.0	3.0	7	-4.0	10.9	5.5	5.0
5-6	10.0	0	0	0	10.0	9	+1.0	0	0	9.0	7.0	16.0	10	+6.0	13.4	5.5	13.0
6-7	14.2	0	0	0	14.2	16	-1.8	0	0	3.1	11.0	14.1	18	-3.9	11.7	5.4	10.0
7-8	6.6	0	0	0	6.6	25	-18.4	0	0	16.4	26.0	42.1	48	-5.9	27.2	6.0	12.4

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-IN	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
0-1	0.6	0	0	0	0.6	0.0	0.1	0	0	12.1	0.3	5.6	0.0	0.1	0.0	0.8	5.7
1-2	20.8	0	0	0	20.8	0.0	0.0	0	0	15.6	0.1	9.2	0.0	0.0	0.0	20.8	9.2
2-3	17.4	0	0	0	17.4	0.0	0.0	0	0	18.6	0.1	10.3	0.0	0.2	0.0	17.5	10.5
3-4	0.7	0	0	0	0.7	0.0	0.0	0	0	10.1	0.0	6.7	0.0	0.0	0.0	0.7	6.7
4-5	0.4	0	0	0	0.4	0.0	0.0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
5-6	2.8	0	0	0	2.8	0.0	0.0	0	0	12.4	0.0	7.0	0.0	0.5	0.0	2.4	2.5
6-7	0.7	0	0	0	0.7	0.0	0.1	0	0	15.2	0.2	5.0	0.0	0.1	0.0	0.7	5.1
7-8	17.2	0	0	0	17.2	0.0	0.1	0	0	22.7	0.7	6.5	0.0	0.3	1.0	17.8	6.9

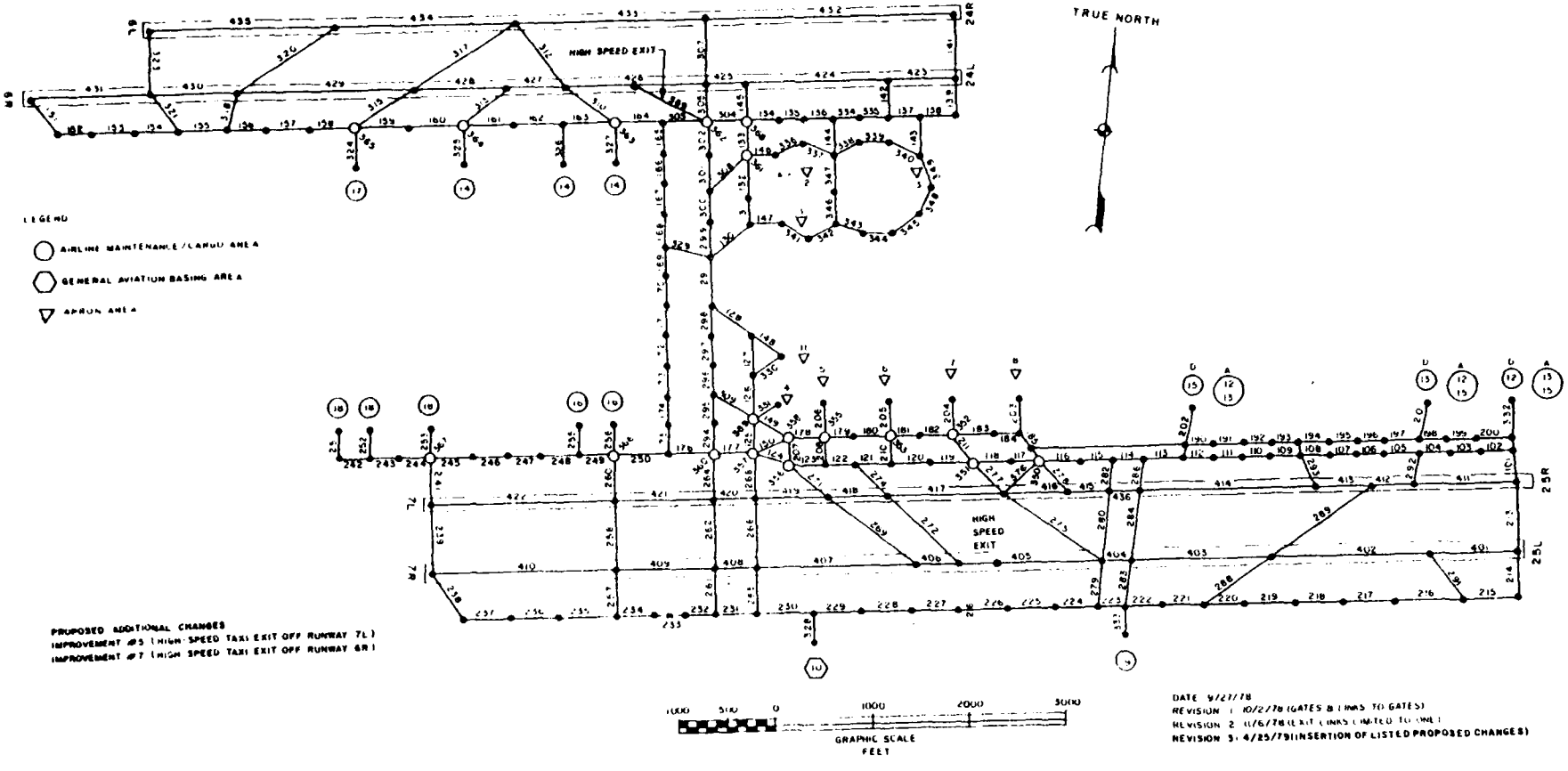


Figure 19 LAX LINK NODE DIAGRAM (HIGH SPEED EXITS OFF 7L AND 6R)

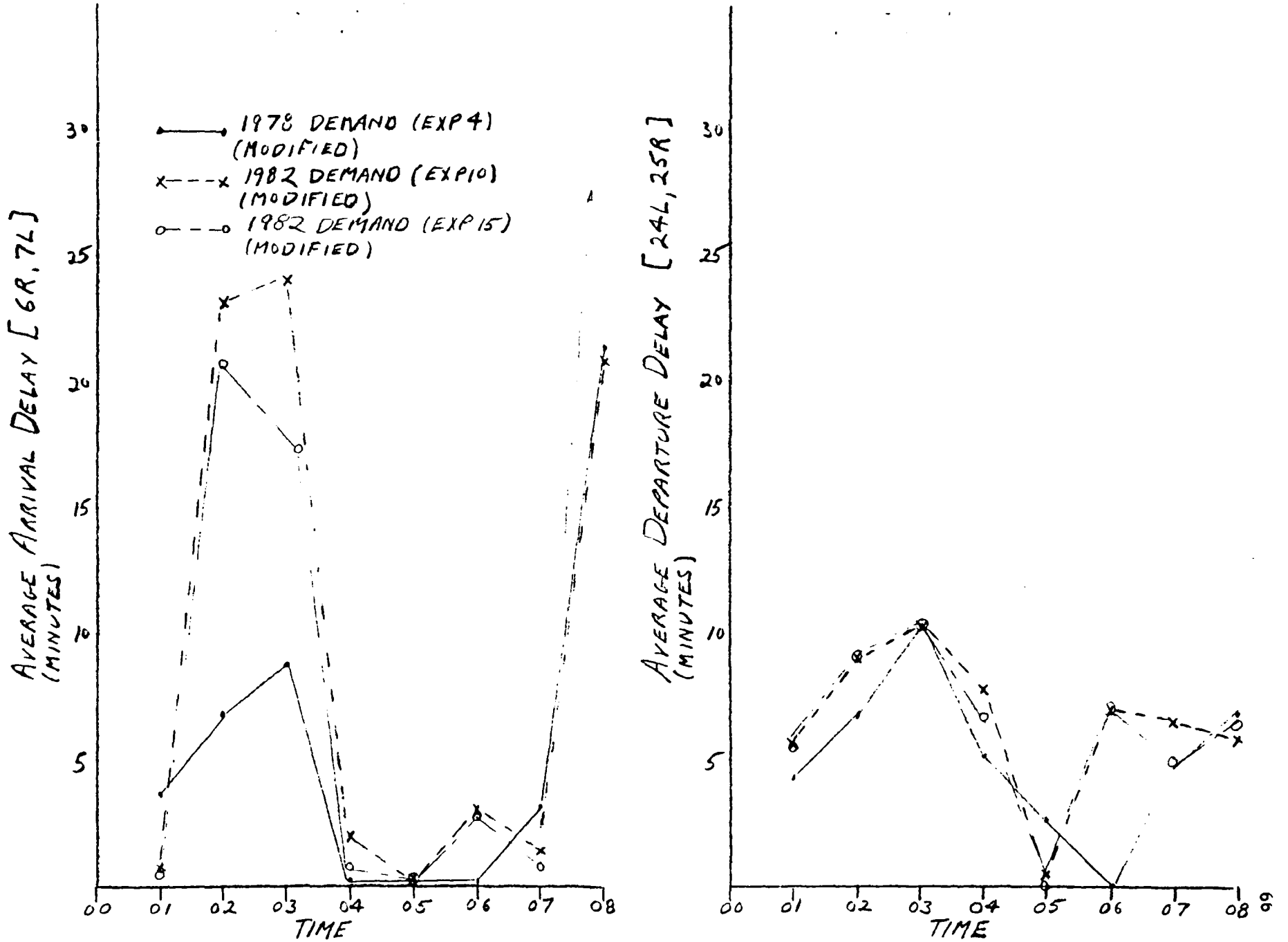


FIGURE 20 VFR-1 (1978-1982) COMPARISON - NIGHT TIME

TABLE 29

SET 5 DEMAND
IFR--NIGHT TIME

EXPERIMENT		RWY 6R	RWY 7L	RWY 29L	RWY 25R	TOTAL
5*	A	118	0	0	0	118
	D	0	0	63	75	138
	TOTAL	118	0	63	75	256
10A*	A	117	0	0	0	117
	D	0	0	69	73	142
	TOTAL	117	0	69	73	259
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					
	A					
	D					
	TOTAL					

* MODIFIED DEMAND

LAX - STAGE 1

EXPERIMENT NO. 10A

Objective:

To obtain baseline delay estimates for the following runway configuration in IFR 1 for 1982 demand.

To obtain delay estimates for 1982 with no improvements to the airport.

ARRIVAL RUNWAYS	DEPARTURE RUNWAYS
6R, 7L	24L, 25R

Related Comparison Experiments:

Prior Experiment 5 is similar with a 1978 demand.

TABLE 31

SUMMARY OF RESULTS

EXPERIMENT NO. 10A

TIME	AVERAGE FLOW RATES														AVERAGE TRAVEL TIME		
	ARRIVALS							DEPARTURES									
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	RWY 6R	RWY 7L	RWY 24R	RWY 25R	AVG. TOTAL FLOW	DE-MAND	DIFF.	FIX TO THRESH.	THRESH. TO GATE	GATE TO ROLL
0-1	11.6	0	0	0	11.6	19	-7.4	0	0	7.6	9.5	17.1	26	-8.9	12.5	5.4	17.8
1-2	10.4	0	0	0	10.4	22	-11.6	0	0	13.6	9.8	23.4	19	+4.4	53.8	5.9	19.9
2-3	15.6	0	0	0	15.6	13	+2.6	0	0	5.7	5.3	11.0	10	+1.0	67.9	5.3	31.3
3-4	18.8	0	0	0	18.8	4	+14.8	0	0	2.2	2.6	4.8	4	+0.8	71.8	5.2	42.8
4-5	11.6	0	0	0	11.6	9	+2.6	0	0	4.5	1.8	6.3	7	-0.7	17.9	5.4	25.6
5-6	9.6	0	0	0	9.6	9	+0.6	0	0	9.4	6.1	15.5	10	+5.5	15.5	5.5	18.3
6-7	13.0	0	0	0	13.0	16	-3.0	0	0	2.8	9.5	12.3	18	-5.7	16.5	5.4	20.7
7-8	4.2	0	0	0	4.2	25	-20.8	0	0	13.2	23.2	36.4	48	-11.6	39.6	5.8	20.4

TIME	ARRIVAL DELAYS AVERAGE							DEPARTURE DELAYS AVERAGE								GRAND TOTAL	
	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-IN	RWY 6R	RWY 7L	RWY 24L	RWY 25R	ALL RWY	RWY CROSS	TAXI-OUT	RWY CONG.	ARR. DELAY	DEP. DELAY
0-1	2.2	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	18.3	5.6	11.1	0.0	0.1	0.0	2.2	11.7
1-2	43.0	0.0	0.0	0.0	43.0	0.0	0.0	0.0	0.0	17.6	8.9	13.9	0.0	0.0	0.0	43.0	13.9
2-3	57.7	0.0	0.0	0.0	57.7	0.0	0.0	0.0	0.0	26.8	25.1	26.0	0.0	0.0	0.0	57.8	26.0
3-4	61.9	0.0	0.0	0.0	61.9	0.0	0.0	0.0	0.0	32.2	39.1	42.2	0.0	0.1	0.0	62.0	42.2
4-5	7.5	0.0	0.0	0.0	7.5	0.0	0.1	0.0	0.0	21.5	14.4	20.0	0.0	0.0	0.0	7.6	20.0
5-6	4.9	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	16.7	8.1	13.4	0.0	0.3	0.0	4.9	13.6
6-7	5.6	0.0	0.0	0.0	5.6	0.0	0.1	0.0	0.0	14.9	14.2	15.2	0.0	0.4	0.0	5.7	15.6
7-8	28.4	0.0	0.0	0.0	28.4	0.0	0.6	0.0	0.0	17.6	13.2	14.7	0.0	0.4	0.1	29.1	15.2

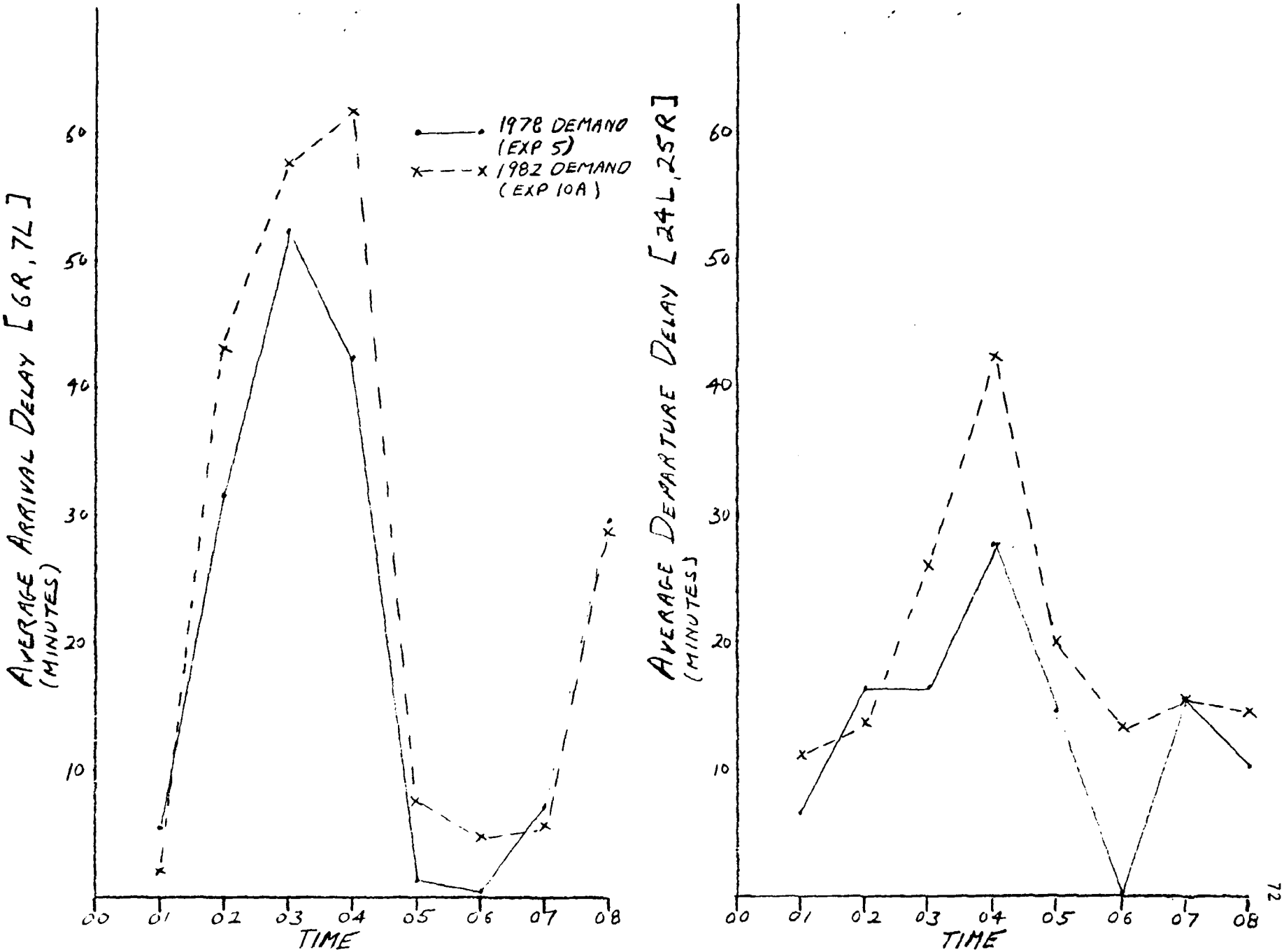


FIGURE 21 IFR-1 (1978) COMPARISON - NIGHT TIME